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Dementia, Diabetes, and Hypertension: Is There a Unified Theory through a Dysregulation of the Ca2+ Homeostasis?
Leandro Bueno Bergantin, PhD (Universidade Federal de São Paulo, Bentham Brand Ambassador, Jardim Brasil, Limeira, Brazil)

In series: Research Progress in Alzheimer's Disease and Dementia
Publication Date: 02/17/2021
155 pp.
Softcover: 978-1-53619-227-8. $95.00
e-book: 978-1-53619-286-5. $95.00

Dementia, diabetes, and hypertension are considered huge medical problems around the world, costing many millions of dollars to the medical health systems. Curiously, hypertension has been clinically linked with a higher risk for decline of cognition, as shown in dementia patients. In addition, there is a clear clinical association between hypertension and diabetes, reflecting substantial similarities in their etiology. In fact, consistent data support that patients diagnosed with diabetes have shown an increased risk of presenting cognitive dysfunctions, clinical signs of dementia. Considering the cumulative knowledge from the scientific literature, we can now link Ca2+ signals dysregulations as an upstream issue for hypertension, diabetes and other inflammatory processes, and dementia. Regarding therapeutics, hypertensive patients have been classically treated with Ca2+ channel blockers (CCBs), medicines whose mechanism of action consists in reducing the influx of Ca2+ into the cells. Intriguingly, many clinical reports have been demonstrating off-label effects for CCBs. In hypertensive patients treated with CCBs, it can be observed a lower incidence of dementia such as Alzheimer’s disease. The possible mechanism of action could be attributed to a restoration of the Ca2+ homeostasis. In addition, in hypertensive patients treated with CCBs, it can be also observed an improvement of diabetes status such as glycemic control. A possible mechanism of action could be due to a restoration of insulin secretion, then achieving glycemic control, and a reduction of the pancreatic β-cell apoptosis. Thus, this book puts together fundamental concepts, and current therapies to treat dementia, hypertension, and diabetes, including novel therapeutics coming from the pharmacological manipulation of Ca2+/cAMP signalling. Finally, this book compiles more than 300 references from the scientific literature, including data of high evidence such as meta-analysis and systematic reviews, and discusses pharmaceuticals already approved and clinically safe, e.g., CCBs, then allowing sustained increments in the life quality of age-related patients.

Anthropometry: Types, Uses and Applications
Sébastien Legrand

In series: Human Anatomy and Physiology
Publication Date: 02/17/2021
120 pp.
Softcover: 978-1-53619-269-8. $82.00
e-book: 978-1-53619-293-3. $82.00

In Anthropometry: Types, Uses and Applications, the science of anthropometry, which deals with measurements of human size, shape and proportion, is examined in the context of obesity and overweight, common problems in developed countries and developing countries alike. An estimated 39% of the world’s adult population were overweight and 13% were obese over the past 3 decades, and these problems can cause diseases like type 2 diabetes mellitus (T2DM), cardiovascular diseases (CVD), and several cancers. While body mass index (BMI) is commonly used as a health risk phenotype, it has several limitations because BMI does not accurately depict different components of body composition and is therefore unable to predict the prognostic effect of individual tissues. Other anthropometric measurements, such as waist circumference (WC), waist to hip ratio (WHR), and waist to height ratio (WHtR) each have their advantages and disadvantages. As such, in Chapter 1, different novel anthropometric parameters and cardiovascular risk factors among obesity adults are compared and evaluated. Chapter 2 describes a study of children aged 0-12 years conducted in the Middle Senegal River Valley (MISOES) in 1957-1958. This study was based on representative samples of children in urban and rural areas and included measurements of weight, height, arm circumference, and more. These measurements were compared with American standards and showed an overwhelming anthropometric deficit compared with standards. This study is examined in the context of other studies.
conducted in the region as well as in connection with economic development in the valley. Chapter 3 describes the various methods of assessing body fat and their application for obese individuals to predict the risk of Coronary Heart Disease (CHD), and Chapter 4 reviews the effect of different modalities of physical exercise on anthropometric measurements and body composition in different populations of older adults.

New Studies on Anthropometry
Ricardo J. Fernandes (Associated Professor, Centre of Research, Education, Innovation and Intervention in Sport, Faculty of Sport, University of Porto, Portugal; Porto Biomechanics Laboratory, University of Porto, Portugal), Alexandre Igor Araripe Medeiros (Adjunct Professor, Federal University of Ceara, Fortaleza, Brazil & Master Program in Physiotherapy and Functioning, Federal University of Ceara, Fortaleza, Brazil) and Rui Garganta (Associated Professor, Faculty of Sport, University of Porto, Portugal)

In series: Human Anatomy and Physiology
Publication Date: 05/14/2021
380 pp.
e-book: 978-1-53619-634-4. $230.00
Hardcover: 978-1-53619-532-3. $230.00

By centring its attention on the measurement of the human body and its parts, anthropometry uses diverse methods and instruments, and is useful for a variety of purposes. In a permanently changing world, with science having a fundamental role in modern societies, this book gathers important anthropometric related research from around the globe in a wide field of applications. Readers will be able to get closer to experimental data and literature reviews on different areas, from medical dentistry and podiatry to health and sport sciences. This book will be of interest to graduates, teachers, researchers and general workers in medicine, kinesiology, ergonomics, orthopaedics, motor development and sport sciences and health. In addition, coaches and strength and conditioning staff can use this data to improve the training process. The fifteen chapters allow a better grasp on the science behind anthropometrics and permit to make the bridge between theory and practice by revisiting basic theory and introducing highly specialized topics. Chapters feature helpful tables and illustrations, and a wide list of bibliographic references and key points are presented in the Conclusion for ease of comprehension.

ANESTHESIOLOGY

Management of Postoperative Pain within ERAS Protocols in Surgery
Jaime Ruiz-Tovar, MD, PhD (Department of Bariatric Surgery, Garcilaso Clinic, Madrid, Spain; Professor of Surgery, Universidad Rey Juan Carlos, Madrid, Spain and Professor of Surgery, Universidad Alfonso X, Madrid, Spain)

In series: Anesthesiology and Perioperative Medicine
Publication Date: 08/10/2021
177 pp.
Softcover: 978-1-53619-918-5. $95.00
e-book: 978-1-53619-970-3. $95.00

Enhanced recovery after surgery (ERAS) programs are a multidisciplinary approach in the perioperative care of the patient undergoing major surgery, including pre, intra and postoperative measures, based on the actual evidence published in literature (evidence-based medicine), to improve the postoperative recovery of the patient. ERAS protocols have been widely developed in colorectal surgery, but given their excellent results, new protocols and guidelines have been developed in other surgical fields, including abdominal and extra-abdominal areas. One of the main keypoints in the multidisciplinary approach is a correct management of postoperative pain. Adequate analgesia implies lower morphine requirements and facilitates early postoperative mobilization. Consequently, lower postoperative ileus and earlier oral intake can be achieved. Altogether, this leads to an improvement of the overall quality of life.
Multimodal analgesia is one of the main tools employed for these aims. It consists of the administration of different analgesic drugs by different ways, reducing the risk of toxicity and the appearance of adverse effects. In addition, the different analgesic methods used provide a synergistic effect, maximizing the analgesic result.

The aim of this book is to update the actual evidence about ERAS protocols on different surgical approaches, analyzing the different analgesic schemes used in different approaches, all of them including the principle of multimodal analgesia.

Horizons in World Cardiovascular Research. Volume 21
Eleanor H. Bennington
In series: Horizons in World Cardiovascular Research
Publication Date: 07/14/2021
225 pp.
Hardcover: 978-1-53619-915-4. $250.00
e-book: 978-1-53619-924-6. $250.00
This monograph comprises seven chapters, each detailing recent advancements in the field of cardiovascular research. Chapter One describes the various benefits that progesterone has on the cardiovascular system. Chapter Two aims to describe congenital heart disease in well-characterized syndromes and update the possible causes of genetic origin. Chapter Three aims to update and review the hemodynamic evaluation and percutaneous intervention in congenital heart disease. Chapter Four is focused on the evaluation and treatment of intermediate coronary plaque. Chapter Five presents a review of the literature on the field of disseminated intravascular coagulopathy and analyzes several factors regarding the management of such cases. Chapter Six aims to identify predictors of the vulnerability and assessment in dynamics of the morphology of coronary plaques in patients with stable coronary artery disease. Finally, Chapter Seven reports on the case of a patient with rheumatic heart disease who underwent double valve replacement and incidentally was diagnosed with emphysematous pyelonephritis during his post-operative course in the hospital.

Peripheral Artery Disease: From Risk Factors to Management
Jeremy D. Parks
In series: Vascular Research Developments
Publication Date: 08/10/2021
142 pp.
Softcover: 978-1-53619-968-0. $82.00
e-book: 978-1-53619-986-4. $82.00
Peripheral Artery Disease is a circulatory condition usually caused by the buildup of fatty deposits and calcium in the walls of the arteries. The condition is often painful and chronic but can be managed with lifestyle changes and medication. Chapter One describes the psychological factors associated with peripheral arterial disease. Chapter Two describes how lifestyle changes play an important role in the management of diabetes and peripheral artery disease. Chapter Three explains the role of the family physician in risk management of peripheral artery disease. Lastly, Chapter Four focuses on questionnaires for primary care physicians, which can be used for peripheral arterial disease symptom screening and assessing functional impairment and quality of life of patients.

The VSITE Review
Young Kim, MD (Clinical and Research Fellow, Division of Vascular and Endovascular Surgery, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA)
In series: Vascular Research Developments
Publication Date: 08/11/2021
186 pp.
Hardcover: 978-1-53619-934-5. $160.00
e-book: 978-1-68507-030-4. $160.00
This is a short and comprehensive handbook of current management of vascular surgery. This review is well-organized and aims to cover all topics in vascular surgery. Each of the disease processes encountered in vascular surgery are divided into their etiology, classification schemes, presentation, and management strategies in a bullet-point format.
for quick review. The primary audience for this review book is medical students, surgical residents, and surgical fellows in vascular surgery who are looking for a comprehensive review prior to board examinations and annual in-service testing.

**DENTISTRY**

**Dentistry: Advances in Research and Future Directions**

*Dr. Kirti Chawla (Associate Professor, Department of Periodontology, Faculty of Dentistry, Jamia Millia Islamia, New Delhi, India) and Dr. Lata Goyal (Assistant Professor, Department of Dentistry (Periodontology), All India Institute of Medical Sciences (AIIMS), Bathinda, Punjab, India)*

In series: *Dentistry and Oral Sciences*

Publication Date: 02/10/2021

300 pp.

Hardcover: 978-1-53619-042-7. $230.00

e-book: 978-1-53619-088-5. $230.00

This book focuses on the future direction of dental research in every discipline. In this context, dental research must be deliverable to society, not just to churn out scientific publications but to truly change protocols applied in the clinic. Most of the topics covered in this book discuss the current trends and future advances in clinical dentistry as well as dental research. The book covers advances in research, future perspectives and challenges faced in different disciplines of dentistry. Various chapters discuss the recent advances in materials, methods and diagnostics, as well as their future implications. The contents review the applications of big data, artificial intelligence and machine learning in various branches of dentistry like orthodontics, prosthodontics, periodontics, pediatric dentistry, endodontics and oral and maxillofacial surgery. With the world moving into the digital age and advancing technology, we have collated the latest developments in the field of dental research.

**DERMATOLOGY**

**Neurofibromatosis Type 1: Diagnosis, Prevalence and Quality of Life**

*Richard G. Morgan*

In series: *Dermatology - Laboratory and Clinical Research*

Publication Date: 06/21/2021

132 pp.

Softcover: 978-1-53619-626-9. $82.00

e-book: 978-1-53619-675-7. $82.00

This monograph includes five chapters about neurofibromatosis type 1 (NF1), a condition characterized by changes in skin coloring and the growth of tumors along nerves in the skin, brain, and other parts of the body. Chapter One concerns the evolving molecular biology, targeted therapeutics, and neurocognitive deficits in neurofibromatosis type one. Chapter Two focuses on gastrointestinal stromal tumors and reviews the clinicopathologic features of these tumors and discusses differential diagnostic considerations. Chapter Three explores juvenile myelomonocytic leukemia, a rare hematological malignancy of the pediatric population, and its association with NF1 and distinguishing features in this context. Chapter Four reviews molecular approaches for the diagnosis of NF1, from single-gene testing to next-generation sequencing of gene panels, with a focus on the issues of sensitivity and variant interpretations. Finally, Chapter Five focuses attention on focal cortical dysplasia that has been identified in the population of NF1 patients that have had coexistent hippocampal sclerosis.
**Polycystic Ovary Syndrome: Causes, Diagnosis and Management**

*Katherine Webb*

In series: *Endocrinology Research and Clinical Developments*

Publication Date: 04/27/2021

179 pp.

Softcover: 978-1-53619-527-9. $95.00

e-book: 978-1-53619-586-6. $95.00

This work contains three chapters, each examining the hormonal imbalance disease polycystic ovary syndrome (PCOS) from a different perspective. Chapter 1 describes various characteristics of PCOS and reviews recent approaches for treatment strategies, including antioxidant supplementation, anti-inflammatory agents, and lifestyle modification. Chapter 2 reviews possible health risks and complications of PCOS. Finally, Chapter 3 aims to provide an understanding and wider concept of pathogenesis and intricacy of various pathways pertaining to the heterogeneity of this syndrome that can help to comprehend the disease’s progression in detail.

**Diabetes**

*Diabetes and Diabetic Complications: Current Status and Future Prospective*

*Randhir Singh Dahiya (Professor, M. M. College of Pharmacy, M. M. Deemed To Be University, Mullana, Ambala, India) and Thakur Gurjeet Singh (Assistant Dean & HOD, Chitkara College of Pharmacy, Chitkara University, Punjab, India)*

In series: *Endocrinology Research and Clinical Developments*

Publication Date: 03/24/2021

492 pp.

Hardcover: 978-1-53619-177-6. $270.00

e-book: 978-1-53619-453-1. $270.00

Diabetes mellitus is one of the major causes of morbidity and mortality in the modern world. Persistent hyperglycaemia is responsible for several complications of diabetes, such as diabetic retinopathy, diabetic nephropathy, diabetic neuropathy, diabetic cardiomyopathy, diabetic autonomic neuropathy, diabetic ketoacidosis, diabetic foot ulcer, gestational diabetes, and diabetic mastopathy. With the advancement of technology, several new drugs have been developed for treatment of diabetes and diabetic complications. Moreover, alternative and complementary medicines have also been employed to manage diabetes and its associated complications. Despite the availability of a plethora of therapeutic agents, the management of diabetes and diabetic complications is an uphill battle associated with several limitations. Various leading research groups across the world are investing billions of dollars to develop impeccable solutions for the treatment of diabetes and diabetic complications.

This book focuses on the understanding of recent advancements in the pathogenesis of diabetes and diabetic complications, the molecular basis of the disease and recent advancements in diabetic treatment. The chapters are specifically dedicated to different complications associated with diabetes. Moreover, recent advances in treatments and medications in clinical trials for these complications are explained. Some chapters are dedicated to the use of herbal medicines, alternative and complementary therapy and personalized medicines. Furthermore, the role of epigenetics in diabetic complications is described, as well as the role of antidiabetic drugs and their interactions.

Due to its widespread prevalence, diabetes is presently considered a pandemic. This book provides contemporary information to researchers and health care practitioners about diabetes and diabetic complications, which may pave the way for designing new strategies to manage diabetes and diabetic complications. Moreover, the insights on alternative and complementary medicines will help in providing a background for inclusion of these medicines as an important therapeutic option for treatment of diabetes.
EXERCISE

Exercise: Physical, Physiological and Psychological Benefits
Dr. Dulce Esteves, PhD (Professor and Researcher, Head of Sports Science Department, University of Beira Interior, Covilhã, Portugal) and Dr. Kiara Lewis, FBASES (Head of School, Sport and Exercise, University of Gloucestershire, Oxstalls Campus, Gloucester, UK)

In series: Physical Fitness, Diet and Exercise
Publication Date: 07/22/2021
386 pp.
Hardcover: 978-1-53619-712-9. $230.00
e-book: 978-1-53619-819-5. $230.00

This book presents an overall vision of different aspects of benefits of exercise, such as emotional and psychological benefits, role of exercise in insulin regulation, benefits in conditions such as fibromyalgia, oncologic disease, rheumatic inflammatory diseases, polycystic ovary syndrome, oral health, dementia, mental health and autism spectrum. Potentialities of aquatic exercise for health are also addressed.

Developed within a base of scientific accuracy and precision, this book aims to accomplish a general synthesis of the topics included, so that it can be a scientific dissemination book for students and professionals in the field of fitness, who seek to update their scientific knowledge about the benefits of exercise in different areas of health, as well as the type of exercise that should be performed to prevent different pathologies, but who are not readers of scientific journals. Therefore, this book is a must read for fitness professionals, sport scientists, sports students, and for anyone who wants to deepen their knowledge about the benefits of exercise in different pathologies, and in health in general.

GASTROENTEROLOGY

Gut Bacteria: The Secret to Health
Dr. Ujjwal Sonika (Associate Professor, Department of Gastroenterology, GIPMER, Maulana Azad Medical College, University of Delhi, India) and Dr. Medha Kapoor (Chief Nutrition Consultant, Varsity Skin and Wellness Clinic, New Delhi, India)

In series: New Developments in Medical Research
Publication Date: 01/29/2021
167 pp.
Softcover: 978-1-53619-084-7. $95.00
e-book: 978-1-53619-144-8. $95.00

This book summarizes the latest scientific research around the influence of gut bacteria on health and well-being as well as their impact on lifestyle diseases. Information is presented in easy-to-understand language and is interspersed with fun facts and anecdotal accounts, which help the audience acquire this fundamental and relevant scientific knowledge.

The authors explain the influence of gut bacteria on physical and mental well-being in language friendly to laypeople. They then share insights about the role of gut bacteria in various lifestyle diseases such as diabetes, obesity, and metabolic syndrome utilizing the latest published research in peer-reviewed journals.

The information provided in this book is useful to anyone who wants to lead a healthy life. It is worth reading even for health care professionals as their current curriculum does not entail extensive information about gut bacteria and their significance in health.
Probiotics and their Role in Health and Disease

Yusuf Olsen

In series: Gastroenterology Research and Clinical Developments
Publication Date: 08/11/2021
256 pp.
Hardcover: 978-1-53619-965-9. $195.00
e-book: 978-1-53619-997-0. $195.00

Probiotics are live microorganisms that, when consumed, can provide health benefits, generally by improving or restoring the gut flora. As probiotics have become increasingly popular in recent years, it is important for consumers and clinicians to understand the details of the potential health effects of these supplements. Chapter 1 focuses on the relationship between different types of milk, the growth of probiotics, and relevant characteristics regarding viability, the quality of the dairy product, and the production of undesirable components. Chapter 2 summarizes studies on the probiotic impact of functional foods on the immune system and analyzes the future of the probiotic functional food market. Chapter 3 describes pathways and mechanisms through which probiotics may improve hypothyroidism and its complications. Chapter 4 presents a literature review of intestinal microbiota and bone health and discusses the effectiveness of probiotics in the treatment and prevention of osteoporosis. Chapter 5 presents an FTIR analysis of protein/peptide-based biopolymers used for probiotic encapsulation. Lastly, Chapter 6 collates experimental studies on probiotics with ameliorative effects on arsenic toxicity.

Genetics

Down Syndrome

Vee Prasher, MD, PhD (Consultant and Visiting Professor, The Greenfields, Birmingham, UK) and Flavia H Santos, PhD (Assistant Professor, UCD Ad Astra Fellow, School of Psychology, University College Dublin, Ireland)

In series: Disability and the Disabled - Issues, Laws and Programs
Publication Date: 06/02/2021
283 pp.
Hardcover: 978-1-53619-484-5. $195.00
e-book: 978-1-53619-740-2. $195.00

Life expectancy for adults with Down syndrome has dramatically increased over the last 100 years. Many people with Down syndrome are now living into their 60’s and 70’s. Further, there has been a marked social shift in people with Down syndrome no longer living in large impersonal institutions but now living in the community, often within their family homes or independently. Children are becoming literate and adolescents are acquiring professions and hobbies. This integration into society results in a higher quality of life. Many previously published textbooks have reviewed the medical and psychological conditions associated with Down syndrome. This book aims to highlight the more positive aspects of the life of people with Down syndrome. Fruitful examples, such as the Special Olympics, camping, arts, digital literacy and citizenship actions are included. The book presents early childhood interventions, transition of children to adults, experience with PALS programs, the role of positive behavior support and self-directed support, and finally optimal aging. The aim of this book is primarily to educate families, carers and professionals that people with Down syndrome can achieve excellent well-being in physical, mental and spiritual domains. One’s ability to maximize their own well-being is a human right which also reduces risks and costs associated with mental illness. We hope this book highlights the importance for children and adults with Down syndrome to be seen as valued citizens of their community and allows their voices to be heard.
Stem Cells

Stem Cells in Disease Pathogenesis
Prasad S. Koka (Chief Scientific Director and Professor of DiponEd Institute of Regenerative Medicine Merisis Therapeutics – DiponEd BioIntelligence, Bangalore, India)
In series: Stem Cells - Laboratory and Clinical Research
Publication Date: 06/11/2021
473 pp.
Hardcover: 978-1-53619-630-6, $230.00
e-book: 978-1-53619-658-0, $230.00
The normal functioning of the human female reproductive system is sacrosanct, as it allows for the essential nurturing of offspring. Conditions such as endometriosis and fibroid formation can have devastating consequences to the progeny, as well as the parents, both physically and mentally. This book has several chapters that deal with the role of stem cells in the safer outcome of pregnancies. Mesenchymal stem cells continue to make waves as various researchers dwell on their low immunogenicity to prevent graft rejection when used for therapeutic strategies. Dental pulp-derived stem cells are being sought after to address many therapies. However, researchers must exercise ethical caution to avoid resorting to pulling out the teeth of live, healthy animals, including those qualified for pets. The efficacy of cancer treatments with naturally occurring plant-derived substances and the characterization of cancer stem cells and lesions continue to engage researchers of this ever-perennial disease and its potentially lethal pathology. Stem cells to replenish the pancreatic islet cells from induced pluripotent stem cells are an actively pursued subject in regenerative medicine for diabetes patients. Stem cells in immune responses are also attracting researchers to investigate immune tolerance and autoimmunity.

Geriatrics

Care of the Older African Adult
Seki A. Balogun (Director, Geriatrics Fellowship Program, Associate Professor, Internal Medicine and Geriatric Medicine, Division of General Medicine, Geriatrics and Palliative Care, University of Virginia Health System, Charlottesville, VA, USA)
In series: Geriatrics, Gerontology and Elderly Issues
Publication Date: 03/17/2021
317 pp.
Hardcover: 978-1-53619-295-7, $230.00
e-book: 978-1-53619-395-4, $230.00
Geriatric medicine is generally defined as medical care for adults aged 65 years and older. In Africa and in many developing countries, where the average life expectancy is less than 65 years, medical care of the older adult is still being defined and is in its infancy stages. There are also disparities in health and health care of older adults of African origin in most countries across the world. The aim of this book is to provide a clinical practice resource for physicians and allied health professionals, as they deliver clinical care for older adults of African descent all over the world. It is not intended to be a comprehensive textbook for geriatric medicine. Instead, we focus on common health care issues and unique cultural characteristics that often impact health care utilization in this vulnerable subset of older adults. Chapter authors are medical experts from across several continents, with extensive training and experience in providing medical care for older adults of African descent.
Aging

The Future of Long-Term Care
Pablo Villalobos Dintrans (Programa Centro Salud Pública, Facultad de Ciencias Médicas, Universidad de Santiago, Santiago, Chile)
In series: Geriatrics, Gerontology and Elderly Issues
Publication Date: 03/17/2021
260 pp.
Hardcover: 978-1-53619-263-6. $195.00
e-book: 978-1-53619-396-1. $195.00
Population aging is challenging countries around the globe to adapt their public policy responses to the new world. Long-term care is a relevant topic today both because of the rapid growth in long-term care needs in every country and the lack of responses from governments. The Future of Long-term Care explores some issues related to the implementation of long-term care responses in different countries. Looking at six different cases, the book highlights the need to foster an urgent debate in the area, as well as emphasizing the need for action in the coming years. The examples analyzed show common problems faced by countries trying to respond to their people’s needs, as well as the dissimilar stages, contexts, and paths followed by each one in the endeavour for providing long-term care services to the population. Whether the analysis is carried out in countries with well-established long-term care systems or in places where the debate is just starting, the book proves that this is an area in which many challenges remain. Learning lessons from others is important but providing a space for countries to frame their problems and propose their solutions is crucial. This book contributes to fill this gap and contribute to a debate that is just starting in many places around the world.

HEALTH CARE

Preexisting Conditions and Healthcare Coverage
Sherman S. Krom
In series: Health Care in Transition
Publication Date: 03/17/2021
394 pp.
Hardcover: 978-1-53619-387-9. $230.00
e-book: 978-1-53619-403-6. $230.00
In the context of healthcare in the United States, a pre-existing condition is a medical condition that started before a person’s health insurance went into effect. A pre-existing condition can be something as common as high blood pressure or allergies, or as serious as cancer, type 2 diabetes, or asthma—chronic health problems that affect a large portion of the population. Americans with preexisting conditions need health insurance. This book looks at the legislation concerning preexisting conditions.

IMMUNOLOGY

Autoimmunity versus Carcinogenesis in Tissue Injury
Lawrence M. Agius
In series: Immunology and Immune System Disorders
Publication Date: 06/10/2021
175 pp.
Softcover: 978-1-53619-610-8. $95.00
e-book: 978-1-53619-660-3. $95.00
This book is a critical appraisal of the data and evidence available in literature of the relative roles of the immune response to neoplastic cells. An attempt has been made to render a better understanding of the various modes of impact of the immune response against tumors in general, particularly gliomas in some of the chapters. Autoimmune response is one mode of reactivity to native component cells within the body. Neoplastic transformation, on the other hand, critically necessitated the absence of an effective immune response to the transformed tumor cells in order for the lesion to grow and
metastasize. This book is aimed towards a wider readership, but its particularly for oncologists and the various clinical and academic professionals that care for patients with cancer. It is especially meant to provide a clear exposition of known facts regarding the genesis and further development of neoplasms. Examples of some of the commoner lesions are accounted for.

Vaccines: Operation Warp Speed, Regulation and Safety
Oliver Huerta
In series: Immunology and Immune System Disorders
Publication Date: 01/13/2021
361 pp.
Hardcover: 978-1-53619-059-5. $230.00
e-book: 978-1-53619-096-0. $230.00
In recent months, the Coronavirus Disease 2019 (COVID-19) pandemic has spread globally, with the United States now reporting the highest number of cases of any country in the world. Currently, there are few treatment options available to lessen the health impact of the disease and no vaccines or other prophylactic treatments to curb the spread of the virus. Researchers and product developers are testing numerous types of vaccines—both in the laboratory and in some early-stage testing in humans. This book answers frequently asked questions about current efforts related to research and development of vaccines, their regulation, and related policy issues.

INFECTIOUS DISEASE AND MICROBIOLOGY
COVID-19 by Cases: A Pandemic Review
Sujanthy Rajaram, MD, MPH (Professor of Medicine, Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, Pennsylvania, USA, Critical Care Medicine, Gagnon Cardiovascular Institute - Morristown Medical Center, Atlantic Health System, Morristown, New Jersey, USA), Jacqueline Darcey, MD (Assistant Professor of Medicine Sidney Kimmel Medical College of Thomas Jefferson University Director of Medical Education Department of Medicine, Morristown Medical Center, Morristown, New Jersey, USA Atlantic Health System, Morristown, New Jersey, USA), Anthony Longo, MD (Department of Medicine, Morristown Medical Center, Morristown, New Jersey, USA Atlantic Health System, Morristown, New Jersey, USA) and Nicole Burak, MD (Department of Medicine, Morristown Medical Center, Morristown, New Jersey, USA Atlantic Health System, Morristown, New Jersey, USA)
In series: New Developments in Medical Research
Expected Publication Date: 03/09/2021
442 pp.
Hardcover: 978-1-53619-238-4. $230.00
A clinical account written by front-line providers, COVID-19 by Cases is the first comprehensive review text on COVID-19. As such, the inventive format features a case-based and systems-based review of observations, clinical knowledge, basic science, ethics, and personal experiences during the COVID-19 pandemic. With each systems-based chapter encompassing a case report, literature review, and discussion, COVID-19 by Cases is intended for a broad audience, including clinical providers, clinical educators, and students. It also serves as a standalone account to preserve this unique time in human history. COVID-19 by Cases is a multi-institutional effort with input from hospitalists, outpatient physicians, specialists, residents, nurses, pharmacists, clinical educators, and students.
Multiple federal agencies, through Operation Warp Speed, continue to support the development and manufacturing of vaccines and therapeutics to prevent and treat COVID-19. As of January 2021, two of the six vaccines supported by Operation Warp Speed have been authorized for emergency use, and vaccine distribution and administration have begun. Effective coordination and communication among federal agencies, commercial partners, jurisdictions, and providers is critical to successfully deploying COVID-19 vaccines and managing public expectations, especially because the initial supply of vaccine has been limited.
provide visual and verbal information, can help students learn by taking advantage of “dual processing,” wherein information is processed through two channels instead of through a single channel. This approach to teaching is speculated to be particularly beneficial for students with ADHD.

**Dizziness: Prevalence, Risk Factors and Management**

Francesco Martines, MD, PhD (Associate Professor of Audiology, Universita’ degli Studi di Palermo, Palermo, Italy; Istituto Euromediterraneo di Scienza e Tecnologia – IEMEST, Palermo, Italy) and Pietro Salvago, MD, PhD (Medical Doctor and Consultant, Universita’ degli Studi di Palermo Palermo, Italy)

In series: Neuroscience Research Progress
Publication Date: 05/24/2021
362 pp.
Hardcover: 978-1-53619-668-9. $230.00
e-book: 978-1-53619-692-4. $230.00

Vertigo and dizziness are two conditions whose prevalence throughout an individual’s lifespan is estimated to range from 20% to 50% with a marked incidence regarding women. Starting from the frequency of these symptoms, the book explores different aspects of the otoneurology field and the vestibular diseases, from the anatomy of vestibular organs to the pharmacological, surgical and rehabilitative treatment of posterior labyrinth disorders. In particular, the benign paroxysmal positional vertigo (BPPV), Meniere’s disease and dizziness in patients suffering from temporomandibular joint disorders and vertebral fractures are described. A focus on specific techniques to evaluate vestibular disorders is included and the video head impulse test (vHIT) and vestibular evoked myogenic potentials (VEMPs) application are shown to study each part of the posterior part of the inner ear.

A specific chapter is dedicated to the management of postural disorders in vestibular dysfunctions, from the postural evaluation to the many different protocols of vestibular rehabilitation. The principles of pharmacotherapy are described; medications to treat dizziness and vertigo can include anticholinergics, antihistamines, benzodiazepines and other drugs including antiemetics, sympathomimetic and calcium antagonists.

Finally, the principles underlying the surgical strategies in the management of the vertiginous patients, furthermore a general description of the technical aspects of each procedure are provided to show indications, potentials, limits, and contraindications of vestibular surgery.

**Horizons in Neuroscience Research. Volume 43**

Andres Costa and Eugenio Villalba

In series: Horizons in Neuroscience Research
Publication Date: 05/24/2021
229 pp.
Hardcover: 978-1-53619-705-1. $250.00
e-book: 978-1-53619-710-5. $250.00

This book contains twelve chapters describing recent advancements in neuroscience research. Chapter One summarizes the role of cerebrospinal fluid biomarkers in the health and disease of dogs. Chapter Two discusses the neuroprotective effects of erythropoietin. Chapter Three focuses on the development of several mesencephalic areas using tyrosine hydroxylase immunocytochemistry and tritiated thymidine autoradiography. Chapter Four presents a study of the cerebellum of different age members of the same family using gravitational mass spectroscopy. Chapter Five explores how the conformations of nucleosomes and their states in the spirals of solenoids are responsible for the processes of short-term and long-term memory as well as other brain functions. Chapter Six deals with cognitive decline and depression associated with severe asymptomatic carotid stenosis. Chapter Seven describes the surgical technique of extensive craniofacial reconstruction for unilateral anterior plagiocephaly treatment. Chapter Eight gives a model of the molecular cause of pain based on a study of human fingers conducted via gravitational mass spectroscopy. Chapter Nine deals with the role of globules in the work of the brain and the dynamics of their conformations. Chapter Ten explains how chromosome topology is formed in vivo. Chapter Eleven explores the relationship between mild traumatic brain injury and residual cognitive impairment. Finally, Chapter Twelve examines stochastic resonance in the context of human sensory systems.
Hydrocephalus: From Diagnosis to Treatment
Richard D. Campbell
In series: Neurology - Laboratory and Clinical Research Developments
Publication Date: 01/01/2021
156 pp.
Hardcover: 978-1-53619-079-3. $160.00
Softcover: 978-1-53619-620-7. $95.00
This monograph is comprised of seven chapters, each of which discusses hydrocephalus, a chronic neurological condition caused by an abnormal accumulation of cerebrospinal fluid within cavities of the brain. Chapter One provides an overview of hydrocephalus and points out current limitations of understanding this condition. Chapter Two details treatment options for hydrocephalus, including the traditional use of surgery for placement of a shunt as well as more experimental methods. Chapter Three describes an alternate procedure for treating hydrocephalus, called endoscopic third ventriculostomy, which entails creating an opening on the floor of the third ventricle instead of implanting foreign material. Chapter Four also provides information about endoscopic third ventriculostomy, including factors influencing the success rate of the procedure. Chapter Five describes various surgical methods for treating hydrocephalus in children. Chapter Six concerns the technique of neuroendoscopic lavage, which enables a partial or complete hematoma evacuation in addition to haematoccephalus washing. Lastly, Chapter Seven details the rehabilitation process for patients who have undergone surgery for hydrocephalus.

Imaging and Multiomic Biomarker Applications
Yongxia Zhou, PhD (Imaging Scientist, University of Southern California, Los Angeles, CA, USA, Columbia University, New York, NY, USA)
In series: Neuroscience Research Progress
Publication Date: 01/20/2021
251 pp.
Hardcover: 978-1-53619-079-3. $160.00
e-book: 978-1-53619-086-1. $160.00
The well-known Alzheimer’s Disease Neuroimaging Initiative (ADNI) Center provides the most advanced, comprehensive, multiparametric and up-to-date biomarkers for mild cognitive impairment (MCI) and early Alzheimer’s disease (AD) projects, including neuroimaging, clinical assessments, biospecimens and genetic data. Recent developments in imaging techniques, including new molecular tracers for imaging disease burden and systematic multi-modal integration, have emerged to overcome the limitations of each single modality and individual-dependent variability. The MRI-based high-resolution structural and morphological changes in the brain, such as atrophy, and the abnormal activity/connectivity patterns of the hippocampus subfields and default mode network (DMN) modulation, together with the amyloid and tau neuropathological quantification using PET molecular tracers, could be used to predict brain changes and cognitive performance declines in early AD, including transitional MCI. Finally, a generalized and integrative model with multiple biomarkers could be built to target disease progression and symptom prediction as well as to optimize patient management.

Multiomics investigates metabolic, lipidomic, genomic, transcriptomic and proteomic perspectives by presenting an accurate biochemical profile of the organism in health and disease. The Alzheimer's Disease Metabolomics Consortium (ADMC) in partnership with ADNI is creating a comprehensive biochemical database for patients in the ADNI1 cohort, consisting of eight metabolomics datasets. The vast majorities of biospecimen data provide rich biological information to the human brain at normal and dementia status. One of the purposes is to reveal the connections between disease and multiomics such as obesity, hypertension, cholesterol imbalance and inflammation risks that might lead to neurodegenerative disease. Multiomic biomarker developments in the dementia field have provided earlier clues to novel treatments that help correct metabolic dysfunction and delay disease progression. Furthermore, the assembling of multiomics-based biomarkers including metabolites and lipids, cholesterol biosynthesis, purine metabolism, lipoprotein, bile acids, and genetics as well as their relation to the pathological amyloid and tau network could improve disease diagnosis sensitivity and reveal more diverse and complementary molecular pathways to allow for the advancement of early AD diagnosis and therapeutic prevention. In this book, we report on the significant differences of multiple biomarkers from the ADNI database including neuroimaging, clinical assessments and multiomic biospecimen/genetic data in MCI and early probable AD (pAD), and elucidate the interconnections among different metrics at various domains. Classification results with high accuracies (0.95-1) for each early dementia subtype including early MCI (EMCI), late MCI (LMCI) and pAD, and better prediction of clinical symptoms is achieved with these comprehensive biomarkers. Further longitudinal changes of imaging and neuropsychological biomarkers, and inter-correlations with baseline parameters are examined for a better illustration of disease progression association. Additionally, an analysis of the post-traumatic stress disorder biomarkers is performed with high classification accuracy. With illustrative and rigorous data analyses and confirmative results, this book provides readers with a full spectrum of biomarker research for early dementia diagnosis and treatment, and helps convey the technical development and data evaluation perspectives in advanced medical imaging and various disease application fields.
Joint Imaging Applications in General Neurodegenerative Disease
Yongxia Zhou, PhD (Imaging Scientist, University of Southern California and Columbia University, USA)

In series: Neuroscience Research Progress
Publication Date: 04/05/2021
170 pp.
Softcover: 978-1-53619-435-7. $95.00
e-book: 978-1-53619-478-4. $95.00

Multiple advanced neuroimaging applications in various neurodegenerative diseases including Parkinson’s disease (PD), frontotemporal dementia (FTD), vascular dementia (VaD) and autism spectrum disorder (ASD) are covered in this book. Relatively novel techniques such as integrated PET/MRI and independent component analysis (ICA)-based dual regression (DR) methods were developed to capture multi-level molecular/functional and structural/microstructural as well as high-order inter-network coordination abnormalities. For instance, both PET dopamine transporter and striatal binding ratio reductions in the caudate and putamen were found in PD, consistent with the diffusion tensor imaging (DTI) fractional anisotropy (FA) reduction and fMRI voxel-mirrored homotopic correlation (VMHC) in the substantia nigra (swallow tail sign signature of PD). Furthermore, dopamine storage and pathway labeled with the vesicular monoamine transporter tracer identified decreased densities in the bilateral mesial temporal cortex, caudate, orbitofrontal cortex, left frontal and occipital cortices, consistent with the morphological atrophy, functional connectivity and conductivity deficits in PD. Similarly in FTD patients, the advanced MRI methods such as ICA-DR, VMHC, voxel-based morphometry (VBM) as well as PET tracer for amyloid accumulation and FDG glucose uptake identified typical brain atrophy, structural dysconnectivity, glucose hypometabolism, higher neuropathological burden, lower interhemispheric correlation as well as disrupted intra- and inter-network modulation in the orbitofrontal and anterior temporal cortices together with insular and frontoparietal networks, with the cerebellum and dorsolateral attentional network as typical compensations.

In this book, we have developed and generalized conventional and advanced imaging methodologies to several common neurodegenerative diseases. For instance, we have identified the unique imaging signature for each disease type and the underlying neuropathological mechanism connections with conductivity, structural and microstructural connectivity, intra- and inter-network correlation, systematic integration and efficiency analyses. Our objective, comprehensive and confirmative results indicated great potential in utilizing these quantifications for accurate disease classification and staging. With solid imaging evidence, thorough analysis and generalized applications, this book should capture the interests of readers in the broad fields of brain science, disease diagnosis and effective treatment.

Living with Aphasia
Joseph A. Barrow

In series: Speech and Language Disorders
Publication Date: 07/27/2021
184 pp.
Softcover: 978-1-53619-899-7. $95.00
e-book: 978-1-53619-927-7. $95.00

Aphasia is a debilitating disorder, resulting from brain damage, that causes a person to lose the ability to understand or express speech. While aphasia is sometimes permanent, some people can completely recover their language ability spontaneously or with treatment. This monograph consists of four chapters that provide details about the disorder and describe various treatment options. Chapter One reports non-invasive brain stimulation’s contribution to the study of phonological, syntactic and semantic language processing, as well as the recent interest in connections between language and motor systems. Chapter Two describes linguistically focused intensive group therapy and discusses the specific needs of adolescents and young adults with acquired aphasia. Chapter Three presents a case report of a patient with post-traumatic aphasia. Chapter Four provides details about subcortical aphasia, which is a language disorder caused by injuries in subcortical areas, such as the basal ganglia, white matter tracts, and thalamus, but not by injuries in cortical language areas, such as Wernicke’s and Broca’s areas.
Neuromanagement: Neuroscience for Organizations
Michela Balconi, PhD (Professor of Psychophysiology and Cognitive Neuroscience, International Research Center for Cognitive Applied Neuroscience (IrcCAN), Catholic University of the Sacred Heart, Milan, Italy; Research Unit in Affective and Social Neuroscience, Department of Psychology, Catholic University of the Sacred Heart, Milan, Italy)

In series: Neuroscience Research Progress
Publication Date: 06/21/2021
172 pp.
Softcover: 978-1-53619-562-0. $95.00
e-book: 978-1-53619-650-4. $95.00
This book focuses on applying neuroscience to organizational and managerial contexts, observing its possible applications, present and future potentials, and highlighting the possible criticalities of using neuroscientific paradigms and techniques applied to the management field. Specifically, the first part of the volume aims to offer an overview of how the adoption of an approach and a “neuroscientific mentality” allows to analyze and promote a change, with a view to the promotion of some fundamental components in the organizational context, such as leadership, confident behavior, business morality and ethics, and stress management. In particular, each of these components is observed through a neuroscientific perspective to offer elements for the promotion of a climate of well-being in the workplace. These aspects are also taken up in the second part of the volume, which focuses mainly on the application of neuroscience to the organizational context, providing evidence on how the use of specific neuroscientific techniques and paradigms, such as those of neuroassessment and neuroenhancement, allows to evaluate and strengthen the executive functions of individuals, to better manage the stress levels and the emotional load of individuals by improving their work performance. In addition to highlighting the impact and effectiveness of some neuroscientific paradigms, the second part of this book highlights the impact of Industry 4.0 on automation and technological developments, such as distance learning in the workplace, from a neuroscientific point of view. Therefore, this book aims to provide a broad overview of how neuroscience within the organizational context allows to fully explore individuals’ behavior by “modifying” it to promote well-being, functional management of stress, and promote a generative climate and encourage trust.

Perspectives on Consciousness
Paul Dennison, PhD (Consultant Psychotherapist and Independent Neuroscience Researcher, London, UK)

In series: Neuroscience Research Progress
Publication Date: 03/17/2021
410 pp.
Hardcover: 978-1-53619-323-7. $230.00
Perspectives on Consciousness bridges ancient views on consciousness with modern neuroscience, quantum physics and higher-dimensional mathematics, as well as real-world application to raising awareness of consciousness in teaching. Following a description of neurobiological approaches towards understanding the subjective nature of conscious experience in Chapter 1, including the enigma of qualia, the challenging dilemmas of understanding damaged consciousness following brain injury are reviewed in Chapter 2. The nature of qualia is taken up again in Chapter 3, which introduces a Qbit theory of consciousness based on inspirations and insights from quantum mechanics, biology, information theory and thermodynamics.

Chapters 4, 5 and 6 bridge ancient and modern views on consciousness, ranging across ancient yet impressively sophisticated Buddhist understandings of perception, feeling and cognition (Chapter 4), the also ancient Jewish mystical tradition of the kabbalistic Zohar (Chapter 6), and insights into brain activity drawn from deep states of meditation (Chapter 5). Chapter 5 also includes a discussion of hierarchies of consciousness including likely interactions at the global-societal level with implications to understanding climate change and the Covid-19 pandemic. Chapter 7 takes readers to the outer reaches of discussions on consciousness to introduce ideas of higher-dimensional structures, and the problem of understanding consciousness within mainstream physics, before the final Chapter 8 sets a refreshing and timely change of pace to consider the need to help children, and their teachers, develop a broader awareness of consciousness as part of life in the global “family.”

The book will be of interest to a general scientific audience, as well as those with specialized interests in neuroscience and consciousness studies, education and philosophy, as well as Buddhist and Kabballistic spiritual traditions.
Typical Imaging in Atypical Parkinson's, Schizophrenia, Epilepsy and Asymptomatic Alzheimer's Disease

Yongxia Zhou, PhD (Scientist, Departments of Biomedical Engineering and Radiology, University of Southern California, CA, USA)

In series: Neuroanatomy Research at the Leading Edge
Publication Date: 08/10/2021
152 pp.
Softcover: 978-1-53619-939-0. $95.00
e-book: 978-1-68507-016-8. $95.00

The aim of this new book is to provide readers some new insights into applying various imaging techniques to diagnose and distinguish subtypes and rare/comorbid cases of several brain disorders more accurately. Specific and comprehensive imaging features utilized that could pinpoint the exact abnormalities of these atypical and/or rare diseases are the highlights of this book, which will provide guidance for better disease mechanism interpretation.

Central Nervous System

Neurocysticercosis: From Diagnosis to Treatment

Mark A. Chavez

In series: Neuroscience Research Progress
Publication Date: 07/01/2021
115 pp.
Softcover: 978-1-53619-791-4. $82.00
e-book: 978-1-53619-825-6. $82.00

Neurocysticercosis, a preventable parasitic infection of the central nervous system caused by tapeworm, is a serious, potentially fatal disease that can cause neurologic syndromes such as epileptic seizures. Chapter One of this monograph describes the existing treatment options for neurocysticercosis, along with possible therapeutic alternatives under different drug development phases. Chapter Two explains the difficulties associated with correctly diagnosing neurocysticercosis, resulting from its varied clinical presentation, and mentions current guidelines of diagnostic criteria for neurocysticercosis. Chapter Three describes the various merits and demerits of techniques for detecting the parasites associated with neurocysticercosis, which include radioimaging, genotyping of cysts, and antibody, antigen, and nucleic acid detection in body fluids.

Tumors of the Central Nervous System: Clinical Aspects and Symptom Management

James A. Reed

In series: Neuroscience Research Progress
Publication Date: 06/10/2021
99 pp.
Softcover: 978-1-53619-628-3. $82.00
e-book: 978-1-53619-648-1. $82.00

This book contains seven chapters, each of which provides information about tumors of the central nervous system. Chapter One reviews the clinical, pathological, molecular and prognostic features of Embryonal Tumor with Multilayered Rosettes (EMTR). Chapter Two reviews the clinicopathologic features and differential diagnoses of Dysembryoplastic neuroepithelial tumor (DNET), a rare low grade glioneuronal neoplasm which mostly affects the temporal lobe. Chapter Three reviews the clinical and pathologic features of Rosai-Dorfman disease (RDD), a rare, benign, idiopathic lymphohistiocytic proliferative disease. Chapter Four reviews the clinical and pathologic features of the rare central nervous system neoplasm called angiocentric gliomas. Chapter Five reviews the histological and clinical features of chordoid gliomas, rare neoplasms of the central nervous system. Chapter Six provides a clinicopathologic review of dysplastic cerebellar gangliocytomas, also known as Lhermitte-Duclos disease. Finally, Chapter Seven reviews the clinicopathologic features of cerebellar liponeurocytoma, a rare cerebellar tumor which is marked by admixed neurocytic and lipoma-like components.
Sleep and Sleep Disorders

Advances in Sleep Apnea: Detection, Diagnosis and Treatment
Francesco Lorusso, MD (Specialist, Otolaryngology and Head and Neck Surgery, Otolaryngology Department, University Hospital Paolo Giaccone Palermo, Italy) and Salvatore Gallina (Associate Professor, Otolaryngology, University of Palermo, Director of Otolaryngology Department, University Hospital Paolo Giaccone Palermo, Italy)

In series: Sleep - Physiology, Functions, Dreaming and Disorders
Publication Date: 06/25/2021
357 pp.
Hardcover: 978-1-53619-758-7. $230.00
e-book: 978-1-53619-797-6. $230.00

This book explores the diagnosis and treatment of Sleep Apnea Syndrome involving various medical figures for whom interactive and multidisciplinary work is essential. This is because sleep apnea is a very wide field that ranges from pediatric apneas, often of organic origin and usually connected to adenotonsillar hypertrophy or craniofacial anomalies, to adult apneas that can have an obstructive origin, especially in the case of overweight and particular conformations of the upper respiratory tract, and/or a central origin due to neurological pathologies. Particular attention has been paid to diagnosis and new technologies that go alongside the classic diagnostic tools, especially in the screening of pathology. The approaches described concern both medical and surgical treatments. Particular attention was paid to the treatment of associated comorbidities and to the physical rehabilitation of apnoic patients. Given the complexity of the pathology and the pictures associated with it, the purpose of this book is to make known the new frontiers both in the diagnostic and therapeutic field that can be used to develop a therapeutic plan tailored to the patient, since not all apnea patients are the same.

NUTRITION AND DIET

Gluten-Free Diets and Health
Hisham Castillo

In series: Nutrition and Diet Research Progress
Publication Date: 02/26/2021
178 pp.
Softcover: 978-1-53619-327-5. $95.00
e-book: 978-1-53619-345-9. $95.00

Over the past several decades, gluten-free diets have attracted wide public interest, in large part due to their efficacy in treating celiac disease. However, such diets present nutritional risks, as gluten-free products can be low in protein, dietary fiber, and other nutrients. Chapter One of this book discusses techniques for improving the nutritional value of gluten-free foods as well as their textural and sensorial features. The second chapter discusses gluten-free cheese bread enriched with essential fatty acids, and how such enrichment improves the overall quality of the food. Similarly, the third chapter explores the technological and sensory properties of gluten-free muffins made with chickpea flour and describes the effects of various muffin formulations. The final chapter describes gluten-free Mexican sweet bread and analyzes the physicochemical characteristics of taro flour and gluten-free muffins made with taro flour.

Human Milk: Nutritional Content and Role in Health and Disease
John I. Cole

In series: Nutrition and Diet Research Progress
Publication Date: 06/28/2021
142 pp.
Softcover: 978-1-53619-713-6. $82.00
e-book: 978-1-53619-824-9. $82.00

Mother’s milk provides a wide variety of health benefits for infants, which is why breast feeding is highly recommended all over the world. This monograph provides details about the nutritional and bioactive properties of human milk, explaining the significance of this natural source of food. Chapter One describes how lactic acid bacteria present in human
milk plays a critical role in establishing an immunocompetent microbiome in newborns, inducing multifarious health-promoting activities required to successfully initiate the life process. Chapter Two describes how the fatty acid profile of breastmilk varies according to the needs of the infant, particularly depending on the gestational age of the newborn, but also as a result of the mother’s diet. Chapter Three summarizes the current literature on the composition of human milk and its life-course functional effects on health outcomes.

**Micronutrients and their Role in Health and Disease**

*Horace A. Howard*

In series: *Nutrition and Diet Research Progress*

Publication Date: 07/27/2021

107 pp.

Softcover: 978-1-53619-843-0. $82.00

e-book: 978-1-53619-872-0. $82.00

Micronutrients, which include vitamins and minerals, are an essential component of any healthy diet. Though the body only requires small amounts of micronutrients, they nonetheless play a critical role in health and disease. The first chapter of this book includes a review of the relationships between micronutrient levels and clinical outcomes in patients with chronic kidney disease and the effects of different types of renal replacement therapy on micronutrient levels. The second chapter focuses on the use of micronutrient phytochemicals for optimizing health in normal subjects to assure they have the best possible immune response to an adverse disease event. Finally, the third chapter summarizes the data on the possible benefits and harms of vitamin supplements and essential minerals in pediatric ICU patients.

**Fruits, Vegetables and Nuts**

*Blueberries: Nutrition, Consumption and Health*

*Laura M. Williams*

In series: *Nutrition and Diet Research Progress*

Publication Date: 05/05/2021

236 pp.

Hardcover: 978-1-53619-568-2. $160.00

e-book: 978-1-53619-646-7. $160.00

This book comprises four chapters about the various properties of blueberries. Chapter One assesses the impact of various processing methods on the quantity and profile of anthocyanins, which are the most abundant flavonoids in blueberries. Chapter Two describes how dehydration impacts the bioactive compounds and nutritional value of blueberries. Chapter Three explains the health benefits of consuming foods rich in flavonoids, like blueberries, such as a reduction in heart attack incidence, blood pressure and arterial stiffness. Chapter Four discusses the effects of the different processing operations that blueberries are subjected to by comparing the properties of processed blueberries and fresh blueberries.

**OBSTETRICS AND GYNECOLOGY**

*Fertility Preservation in Gynecological Cancer: Current Management and Novel Insights*

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317 pp.

Hardcover: 978-1-53619-179-0. $230.00


This book was written for the complex scenario of fertility-sparing management in gynecological cancer. In reproductive age women, appropriate counseling is mandatory in
Hyaluronic Acid - Role in Pregnancy and Novel Applications in the Gestational Period
Vittorio Unfer (A.G.UN.CO Obstetrics and Gynecology Center, Rome, Italy)
In series: Obstetrics and Gynecology Advances
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179 pp.
Softcover: 978-1-53619-743-3. $95.00
e-book: 978-1-53619-873-7. $95.00
This book offers a valuable clinical resource for health professionals and researchers. It gives an overview about the pivotal role played by High Molecular Hyaluronic Acid (HMW-HA) during pregnancy and its applications in the gestational period. Hyaluronic acid is a critical component of the extracellular matrix (ECM) and one of the most interesting, versatile and useful natural molecules in almost all areas of biology. As widely reported, HA has a pivotal role in several phases of pregnancy, from fertilization to labour and it displays several regulatory activities and functional properties based on its different molecular weight. While low molecular weight hyaluronic acid (LMW-HA) is widely used in gynaecology for menopause-related symptoms or in association with physical treatments (e.g., radiation therapy) to counteract the onset of adverse events, HMW-HA has been poorly evaluated as clinical treatment. Its physiological presence in the extracellular matrix of all the main organs and tissues involved in pregnancy (uterus, cervix, placenta, decidua, chorion, amnios, ovarium etc.) suggests the importance of this molecule for a successful gestation. Several papers, in particular, shed light on its importance for blastocyst adhesion and implantation, for an efficient immune tolerance and for the correct development of haemo-lymphatic system. It has been demonstrated that HMW-HA has regulatory activity on the PGRMC1 expression, a specific progesterone receptor expressed in maternal and foetal-maternal interface tissues, involved in uterine quiescence. On these premises, the administration of HMW-HA may represent an interesting treatment opportunity for the prevention of recurrent miscarriage and pre-term birth (PTB) in patients with risk factors. The high safety profile of HMW-HA further supports its administration in pregnancy. All these interesting topics will be discussed and deepened in this book, giving the opportunity to explore in detail every aspect of this effective and attractive molecule, thus helping physicians to assess the state of connective tissues in pregnancy and to evaluate the risk for the onset of gestational complications.

Intracytoplasmic Sperm Injection (ICSI): Clinical Considerations, Outcomes and Potential Health Effects
Murid Javed, PhD (Laboratory Director at OriginElle Fertility Clinic and Women’s Health Centre, Ottawa and Montreal, Canada)
In series: Human Reproductive System - Anatomy, Roles and Disorders
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245 pp.
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e-book: 978-1-53619-793-8. $160.00
This book provides comprehensive information on Intracytoplasmic Sperm Injection (ICSI), its clinical considerations, outcomes and potential health effects. Male and female infertility is increasing all over the world. The basic techniques of assisted reproduction like ovulation control and intrauterine insemination are ineffective if the sperm quality or number is inadequate. The advanced fertilization techniques are in-vitro fertilization (IVF) and ICSI. In 15% cases of infertility, IVF results in total failed fertilization; therefore, ICSI must be used. Some clinics exclusively use ICSI for all infertility patients due to its reliability of fertilization outcome or to avoid total fertilization failure. ICSI was first used in humans in 1992. Since then, tremendous advances have been made in assisted reproductive technology. ICSI has enabled even those men who have rare sperm in their testes to father a biological child. If no sperm are observed in the ejaculate, in almost all cases, they can be recovered from the testicles. Such retrieved sperm can only be used by ICSI. Therefore, its understanding is essential not only for medical staff but also for patients suffering from infertility.
This book is highly recommended for patients suffering from infertility or currently undergoing infertility treatment. It explains the factors affecting ICSI success rate. In ICSI, the embryologist picks a sperm for injection to fertilize oocytes whereas in intrauterine insemination and IVF, one sperm penetrates naturally. This manual selection of sperm has raised concerns especially in those patients suffering from severe male factor infertility. The nature of sperm defects varies and could be congenital, acquired or genetic. Children born through ICSI are, therefore, considered at higher risk of carrying the defect. Many investigations have been carried out to compare incidence of the defects between children conceived naturally and conceived through ICSI. Additional technologies have been developed to ensure the birth of a normal child. These include pre-implantation genetic testing and non-invasive prenatal testing. This book addresses these concerns and explains the health effects on children born through ICSI. This book is very useful for medical students, andrologists, embryologists, nurses or anyone else interested in learning basic or advanced knowledge of assisted reproductive technology, especially ICSI. The authors of the chapters of this book are highly experienced and from different parts of the world. Many of them are directing very busy ART laboratories at leading infertility clinics in the United States of America, Canada and the Middle East.

**Uterine Fibroids from Diagnosis to Treatment**

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In series: Obstetrics and Gynecology Advances

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156 pp.

Softcover: 978-1-53619-184-4. $95.00
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Uterine fibroids (UFs) are benign masses that develop from the smooth muscle cells and connective tissue of the wall of the uterus under the influence of genetic and/or hormonal stimuli. These benign tumors are postulated to arise from a single, genetically altered, mesenchymal cell under the influence of gonadal hormones namely progesterone and 17β-estradiol.

The annual societal cost for fibroids is estimated up to 34 billion dollars, calculated through combined expenditures for medical management of symptomatic fibroids, lost work attributable to diagnosis of fibroids, and obstetrical complications of fibroids in Italy, for example, they afflict 3 million women.

Estimates say that 20 to 80% of women experience them throughout life, and are the most common form of benign cancer in childbearing age.

Various surgical and medical options are currently available to manage symptomatic uterine fibroids. The choice of the appropriate therapeutic approach for UFs depends on several factors, including women’s age, parity, childbearing aspirations and wish to preserve fertility, extent and severity of symptoms, size, number and location of myomas, risk of malignancy and proximity to menopause. This book reviews the diagnoses, management and treatment of uterine fibroids.

**An Occupational Therapist’s Role in Health Literacy and Integrated Care**

Brittany Ferri (Founder & Occupational Therapist, Simplicity of Health, Rochester, NY, USA)

In series: New Developments in Medical Research

Publication Date: 05/14/2021

198 pp.

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e-book: 978-1-53619-679-5. $160.00

An Occupational Therapist’s Role in Health Literacy and Integrated Care gives students a look into one of the most important roles of a therapist: health educator. This book describes the basics of health literacy, its intersection with preventative care, and how it can be incorporated into occupational therapy intervention. With a detailed look at theory bases and frames of reference, An Occupational Therapist’s Role in Health Literacy and Integrated Care aims to create more well-informed and effective rehabilitation providers who promote health for all populations and diagnoses. This book also offers a look at many integrated care approaches that can be used on a macro and micro level to improve the care that patients receive. This is a comprehensive resource for anyone looking to delve deeper into the world of preventive and integrated medicine.
ONCOLOGY

A Biochemical View of Head and Neck Cancers

Dorota Bartusik-Aebisher (Professor, Medical College of The University of Rzeszow, Poland) and David Aebisher (Professor, Medical College of The University of Rzeszow, Poland)

In series: Cancer Etiology, Diagnosis and Treatments
Publication Date: 03/04/2021
144 pp.
Softcover: 978-1-53619-370-1. $82.00
e-book: 978-1-53619-376-3. $82.00

This book addresses major problem in the management of patients with cancer of the head and neck. The authors have written six chapters of particular importance for head and neck cancer diagnosis, treatment, and rehabilitation. Chapter 1 describes treatment of patients with squamous cell carcinoma of the head. Chapter 2 presents treatment of patients with squamous cell carcinoma of the neck. Biochemical studies of head and neck cancer treatments are presented in Chaprer 3. In chapter 4 biochemical studies of head and neck cancer biomarkers are presented. Photodynamic therapy (PDT) exploits light interactions and photosensitizers to induce cytotoxic reactive oxygen species. Photodynamic diagnosis (PDD) uses the phenomenon of photosensitizer emitting fluorescence to distinguish some tumors from normal tissue. PDT offers a therapeutic solution that has been found to be cost-effective compared to palliative major surgery or chemotherapy. However, despite the significant improvement noted in preclinical and clinical trials, PDT is still not considered the standard treatment option for head and neck cancer. Multiple photosensitizers have been studied and tumors have been treated in a variety of head and neck sites over the last 30 years. Photodynamic therapy is a palliative treatment option for head and neck squamous cell carcinoma patients which induces local inflammation and alters tumor cell morphology.

A Comprehensive Textbook of Primary and Metastatic Tumors of the Skeletal System

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In series: Cancer Etiology, Diagnosis and Treatments
Publication Date: 02/10/2021
243 pp.
Hardcover: 978-1-53619-104-2. $195.00
e-book: 978-1-53619-159-2. $195.00

This book is a comprehensive textbook of primary and metastatic skeletal system tumors which provide clinical, pathological and imaging data of the skeletal system tumors appropriate for all clinicians who are practicing in oncology wards, especially orthopaedic surgeons. In this book, we discuss the diagnosis and treatment of skeletal system tumors, their clinical signs, and symptoms and we also discuss their pathological aspects of the tumors. We conclude with important images such as plain radiographs, CT scans, MRIs, and bone scan. The most helpful data of each tumor is brought together in order to help patients and clinicians of this widespread part of medicine.
Recognizing rare diseases’ impracticability of having extensive clinical trials necessary for regulatory approval, the US Orphan Drug Act appropriately facilitates the commercialization of “orphan drugs”. However, even common cancers also have rather specific but uncommon clinical situations for which extensive clinical trials are hardly practicable. Moreover, although such very costly and extensive trials often depend on industry support, uncommon situations are unattractive. Eventually, many specific treatments for designated clinical oncology situations often lack regulatory approvals merely because of suboptimal trial data. Now, this EBM (evidence-based medicine) book by expert authors with first-hand clinical experience is about off-label but acceptable treatment options. The attempt is to patch up the low response rates and considerable adverse events of novel immunotherapy. Currently, without any such off-label treatments, some cancer patients may well be left out in the cold. Although off-label treatments lack regulatory approval, they are backed by EBM and have good safety profiles. It’s inappropriate to announce “nothing else can be done” merely because all approved options have already been exhausted. In expert hands, despite the “on compassionate grounds” proviso, the safety profiles of such off-label prescriptions may even compare favorably with orthodox chemotherapy given at top doses.

Gastric cancer is the fourth most common cancer in the world. Most gastric cancers are diagnosed in advanced stages, and the prognosis remains poor. The 5-year survival rate is 40-60% in eastern countries and around 25% in the west. Among advanced gastric cancer cases, peritoneal implantation is one of the most common forms of metastasis and around 14% of cases present peritoneal metastases at initial diagnosis, presenting a survival of 3-6 months. Until the early 1990s it was considered a terminal disease. But today these patients have some opportunities to be treated with curative intent or to prolong their life. Although the prognosis remains poor, there are some treatment options including cytoreductive surgery, neoadjuvant therapy, and some forms of intraperitoneal chemotherapy with or without hyperthermia. These are aggressive treatments, so we must be careful when selecting patients. Imaging and preoperative staging are also crucial in selecting patients for appropriate treatment. The surgical technique is described and a detailed demonstration video is available in the e-book: version. New forms of treatment such as PIPAC and new scientific advances and future perspectives are discussed. This book is an update on this topic and attempts to provide an overview for all medical personnel involved in the treatment of these patients.
This compilation includes details about recent innovations in the field of cancer treatment as well as best practices for managing the disease in various forms. The first chapter deals with the potential anticancer properties of the plant Trigonella foenum-graecum, also known as fenugreek. Following this, the authors provide clinically relevant information on physical therapy for women with breast cancer as well as targeted therapy for metastatic triple-negative breast cancer. Then, the authors discuss the evolution of the field of systematic therapy for urothelial cancer, which ranges from chemotherapy to immune checkpoint inhibitor use. The final chapter highlights the chemo-preventive efficacy of phytochemicals in modulating the epigenetic mechanisms involved in the initiation and progression of cancer.

This edited volume presents six chapters detailing recent progress in the field of cancer research. Chapter One discusses the current information available regarding chemotherapy-induced peripheral neuropathy, including definition, prevalence, pathophysiology at nerve fibers, risk factors, physiology of specific antineoplastic agents on the peripheral nervous system, signs and symptoms, diagnostic criteria, and treatment methods. Chapter Two aims to substantiate the value of tumor-associated circulating and tissue miRNAs for assessing both the aggressiveness of the malignant process course and the sensitivity to neoadjuvant polychemotherapy (NPCT) in breast cancer patients of various molecular subtypes. Chapter Three summarizes the current role of nuclear factor kappa B (NF-κB) in cell aging, its dual functions in the balance of proliferation and apoptosis pathways and the current knowledge of not only the physiological but also the pathophysiological missions of NF-κB and its potential role as a target of therapeutic intervention against breast cancer. Chapter Four deals with 5-aminolevulinic acid radiodynamic therapy for treatment of high-grade gliomas. Chapter Five presents a literature review to identify the possible role of sex hormone receptors in gender variation and sexual dimorphism in the genesis and progression of urothelial bladder cancer (UBC). Lastly, Chapter Six discusses the risk factors, diagnostic modalities, and outcomes of cholangiocarcinoma (CCA), the second most common primary hepatobiliary malignancy.

This edited volume presents seven chapters detailing recent progress in the field of cancer research. Chapter One explores the application of robotic surgery to radical cystectomy, highlighting patient selection, surgical approach, perioperative and oncologic outcomes as well as some areas of controversy in the literature. Chapter Two describes the principles of cytoreductive surgery and hyperthermic intraperitoneal chemotherapy procedures with its potential risks for patients and staff. Chapter Three discusses findings related to ISG15 and protein ISGylation, and their association with interferon signaling in cancer. Chapter Four describes the potential for MCF-7 cells to curb or counteract breast cancer. Chapter Five discusses the potential of emerging technologies in breast conserving treatment. Chapter Six reviews the current literature surrounding the basis of employing the immune system for the treatment of various non-melanoma skin cancers (NMSC), discusses approved immunotherapies for each type of NMSC as well as indications for use, and synthesizes ongoing investigational studies of immunomodulatory agents for these diseases. Finally, Chapter Seven discusses the use of gene therapy in management of squamous cell carcinoma.
New Research on Hematological Malignancies

David K. Gioia

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145 pp.
Softcover: 978-1-53619-955-0, $82.00
e-book: 978-1-53619-989-5, $82.00

Hematological malignancies, defined as cancers that affect the blood, bone marrow, and lymph nodes, represent a serious health care challenge for oncologists. Chapter One focuses on cytogenetic and molecular markers and summarizes their importance in identification, treatment and prognosis in patients with myeloproliferative neoplasms. Chapter Two details the efficacy of treatment of myeloid hematologic malignancies with isocitrate dehydrogenase mutations by inhibitors of this enzyme. Chapter Three describes the use of Selinexor and other drugs for the treatment of hematologic malignancies. Chapter Four explains the utility of poly(ADP-ribose) polymerase inhibitors in the treatment of myelodysplastic syndrome and acute myeloid leukemia.

Oncology Pharmacy Practice: The Clinical Pharmacist’s Perspective

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In series: Pharmacology - Research, Safety Testing and Regulation
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322 pp.
Hardcover: 978-1-53619-564-4, $230.00
e-book: 978-1-53619-580-4, $230.00

Incidence of cancer is increasing all over the world and personalized therapies have become the trend in cancer therapy. Multidisciplinary approaches provide successful results for personalized therapies. As a part of a multidisciplinary healthcare team, oncology pharmacists (OPs) contribute to the rational use of chemotherapy by providing individual pharmaceutical care for cancer patients. A multidisciplinary approach is crucial for the success of cancer therapy. Pharmacists acting as a counsellor for medication-related issues in the multidisciplinary team have a vital role in the oncology setting. OPs are the clinical pharmacists specialized in oncology and they are involved in planning and implementation of pharmaceutical care. Additionally, OPs play an important role in providing comprehensive medication management and related care for cancer patients. We hope that this book will contribute to pharmacists’ knowledge and practice in cancer management by provision of a clinical pharmacist’s perspective.

Oral Squamous Cell Carcinoma: From Diagnosis to Treatment

Matthew Rabin

In series: Cancer Etiology, Diagnosis and Treatments
Publication Date: 07/14/2021
251 pp.
Hardcover: 978-1-53619-895-9, $195.00
e-book: 978-1-53619-907-9, $195.00

This monograph consists of five chapters that describe the diagnosis and treatment of oral squamous cell carcinoma (OSCC), which is the most common malignant epithelial neoplasm affecting the oral cavity. Chapter One deals with different potentially malignant disorders in the development of OSCC, diagnostic methods of OSCC, the pertinence of biomarkers in OSCC therapy, classification of biomarkers, existing biomarkers in different stages of OSCC and the challenges of developing new biomarkers. Chapter Two is focused on principles, systems, technologies, therapeutic approaches, safety and toxicity and patents comprising drug delivery systems for local oral squamous cell carcinoma treatment. Chapter Three aims to highlight a detailed critical review of previous literature on putative cancer stem cell pathways for oral carcinoma and draw interest in targeting the most common cancer stem cell markers as a therapeutic regimen for oral cancer preneoplastic tumors, metastasis, and treatment progression. Chapter Four aims to cover the recent developments in nanotechnology-based drug delivery systems, advanced nanomedicines and their diagnostics as well as therapeutic
applications in OSCC. Finally, Chapter 5 aims to elaborate on the importance of biomarkers as an early diagnostic tool in detecting oral squamous cell carcinoma.

Plant Flavonoids Against Metastasis: New Concepts For Cancer Treatment
Katrin Sak (Dip.Nut.Med., Head of the NGO Praeventio, Tartu, Estonia)

In series: Cancer Etiology, Diagnosis and Treatments
Publication Date: 01/27/2021
385 pp.
 Hardcover: 978-1-53619-102-8. $270.00
e-book: 978-1-53619-105-9. $270.00

Cancer poses a major threat to human health and is one of the leading causes of death worldwide. Today, we know that metastasis, a multistep process whereby tumor cells spread from the site of origin to distant organs, is responsible for most cancer mortality. In fact, more than 90% of cancer-related deaths are attributed to tumor metastasis. Unfortunately, there are no therapies currently available to specifically target metastasis of any human cancer types, and patients with distant metastases ultimately die from their disease. Current conventional treatment modalities are focused on the removal of tumors by surgical resection and/or the killing of malignant cells using cytotoxic chemotherapeutic drugs or ionizing radiation, with no substantial inhibitory effects on the migratory and invasive abilities of cancer cells. Moreover, emerging evidence has shown that these standard treatment modes can unexpectedly increase the motility and invasiveness of surviving tumor cells, inducing or accelerating metastases formation and aggravating malignant progression. This paradoxical phenomenon can help us to understand why, despite the technological advancements in surgical procedures and drug delivery methods, the overall survival rate of numerous cancer types has barely changed over the past several decades, remaining unacceptably poor. Due to the insufficiency of existing therapies in improving the prognosis of cancer patients, new effective treatment options are urgently needed. To this end, the focus must be moved from a simply cytotoxic approach to a metastasis-preventing strategy, substituting the question of why cancer forms and how to kill it for the question of why tumors spread and how to prevent metastasis.

In this book, a conceptually new approach to cancer management is presented, by focusing not on the killing of transformed neoplastic cells, but blocking the spread of tumor cells to distant organs, thereby restricting malignant progression and targeting the main cause of cancer-related mortality. Plant-derived flavonoids might be ideal candidates for novel antimetastatic agents, as they are non-toxic and possess the capacity to inhibit multiple steps of metastatic cascade. These polyphenolic phytochemicals act through regulating a number of metastasis-associated signaling cascades in different tumor cells, and also modulate diverse components of tumor microenvironments and attenuate the formation of tumor-specific angiogenesis. Moreover, the combination of certain flavonoids with surgical resection, chemotherapy or radiotherapy may result in the abolishment of the metastasis-promoting effects of these conventional therapeutic modalities, providing novel treatment options for combating cancer in the future. It is expected that the development of flavonoids for antimetastatic drugs and their inclusion in further cancer treatment strategies can substantially improve the prognosis of patients with various types of malignancies in a time when cancer incidence is predicted to continue increase throughout the world. This book should be read by anyone who is interested in innovative advances in cancer care. Due to its systemic approach to cellular and molecular processes of metastatic cascade, this book might serve as a useful contemporary textbook for medical colleges and universities for studies of cancer development, progression and dissemination.
authors and supported by a comprehensive review on the topic. All chapters are well-illustrated, well-tabulated, linguistically lucid and easy to understand. The uniqueness of this monograph lies in the fact that it elucidates some of the most cited strabismus research in the last two decades which has led to fundamental changes in the understanding of ocular misalignment and its management, all within one cover. In doing so, it provides a synopsis of research articles covered in at least 50 journals, thus aiding both the novice and the experienced strabismologist in accessing easily available literature on the subject, by the same authors of those research articles. The contributors are from many countries — Argentina, Brazil, Germany, India, the United Kingdom and the United States of America — thus assimilating different practice patterns and research styles in one book.

Conforming to the theme of strabismus prevalence, recognition and management, the monograph overviews certain “newer” forms of “neuro-anatomical” strabismus associated with abnormal orbital anatomy and connective tissue morphology like age-related strabismus (sagging eye syndrome) and myopic strabismus, provides the constellation of symptoms and signs of ocular misalignment associated with brain injury, updates the readers on the genetics of strabismus, describes newer imaging modalities that have been used in strabismus diagnostics like optical coherence tomography angiography (OCTA) and high resolution surface coil orbital magnetic resonance imaging (MRI), elucidates innovative experimental studies delineating the normal and abnormal physiology of ocular movements, emphasizes certain unique strabismus surgical modalities that have gained popular attention in this decade, namely lateral rectus split with nasal transposition as well as rectus extraocular muscle plication and also provides a vast and extensive overview of the pharmacological management of strabismus with botulinum toxin type A (BTXA). It is anticipated that this unique compendium finds a place in the academic arsenal of all strabismologists as a ready reference book.

OTOLARYNGOLOGY

Nasal and Paranasal Sinus Surgery: State of the Art and Future Perspectives
Francesco Gazia, MD (Otorhinolaryngology unit, Policlinico Gaetano Martino, University of Messina, Italy), Francesco Galletti, MD, PhD (Professor, Otorhinolaryngology unit, Policlinico Gaetano Martino, University of Messina, Italy), Bruno Galletti, MD, PhD (Associate Professor, Otorhinolaryngology unit, Policlinico Gaetano Martino, University of Messina, Italy) and Francesco Freni, MD, PhD (University Researcher, Otorhinolaryngology unit, Policlinico Gaetano Martino, University of Messina, Italy)

In series: Otolaryngology Research Advances
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318 pp.

e-book: 978-1-53619-848-5. $230.00
Hardcover: 978-1-53619-744-0. $230.00

In this book we have tried to collect the state of the art of nasal and paranasal sinus surgery, deepening the most modern techniques and addressing every single pathology with great dedication. In the first chapter, thanks to the help of Professor Enrique Perello, leader of ENT surgery in Spain and with an international reputation, we tried to trace the history of nasal surgery. We found photos of ancient treatises, analyzing the origins of some techniques, still used but perfected with the help of technology.

In the following chapters, we have dealt with the basic surgery of the nose and paranasal sinuses, with evident help on the septal endoscopic part by Professor Andrea Gallo, director of the Polo Pontino of the La Sapienza University in Rome. The chapters on oroantral communications and odontogenic sinusitis were written by Professor Cosme Gay-Escoda, leader in the maxillofacial and oral cavity surgery sector throughout Spain. The chapter on inverted papillomas was written by the professor of the University of Genoa Frank Rikki Canevari, a surgeon of national and international fame, expert on the nasal cavities.

We wrote a chapter on dacryocistorinostomy, with the help of Professor Maurizio Catalani, of the University of Turin and in collaboration with a team of ophthalmologists led by professors Meduri, Aragona and doctor Migliardi.

We thank the whole ENT team of the University of Palermo, led by Professor Gallina, for the chapter on the complications of endonasal surgery. We received special help from the team of the Insubria University of Varese, led by professors Bignami and Castelnuovo, world leaders in this type of surgery. They wrote the chapters on rhino-liquor fistulas and on the treatment of nasal tumors, giving us the precious images of their most interesting clinical cases.

Thanks to external contributions, this book can be considered a handbook for nose surgery, updated to the most modern surgical techniques in use and with an analysis of the possible future developments of this type of surgery.
Auditory and Speech

Tinnitus Assessment and Intervention: Clinical Studies and Case Reports
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233 pp.
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e-book: 978-1-53619-991-8. $160.00

Tinnitus (“ringing in the ears”) is a prevalent symptom among adult patients with ear disorders. Often co-existing with other otological symptoms such as hearing impairment and hyperacusis, it requires specialized assessments and interventions to minimize its negative consequences, as well as to improve the quality of life of the affected individuals. Even though notable achievements have been seen in tinnitus studies and clinical services to manage patients with tinnitus are now more commonly available, ongoing research efforts are still warranted to enhance the understanding on the pathophysiology of tinnitus, as well as in search of the optimum treatments and interventions of this phantom auditory perception. In this book we have gathered the latest clinical studies and case reports on tinnitus, which could be of interest to academicians, researchers, clinicians and other interested readers.

PEDIATRICS

Donald E. Greydanus, MD, Dr HC (ATHENS) (Professor and Founding Chair, Department of Pediatric and Adolescent Medicine, Western Michigan University Homer Stryker MD School of Medicine, Kalamazoo, MI), Shibani Kanungo, MD, MPH, FAAP, FACMG (Associate Professor, Department of Pediatric and Adolescent Medicine, Western Michigan University Homer Stryker MD School of Medicine, Kalamazoo, MI, USA), Cheryl Dickson, MD, MPH, (Associate Dean, Health Equity and Community Affairs, Associate Professor, Department of Pediatric and Adolescent Medicine, Western Michigan University Homer Stryker MD School of Medicine, Kalamazoo, MI, USA) and Joav Merrick, MD, MMedSci, DMSc (National Institute of Child Health and Human Development, Jerusalem, Israel; Division of Pediatrics, Hadassah Hebrew University Medical Centers, Mt Scopus Campus, Jerusalem, Israel; Division of Adolescent Medicine, KY Children’s Hospital, Department of Pediatrics, Lexington, Kentucky, USA; School of Public Health, Georgia State University, Atlanta, Georgia, USA)

In series: Pediatrics, Child and Adolescent Health
Publication Date: 06/25/2021
565 pp.
This book summarizes the state of cognoscibility regarding normal newborn care that has been accumulated over the past centuries, especially the 20th and now 21st century. The preface/introduction details historical concepts that have followed newborns over the millennia of Homo sapiens sapiens’ existence, such as infanticide, breast feeding, swaddling, neonatal resuscitation, and principles of caring for newborns. The mortality rate of newborns has been reduced in many parts of the world in the past two centuries, and we have learned much about how to keep increasing numbers of newborns alive and healthy. This is especially seen when healthcare providers and society collaborate in this important endeavor that includes emphasizing known preventive principles. Current modern pediatric and perinatal treatments allow newborns in the current 21st century America to have a start on an overall life expectancy of 78.5 years (up to 76 years in males and 80.9 years in females) if they receive meticulous medical care, and even if they are born into a penurious state. Such deserved care and inevitable medical discoveries will only lengthen these life trajectories. This second edition updates principles of caring for the newborn that were identified in the first edition. It considers the newborn examination, newborn screening, safe-sleep concepts, mother and newborn skin-to-skin contact, effects of prenatal drug use, mental health issues in the newborn, maternal mood disorders, infant feeding, circumcision, anticipatory guidance, and concepts of surgery in the newborn. Also considered are selective disorders found in some newborns that includes newborn neurology, cardiology, pulmonology, nephrology, gastroenterology, endocrinology and dermatology.

Pediatric and Adolescent Sexuality and Gynecology: Principles for the Primary Care Clinician, Second Edition
Hatim Omar (Chief, Section of Adolescent Medicine, Medical Director of the Adolescent Health Center, Lehigh Valley Reilly Children’s Hospital, Allentown, PA; Lehigh Valley Health Network, LVPG, Clinical Professor, Department of Pediatric and Adolescent Medicine, Western Michigan University Homer Stryker MD School of Medicine, MI), Donald E. Greydanus MD, Dr HC (ATHENS) (Professor & Founding Chair, Department of Pediatric & Adolescent Medicine, Western Michigan University Homer Stryker MD School of Medicine, Kalamazoo, MI), Dilip R. Patel MD, MPH, MBA (Professor & Chair, Department of Pediatric & Adolescent Medicine, Western Michigan University, Homer Stryker MD School of Medicine, Kalamazoo, MI) and Joav Merrick, MD, MMedSci, DMSc (National Institute of Child Health and Human Development, Jerusalem, Israel; Division of Pediatrics, Hadassah Hebrew University Medical Centers, Mt Scopus Campus, Jerusalem, Israel; division of Adolescent Medicine, KY Children’s Hospital, Department of Pediatrics, Lexington, Kentucky, USA; School of Public Health, Georgia State University, Atlanta, Georgia, USA)

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617 pp.
Harcover: 978-1-53619-340-4. $310.00
e-book: 978-1-53619-607-8. $310.00

Adolescent sexuality and gynecologic care of young patients are topics which make most clinicians uncomfortable. This is due to a lack of knowledge and training in many circumstances. Assumptions based upon knowledge of adult gynecology alone may be hazardous for pediatric and adolescent patients. These children and young women often do not have access to specialists who are able and willing to care for their gynecologic issues at an appropriate level. The primary care setting is often the most comfortable venue for a number of these patients. The concept for this book was to provide a reference for primary care providers without highly specialized gynecology textbooks, just to focus on what providers tackle on a daily basis. The first edition was well received and the feedback was good. In the 10 years since the first edition was published, our knowledge has improved and many new methods, medications and devices were added to daily practice. Those changes prompted the Editors to provide an updated version of the book, while keeping its essence intact.
Pediatric Critical Care: A Primer for All Clinicians
Jason M. Kane, MD MS (Associate Professor of Pediatrics, University of Chicago, Comer Children’s Hospital, Interim Chief, Section of Pediatric Critical Care, Director of Quality and Outcomes, Pediatric ICU, Chicago, IL., USA), Rachel Wolfson, M.D. (Associate Professor of Pediatrics, University of Chicago, Comer Children’s Hospital, Pediatric Critical Care Medicine, Pritzker School of Medicine, University of Chicago Medical Center, Chicago, IL, USA), Stuart Berger, M.D. (Vice Chair for Clinical Affairs, Department of Pediatrics, Chief of Cardiology in the Department of Pediatrics, Professor of Pediatrics, Feinberg School of Medicine, Northwestern University, Chicago, IL., USA) and Joseph R. Hageman, M.D. (Director NICU Quality Improvement, Comer Children’s Hospital, Senior Clinician Educator, Pritzker School of Medicine, University of Chicago, Chicago, IL., USA)

In series: Emergency and Intensive Care Medicine
Publication Date: 04/16/2021
616 pp.
Hardcover: 978-1-53614-837-4. $310.00
Softcover: 978-1-53619-539-2. $89.00
e-book: 978-1-53614-838-1. $89.00

This practical handbook of pediatric critical care is written for all clinicians who care for children with acute illness. Specifically, chapters are written to provide helpful insights to all levels of pediatric providers including PICU nurses, Advanced Practice Nurses based in the PICU, medical students, pediatric residents, residents from other disciplines who rotate through PICU, hospitalists who may need to stabilize children prior to transfer to the PICU, and emergency physicians who may want to refer patients to the PICU. In addition to covering PICU-specific topics such as mechanical ventilation and procedural sedation, this handbook also includes guidance in the initial resuscitation, management and stabilization of critically ill children. Management of life-threatening situations that are specifically included in this book include respiratory failure, cardiovascular failure, electrolyte derangements, diabetic ketoacidosis, burn injuries, status epilepticus, status asthmaticus, toxic ingestions, and sepsis, among many others.

This easy-to-read handbook covers basic and fundamental concepts of pediatric critical care medicine and makes for easy reading when on call, at the bedside, or when evaluating a child who may need critical care services. At the same time, Pediatric Critical Care: A Primer for All Clinicians provides a quick and practical reference with high-yield information for the clinician who finds themselves in an emergency situation in need of immediate guidance for stabilization and management. We hope that you enjoy this compendium and most of all our intent is that you will find it useful and practical in the everyday care that is provided to critically ill neonates, infants, children and adolescents with the wide array of critical illnesses that you encounter every single day.

PHARMACOLOGY

A Closer Look at Antibiotic Resistance
Victor Tsunoda
In series: Microbiology Research Advances
Publication Date: 03/04/2021
268 pp.
Hardcover: 978-1-53619-277-3. $195.00
e-book: 978-1-53619-319-0. $195.00

Bacterial infections have become more difficult, and sometimes impossible, to treat due to antibiotic resistance, which occurs when bacteria develop the ability to defeat the available drugs designed to kill them. According to the Centers for Disease Control and Prevention, each year, 2 million Americans become sick with antibiotic-resistant infections, and of that, about 23,000 die. This book examines the challenges related to antibiotic resistance, the development and use of diagnostic testing to identify antibiotic resistance, the development of treatments for resistant infections, and appropriate antibiotic use.
A Comprehensive Guide to Non-Steroidal Anti-Inflammatory Drugs
Suleyman Kaplan, PhD (Full Professor and Head of Department, Department of Histology and Embryology, Faculty of Medicine, Ondokuz Mayis University, Samsun, Turkey)

In series: Pharmacology - Research, Safety Testing and Regulation
Publication Date: 02/10/2021
529 pp.
Hardcover: 978-1-53619-128-8. $310.00
e-book: 978-1-53619-215-5. $310.00

A Comprehensive Guide to Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) begins by describing the general characteristics, classification, pharmacokinetics, pharmacodynamics, clinical uses and adverse effects of NSAIDs. The adverse effects of NSAIDs, drug interactions and their clinical applications in neurological diseases, headaches, and cerebrovascular diseases are discussed. These drugs are also often used in dermatology, especially in the treatment of dermatosis. Extensive information concerning NSAIDs and dermatological diseases is provided. A broad perspective on the role of NSAIDs in infectious diseases is also provided.

The next chapter discusses findings concerning the effects of NSAIDs on bone and tendon healing, together with cellular and molecular factors. The authors suggest that NSAIDs may be a risk factor for tissue healing. Diclofenac sodium (DS), widely used in urology clinics, exhibits dose-dependent side effects on various systems. This chapter suggests that nanoparticle technology can be applied to the oral form of DS in order to reduce its side-effects. The effects of NSAIDs on the reproductive systems of both sexes are also evaluated. Both genders make extensive use of NSAIDs during infertility treatment.

Another chapter focuses on how DS affects spermatogenesis. The authors suggest that DS causes histopathological changes in the testes by disrupting the nutrition of testicular cells and impairing complete testis functions. Men wishing to have children should therefore use this drug with caution. The authors also review the effects of NSAIDs on prostatitis, benign prostatic hyperplasia and prostate cancer.

In the following chapter, the authors examine the role of NSAIDs in gynaecology and obstetrics. Advances in the use of NSAIDs and melatonin in reproductive medicine for both sexes are discussed. The authors describe the biological roles of NSAIDs and melatonin in human reproduction, diseases, pregnancy, and assisted reproductive treatment. The subsequent chapter highlights the side-effects of NSAIDs on the gastrointestinal system.

A Pharmacological Guide to Non-Steroidal Anti-Inflammatory Medications
Pugazhenthan Thangaraju, MBBS, MD, DNB, MNAMS, PGD, Diab, MBA Hospital Management (Assistant Professor, Pharmacology, All India Institute of Medical Sciences, Raipur, Chhattisgarh, India)

In series: Pharmacology - Research, Safety Testing and Regulation
Publication Date: 07/14/2021
366 pp.
Hardcover: 978-1-53619-836-2. $230.00
e-book: 978-1-53619-905-5. $230.00

The purpose of this book is to provide a comprehensive source of information regarding NSAIDs in detail. NSAIDs are widely used and prescribed to all age groups. This book represents a new approach for undergraduate and post-graduate medical students of all specialties. The book was written in simple and easily understandable language for everyone.
This book is mainly focused on NSAIDs and related topics like mechanism and pharmacological actions, adverse drug reactions, fixed dose combinations, poisoning of overdose, usage in neurological conditions, geriatrics, pediatrics and pregnancy, NSAID-induced gastropathy and nephropathy, NSAIDs in oncology, pharmacogenomics, and in COVID. Their use is associated with a vast spectrum of adverse drug effects, so drug selection is crucial in various conditions. Each chapter of the book presents the pharmacology of NSAIDs in the framework of biochemical, physiologic or pathophysiologic systems. Each topic provides an understanding of the basic concepts of NSAIDs on already existing and on newer drugs and their pharmacological use in various organ systems at different age groups. Updated and recent information including the use of NSAIDs in COVID has been added. Detailed drug information in aspects of drug selection and its contraindications as per patients’ disease status and updated approaches in newer clinical perspectives were included. Diagrams, tables, and flowcharts are included to make the concepts easier to understand. At the end of each chapter, useful references are added for further reading.

An Introduction to P-Glycoprotein

M. Wahajuddin, PhD, FHEA, FRSB, FRSC (Principal Scientist, CSIR-Central Drug Research Institute, Lucknow (U.P.), India), Ravindra Varma Alluri, PhD (Associate Principal Scientist, Clinical Pharmacology and Safety Sciences, AstraZeneca R&D, Cambridge, UK) and Rahul Dev Jayant, PhD (Assistant Professor, Texas Tech University Health Sciences Center, Texas, USA)

In series: Pharmacology - Research, Safety Testing and Regulation
Publication Date: 06/11/2021
393 pp.
Hardcover: 978-1-53619-488-3. $230.00
e-book: 978-1-53619-728-0. $230.00

P-glycoprotein (P-gp), encoded by the multidrug-resistance (MDR)-1 gene is one of the best studied efflux transporters that is linked to multidrug resistance in cancer chemotherapies. P-gp belongs to the ATP-binding cassette (ABC) transporter family of proteins that utilizes energy derived from hydrolysis of ATP to efflux endogenous and exogenous xenobiotics, metabolites and toxins from the intracellular space to the outside, thereby providing a general protective role. P-gp is expressed on the apical plasma membrane of all major drug eliminating organs such as the intestine (enterocytes), liver (bile canaliculi), kidney (proximal tubules), brain (endothelia of blood-brain barrier) and in certain tumor types. In the intestine and BBB, P-gp limits entry of drugs by actively pumping drugs back into the lumen or blood, respectively. In the liver and kidney, P-gp actively effluxes drugs, endogenous substances and metabolites into bile or urine, thereby removing them from the body. Upregulation of P-gp in tumor cells is noted in several cancers and is a hallmark for drug resistance. Additionally, P-gp is also shown to play a role in neurogenesis and maintaining homeostasis in the brain. Alteration of P-gp expression is observed in neurodegenerative diseases, highlighting its importance in maintaining normal brain health.

Due to its central role in defining oral pharmacokinetics, systemic clearance, tissue exposure, organ health and chemoresistance, much of the research has been focused on modulating P-gp. Chemical inhibitors, formulation-based and epigenetic approaches are applied to modulate P-gp activity with a goal to improve oral pharmacokinetics, increase tumor and brain penetration, minimize organ toxicity and potentially treat neurodegenerative diseases. Although enormous research on P-gp has been published, a book chapter exclusively and comprehensively covering diverse aspects of P-gp, including the recent developments in the field, is required. With much enthusiasm from the publisher, we have collaborated to bring together wide-ranging topics on P-gp. This book contains 12 chapters covering the structure, function, regulation, distribution and expression of P-gp, its pharmacological importance in health and disease and role in pharmacokinetics and drug-drug interactions. Also included are computational approaches to identify selective inhibitors and tactics to modulate P-gp function using chemical inhibitors (synthesized or isolated from marine sources), formulation strategies or epigenetic approaches. The last chapter describes various methods to quantify P-gp expression levels and function in vitro, in situ and in vivo settings. It is our sincere hope that this material will serve as an important desk reference for students, researchers and clinical scientists in academia, medical research and the pharmaceutical industry working in various fields such as pharmacology, pharmacy, toxicology, medicinal chemistry, pharmaceutical sciences, pharmacokinetics and computational biology.

Finally, we wish to acknowledge the contributions of all the authors who passionately contributed to this book. We also extend our gratitude to the editorial staff and production manager at Nova publishers. Lastly, but most importantly, we thank our families for their continued support during this journey.
Handbook of Novel Drug Delivery
Dr. Balram Ambade (Associate Professor & Head of Department, Department of Chemistry, National Institute of Technology, Jamshedpur, Jharkhand, India), Dr. Rajendra Kumar Jangde (Assistant Professor, University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur (C.G.), India) and Sulekha Khute (University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur (C.G.), India)

In series: Pharmacology - Research, Safety Testing and Regulation
Publication Date: 02/15/2021
110 pp.
Softcover: 978-1-53619-075-5. $82.00
e-book: 978-1-53619-091-5. $82.00

This book presents advances in the field of novel drug delivery, focusing on novel molecules with potential to transform the treatment and preclusion of wound healing. However, such potential is severely compromised by significant obstacles to the delivery of these drugs in vivo. Sophisticated drug delivery and targeting can offer substantial advantages to conventional drugs, such as increased efficiency, handiness, and the potential for line extensions and market expansion. A simple, accessible, and easy-to-read handbook, Handbook of Novel Drug Delivery is the first book to provide a comprehensive introduction to the principles of advanced drug delivery systems.

Forensic Psychiatry and Ethical Approaches in Legal Issues
Nursen Turan Yurtsever (Forensic Medicine Department, Marmara University, School of Medicine, Istanbul, Turkey)

In series: Psychiatry - Theory, Applications and Treatments
Publication Date: 05/05/2021
228 pp.
Hardcover: 978-1-53619-530-9. $160.00
e-book: 978-1-53619-606-1. $160.00

Forensic Psychiatry is a field that is more specialized in psychiatry. Specialists who are working in this field are confronted with many ethical-legal problems. Although forensic psychiatry field has multidisciplinary interactions, in literature, there are limited publications about forensic psychiatry. In this book, authors who are experts in their fields, state the main problems confronted by forensic psychiatrists and put forth ethical approaches for legal and ethical problems. The authors emphasize the basic clinical skills and the trainee of the expert is required for a full assessment and understanding of any forensic psychiatry issue. The text also emphasizes an evidence-based approach to practice and gives full attention to ethical and legal issues. This book integrates the classical principles of medical ethics with modern medical applications while demonstrating the clinical applications of this knowledge for the diagnosis and management of a wide range of forensic psychiatry topics. This book will be useful for qualified psychiatrists, forensic medicine specialists, medical students, and those in fields related to current forensic psychiatry practices.

Innovations in Psychiatry
Souparno Mitra, MD (Resident Psychiatry, Bronxcare Health System, Icahn School of Medicine at Mount Sinai, NY, USA), Urmi Chaudhuri (PhD Student, Isenberg School of Management, University of Massachusetts, Amherst, MA USA) and Panagiota Korenis, MD (Program Director and Vice Chair of Education, Icahn School of Medicine at Mount Sinai and Albert Einstein College of Medicine, NY, USA)

In series: Psychiatry - Theory, Applications and Treatments
Publication Date: 04/05/2021
174 pp.
Softcover: 978-1-53619-365-7. $95.00
This book will present the most up to date and concise information related to psychiatric innovations and is especially written for those looking for a quick and easy reference guide. Conveniently formatted to present the most current and up to date concepts and ensure that you are prepared for your psychiatry shelf, PRITE™, psychiatry boards and recertification exams. It will quickly become your go to reference material for psychiatric technological innovations.

The Power of Peer Providers in Mental Health Services
Patrick W. Corrigan (Distinguished Professor of Psychology, Illinois Institute of Technology, Chicago, IL, USA)
In series: Psychology Research Progress
Publication Date: 05/24/2021
357 pp.
Hardcover: 978-1-53619-597-2. $230.00
e-book: 978-1-53619-680-1. $230.00
People with lived experience of mental illness and recovery are joining leagues of skilled providers who offer services to meet the needs of people with serious psychiatric disorders. The emergence of peer power rides the crest of insights that appeared over the past 50 years related to hope, recovery, and self-determination. Key to these insights is support: coaches, navigators, mentors, and care coordinators who are in the field, addressing the person’s goals, and barriers to goals, as they emerge. Peers can clearly learn the interpersonal and instrumental skills of support. In fact, their learned experience may give them special skills and insight into this supportiveness. This book is a deep review into both the conceptual and empirical elements of peer support services.

Trauma-Informed Care: Addressing Cultural Sensitivity of the Women Veterans with Post-traumatic Stress Disorder Related to Military Sexual Trauma in the Veterans Administration and Civilian Health Care Systems
Shemya Vaughn, PhD (Department of Counselor Education and Rehabilitation, Fresno State University, Fresno, CA, USA; The Sexuality & Disability Institute, Licensed Professional Counselor, Eureka, CA, USA), Barbara McEntee (Prineville, OR, USA) and Leslene della-Madre (Sebastopol, CA, USA)
In series: Military and Veteran Issues
Publication Date: 03/09/2021
382 pp.
Hardcover: 978-1-53619-210-0. $195.00
e-book: 978-1-53619-299-5. $195.00
Trauma-informed care: Addressing cultural sensitivity of the women veterans with posttraumatic stress disorder related to military sexual trauma in the Veterans Administration and civilian health care systems is a book born from the mind of a woman veteran. Providing a space for women to write about and for women veterans who receive services for military sexual trauma and posttraumatic stress disorder. This book is a call to action to Veterans Affairs, the Veterans Health Administration and the civilian health care system to provide trauma-informed care where our US women veterans sometimes go for treatment. Above all, Trauma-informed care: Addressing cultural sensitivity of the women veterans with posttraumatic stress disorder related to military sexual trauma in the Veterans Administration and civilian health care systems gives voice to the millions of women veterans who feel they have no voice when interacting with healthcare systems.

Addiction and Substance Abuse
Complementary and Integrative Approaches to Substance Use Disorders
Rita Cola Carroll, PhD, CPCRT, CBIST (Faculty, Complementary and Integrative Health Program, College of Nursing and Health Professions, Drexel University, Philadelphia, PA, USA; Managing Partner, Laurel Lake Consulting, Malvern, PA, USA)
In series: Substance Abuse Assessment, Interventions and Treatment
Publication Date: 06/02/2021
With rising rates of morbidity and mortality from substance abuse, addictions and mental health professionals are called upon to integrate innovative treatment modalities that are effective in supporting health and well-being, managing stress, decreasing cravings, supporting abstinence, and addressing the mental health issues that commonly occur with substance use disorders. An approach that blends the best of conventional treatment with complementary therapies and techniques, can bring optimal health and wellness based on the unique needs, preferences, and goals of each person. This book details complementary and integrative health modalities that promote physical, emotional, cognitive, and spiritual health, and recommends self-care and healthy lifestyle practices for sustainable recovery from substance use disorders. These modalities were chosen based on a body of scientific research supporting their inclusion, and with a focus on the whole person, mind, body, and spirit. Practitioner delivered therapies are presented, such as Acupuncture, Healing Touch and Art Therapy. Modalities that are learned in formal treatment and then translated into personal practices after discharge, such as Meditation, Nutrition for Recovery, and Emotional Freedom Technique are reviewed. Case studies explore these modalities to illustrate applications and integration into conventional treatment. The book concludes with recommendation for self-care that can bring improved health, quality of life and vitality for long term recovery.

**Child and Adolescent Psychiatry**

**Child and Adolescent Psychodynamic Psychotherapy**

Stylianos Christogiorgos, PhD (Associate Professor of Child Psychiatry, School of Medicine, National and Kapodistrian University of Athens, Athens, Greece; Hellenic Association of Child and Adolescent Psychoanalytic Psychotherapy, Athens, Greece) and Georgios Giannakopoulos, MD, PhD (Assistant Professor of Child Psychiatry, School of Medicine, National and Kapodistrian University of Athens, Athens, Greece)

Publication Date: 03/09/2021

362 pp.

Hardcover: 978-1-53619-261-2. $230.00
e-book: 978-1-53619-313-8. $230.00

This edition is an attempt to present the reader with a lucid and concise, yet comprehensible text that outlines the key components that are required for practicing psychodynamic psychotherapy of children and adolescents. There is a brief exposition of the oeuvre of the three main successors of Sigmund Freud’s prodigious work, and their significant contribution to the formation of both the theory and technique of child and adolescent psychodynamic psychotherapy. In addition, there is a description of the key parameters of psychodynamic approach for the therapy of the most-often attested conditions in childhood and adolescence. Special reference is made to particular issues that have a bearing on practicing child and adolescent psychodynamic psychotherapy in the present day.

Throughout this book and where it was deemed necessary, the inclusion of informative (yet appropriately disguised) clinical material, originating from the authors’ broad clinical experience, significantly enriches its content. The book’s chapters are written with clarity, whilst its topics are informed by state-of-the-art theorization and supported by selected both recent and seminal references.

The content of this book will be invaluable to the readers who need a careful description of the fundamentals of contemporary psychodynamic approaches to the comprehension and therapeutic treatment of children and adolescents’ psychopathology, including the specificities, challenges and questions raised accordingly. Notwithstanding any omissions, it is its authors’ belief that the book in question deserves a place in the library of anyone with a genuine interest in child and adolescent psychodynamic psychotherapy.
Coronavirus Disease: From Molecular to Clinical Perspectives
Yildiz Dincer, PhD (Istanbul University - Cerrahpasa, Cerrahpasa Medical Faculty, Department of Medical Biochemistry, Istanbul, Turkey)
In series: Public Health in the 21st Century
Publication Date: 03/09/2021
310 pp.
Hardcover: 978-1-53619-296-4. $230.00
e-book: 978-1-53619-311-4. $230.00
The world is experiencing an unprecedented challenge due to coronavirus disease (COVID-19) pandemic. In December 2019, a novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was identified as the cause of a cluster of pneumonia cases in Wuhan, a city in the Hubei province of China. It rapidly spread, resulting in an outbreak of COVID-19. Although the majority of the infected individuals exhibit mild to moderate respiratory illness and recover without requiring special treatment, older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer may rapidly progress to acute respiratory distress syndrome, septic shock, coagulation disorders, multi-organ failure, and death. The course of COVID-19 is usually mild in children. However, in rare cases, children can be severely affected, and clinical manifestations may differ from adults. Some children present the multisystem inflammatory syndrome that is similar to incomplete Kawasaki disease or toxic shock syndrome. There is no specific treatment and vaccine for COVID-19. Due to the high infectivity rate of COVID-19, the unexpected and rapid influx of large numbers of patients, especially patients who need intensive care, have caused great pressure on the health care systems worldwide. The worldwide spread of COVID-19 caused fear, anxiety, depression, panic attacks, and a general decrease in overall wellbeing in the population. Healthcare professionals who occupy the front line during pandemics are at increased risk concerning their physical and mental health. The outbreak of COVID-19 negatively affected all aspects of life including education, trade, and tourism. Our knowledge of this novel virus is limited. However, many ongoing clinical trials are evaluating potential treatments and vaccines. A better understanding of the pathogenesis of COVID-19 will provide important insight into its management and reduce the mortality rate. Based on the latest global scientific data and clinical experiences of the authors, this book gives the readers an overview of COVID-19 pathogenesis and transmission routes, current diagnostic and treatment strategies, the clinical course of the disease in children and elderly patients, the genetic background of differences in the incidence of new SARS-CoV-2 infection, the impact of the COVID-19 pandemic on patients with chronic diseases such as diabetes, cancer, cardiovascular diseases, chronic respiratory diseases, antioxidant therapy to limit tissue damage, molecular approaches in COVID-19 treatment, and vaccine studies.

More Prescription for Change: Case Studies for Applications of Strategy and Strategic Intervention in National and International Health Systems in Response to a COVID Pandemic
Laure Paquette, PhD (Professor Emerita of Political Science at Lakehead University, Thunder Bay, Ontario, Canada)
In series: Public Health in the 21st Century
Publication Date: 02/10/2021
194 pp.
Hardcover: 978-1-53619-097-7. $160.00
This book illustrates the use of strategy by national and international groups using fictional case studies. The cases are fictional in the sense that the information provided was not collected using the methodology used for previous case studies about states or groups of states. Instead, the author combined characteristics and information as she saw necessary in order to make the example clear to the reader. The case studies include: an infra-national group strategizing to cope with a phenomenon, an individual, another infra-national group, a supranational group, a government or state, and a group of government or states. It also includes the study of a phenomenon, here COVID-19. The present book also differs from previous case studies to the extent that the various components of the strategy are not clearly identified. This will allow the self-taught strategist to use them to test their own skills at strategic analysis.
Non-Invasive Mechanical Ventilation Complications: Essentials for Treatment and Prevention
Antonio M. Esquinas PhD, MD (International Fellow AARC, Intensive Care Unit, Hospital Morales Meseguer, Murcia, Spain)
In series: Pulmonary and Respiratory Diseases and Disorders
Publication Date: 07/14/2021
396 pp.
Hardcover: 978-1-53619-515-6, $230.00
e-book: 978-1-53619-903-1, $230.00

Noninvasive mechanical ventilation has managed to establish itself as the treatment option for a wide variety of causes of acute and chronic respiratory failure in different settings in hospital and home noninvasive mechanical ventilation. In the last decades, we have discovered its positive effects on gas exchange and symptoms such as dyspnea control, widely contrasted against endotracheal intubation. However, although this wide range of beneficial effects have been described, pathophysiology, diagnosis, prevention and treatment of noninvasive mechanical complications could not be forgotten for a correct application as they clearly affect patient outcome and mortality.

Nowadays, there is a scarce number of publications analyzing noninvasive mechanical ventilation complications and this book is the first dedicated to its analysis. This book brings together a broad multidisciplinary vision of common and unusual complications, thus it serves as the original and essential scientific published reference on noninvasive mechanical ventilation complications.

The present book has been structured to offer through its sections and chapters an exhaustive and in-depth analysis of noninvasive mechanical ventilation complications, mechanisms, direct or indirect factors determinants, key recommendations for the early diagnosis and treatment for most frequent applications from multidisciplinary perspective.

Finally, we analyze noninvasive mechanical ventilation complications and how they impact in short- and long-term complications and mortality. The book concludes analyzing evidence in diagnosis, prevention and treatment. We believe that the readers of this book will find in it an essential reference for a correct application of noninvasive mechanical ventilation, and thus be able to improve results and prognosis. Only the precise knowledge of complications of noninvasive mechanical ventilation will allow us to achieve a proper application to success.

Practical Guide for Pulmonary Rehabilitation: The Essential Source for Pulmonary Rehabilitation Programs
Liana Pradan, MD (Department of Respiratory Medicine, Lister Hospital, Stevenage, UK), Florin Mihaltan, MD, PhD (Department of Pneumology, “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania) and Vishal Bansal, MD, PhD (Department of Physiology, Vallabhbhai Patel Chest Institute, University of Delhi, Delhi, India)
In series: Pulmonary and Respiratory Diseases and Disorders
Publication Date: 01/27/2021
386 pp.
Hardcover: 978-1-53619-045-8, $230.00
e-book: 978-1-53619-125-7, $230.00

This book provides up-to-date knowledge on almost all aspects of the multidisciplinary approach to pulmonary rehabilitation. The book advises on how to open a pulmonary rehabilitation program, how to evaluate the chronic lung patients for their fitness level, to prescribe exercises, how to tackle aspects like end-of-life care and provides information about telemedicine rehabilitation in the COVID-19 era. The book also covers subjects of interest like the history and future of pulmonary rehabilitation, smoking cessation, physiology of the skeletal muscle, airways clearing, medication, oxygenotherapy and special consideration for elderly patients with co-morbidities.

There are evidence-based explanations regarding all these aspects that will benefit respirologists who have an interest in pulmonary rehabilitation, physiotherapists, occupational therapists, doctors in training, respiratory nurses, and family medicine physicians.

Furthermore, the contributors are professionals with experience in pulmonary rehabilitation in major rehabilitation centers around the world who are known for their research, teaching and publishing on the international arena.
Principles and Practice of Non-Invasive Mechanical Ventilation Monitoring: From Intensive Care to Home Care
Antonio M. Esquinas, M.D, Ph.D, FCCP (International Fellow AARC, Intensive Care Unit, Hospital Morales Meseguer, Murcia, Spain)

In series: Medical Procedures, Testing and Technology
Publication Date: 07/06/2021
509 pp.
Hardcover: 978-1-53619-689-4. $310.00
e-book: 978-1-53619-850-8. $310.00

Non-invasive ventilation is the delivery of oxygen via a face mask and is used in the treatment of respiratory failure in chronic obstructive pulmonary disease, cardiogenic pulmonary oedema, and other respiratory conditions. Because patients rely upon ventilation systems to breathe, it is essential to monitor patients' respiratory function on an ongoing basis. However, this monitoring can prove to be difficult, particularly when patients receive ventilation treatment outside of the hospital and in their homes. As such, this book provides extensive detail concerning the monitoring of non-invasive mechanical ventilation systems in a variety of contexts.

Pulmonary Vascular Disorders
Roberto G. Carbone, MD (Consultant Cardio-Pulmonary Diseases, Department of Internal Medicine, University of Genoa, Genoa, Italy), Francesco Puppo, MD (Professor of Internal Medicine and Clinical Immunology, Department of Internal Medicine, University of Genoa, Genoa, Italy) and Victor F. Tapson, MD (Professor of Medicine, Department of Medicine; Division of Pulmonary and Critical Care, U.S. Pulmonary Embolism Consortium, Cedars-Sinai Medical Center, Los Angeles, CA, USA)

In series: Pulmonary and Respiratory Diseases and Disorders
Publication Date: 04/28/2021
584 pp.
Hardcover: 978-1-53619-458-6. $310.00
e-book: 978-1-53619-553-8. $310.00

Pulmonary vascular disorders are a complex and fascinating group of diseases. The aim of this book is to exhaustively review the genetics, physiology, diagnosis, management, and treatment of pulmonary vascular disorders with the purpose of helping general physicians and specialists in internal medicine, cardiology, pneumology, immunology, rheumatology, and hematology to identify and assess patients with vascular pulmonary disorders. Special emphasis has been placed upon pulmonary hypertension, pulmonary fibrosis, and pulmonary embolism as well as on pulmonary vascular involvement in immune-mediated diseases, chronic obstructive and advanced pulmonary disease, and sleep apnea. Additional topics that are covered in this book include pulmonary vascular injury occurring in alpha-1 antitrypsin deficiency, congenital heart disease and pregnancy. The text is supported by figures and tables to help the reader understand mechanisms of pulmonary vascular disorders in different clinical settings.

Respiratory Care in Non Invasive Mechanical Ventilatory Support: Principles and Practice
Antonio M. Esquinas M.D, Ph.D (International Fellow AARC, Intensive Care Unit, Hospital Morales Meseguer, Murcia, Spain) and Mohammed AlAhmari PhD (Chief Executive Officer, Dammam Medical Complex, Dammam Health Network (KSA), Eastern Health Cluster, Dammam, Saudi Arabia; Prince Sultan Military College of Health Sciences, Respiratory Care Department, Dammam, Saudi Arabia)

In series: New Developments in Medical Research
Publication Date: 07/14/2021
607 pp.
Hardcover: 978-1-53619-702-0. $325.00
e-book: 978-1-53619-902-4. $325.00
Non-invasive ventilation refers to the use of breathing support administered through a face mask, nasal mask, or helmet. This form of ventilatory support is useful in the treatment of respiratory illnesses including SARS, MERS, PH1N1, and COVID-19. Consisting of 63 chapters, this book provides a detailed, holistic overview of the principles and practice of non-invasive mechanical ventilatory support.

**Special Topics**

**Advances in Health and Disease. Volume 31**

*Lowell T. Duncan*

In series: *Advances in Health and Disease*  
Publication Date: 01/13/2021  
261 pp.  
Hardcover: 978-1-53619-009-0, $250.00  
e-book: 978-1-53619-094-6, $250.00

This compilation reviews the current knowledge on tick-borne diseases in Southeast Asia and identifies the gaps in information that will direct future investigations. Following this, the effects of moderate hypothermia for different durations on the intensity of blood free radical processes and erythrocyte osmotic fragility are studied in rats. The authors summarize the different molecular methods for the detection and genotyping of Noroviruses and Sapoviruses, two genera in the Caliciviridae family that cause acute intestinal gastroenteritis, a disease usually associated with diarrhoea and/or vomiting.

Information about infant and parental factors with respect to paternal involvement in infant sleep is provided, particularly focusing on parental psychosocial functioning, the sleep behaviors of parents and the quality of relationship with their infant at bedtime.

The closing study focuses on scleroderma renal crisis, a complication of systemic sclerosis with high morbidity and mortality characterized by a sudden and marked increase in systemic blood pressure and rapidly progressive oliguric renal failure.

**Advances in Health and Disease. Volume 32**

*Lowell T. Duncan*

In series: *Advances in Health and Disease*  
Publication Date: 02/24/2021  
206 pp.  
Hardcover: 978-1-53619-212-4, $250.00  
e-book: 978-1-53619-285-8, $250.00

This compilation begins by exploring some socio-anthropological aspects of hypertension, namely the disparity between medical and patients’ understanding of the disease and how this difference affects medical management, self-care and prevention of disease, the process of coping with suffering and other factors. Chapter 2 reviews the current status of various techniques applied in nano-encapsulation of vitamin E in the food, pharmaceutical and cosmetic industries and the versatile advantages nano-encapsulation of vitamin E provides for site-specific targeted delivery and effective absorption along cells. Chapter 3 discusses the medical imperative of ensuring pain relief for children facing the end of life, provides information about palliative pain management and summarizes the current literature on the subject.

Following chapters present data on the impact of education and reading and writing habits on linguistic processing abilities and other cognitive constructs relating to healthy aging, discussions of ethical dilemmas associated with pediatric palliative care including parents’ decision making and medical futility, and a review of the recommended treatment for multidrug resistant tuberculosis (MDR-TB) with strategies to prevent transmission and treatment failure. Also, the compilation includes a chapter exploring the oral and dental manifestations of Paget’s disease, a bone remodeling disease in which increased bone resorption occurs followed by excessive deposition of structurally inorganized and weaker bone, and a quantitative analysis of the mortality rates due to Parkinson’s disease in the USA from 1976 to 2017.
Advances in Health and Disease. Volume 33
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 04/08/2021
228 pp.
Hardcover: 978-1-53619-368-8. $250.00
e-book: 978-1-53619-483-8. $250.00
This volume comprises 9 chapters, each concerning a recent advancement in health and disease. Chapter 1 critically appraises the current literature related to pediatric obesity and asthma, summarizes the evidence on the impact of excess body fat on the pulmonary system in pediatric asthma patients, and discusses possible mechanisms as well as effective public health strategies for reducing the increasing obesity trend and mitigating asthma risk. Chapter 2 details the nutritional and bioactive composition of lactuca sativa, commonly called lettuce, including its antioxidant, cholesterol-lowering, cardioprotective, neuroprotective, anti-diabetic, anti-inflammatory, anti-proliferative, and anti-cancer properties. Chapter 3 attempts to shed light into the pathogenetic mechanisms connecting metabolic syndrome and nonalcoholic fatty liver disease (NAFLD) to the emergence and progression of hepatocellular carcinoma, emphasizing the evolving epidemiological profile of this type of cancer. Chapter 4 is also about lettuce and provides another perspective on the nutritional composition and health benefits among different varieties of the vegetable. Chapter 5 deals with the health promoting effects of onions (allium cepa L.), including their insulin secretagogue effect, hypoglycemic influence, hypolipidemic action, antioxidant effect, cardioprotective effect, gallstone prevention, cancer preventive potential, and digestive stimulant action, all of which are scientifically validated. Chapter 6 remarks on the difficulties associated with diagnosing rare diseases and describes several systems-level interventions that can be expected to limit the diagnostic delays experienced by patients with rare diseases and the frustration associated with years or decades of untreated symptoms. Chapter 7 describes the prevalence and effects of iron deficiency and anemia as well as treatment options for these conditions. Chapter 8 once again focuses on lettuce, this time exploring the nutritional and anti-cancer effects of carotenoids from different varieties of lettuce. Finally, Chapter 9 describes an application for the diagnosis of hypothermia in forensic practice wherein the color difference between blood in the left cardiac chamber and blood in the right cardiac chamber can be examined using a CO-oximeter.

Advances in Health and Disease. Volume 34
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 05/14/2021
252 pp.
Hardcover: 978-1-53619-433-3. $250.00
e-book: 978-1-53619-653-5. $250.00
This volume presents eight chapters, each focused on a particular topic in health and disease. Chapter One reviews the mechanism of action and clinical evidence available on the effect of sodium-glucose co-transporter 2 inhibitors (SGLT2i) on glycemic control, weight, blood pressure, and cardiovascular and renal outcomes in patients with type 2 diabetes. Chapter Two explains the diagnosis and management of bruxism, a disorder defined by the repetitive involuntary activity of muscles of mastication characterized by teeth clenching or grinding. Chapter Three details the diagnosis and treatment options for acute appendicitis. Chapter Four focuses on the evolution of pharmacological management of gastroesophageal reflux disease (GERD) with a focus on the current updates in terms of the safety and efficacy of acid suppressive therapy (AST). Chapter Five explores the profile of pediatric patients with bruxism following a therapeutic care program in a health center specialized in bruxism during childhood. Chapter Six discusses the role of anti-reflux surgery in GERD, which is used in cases where AST fails to treat the disease. Chapter Seven provides another perspective on the diagnosis and management of acute appendicitis. Finally, Chapter Eight focuses on the diagnosis of GERD, as well as its medical, endoscopic and surgical management.

Advances in Health and Disease. Volume 35
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 05/14/2021
246 pp.
Hardcover: 978-1-53619-547-7. $250.00
e-book: 978-1-53619-655-9. $250.00
This compilation contains eight chapters, each presenting a unique perspective on issues relating to health and disease. Chapter One describes the use of the newly invented
technique called acupuncture point injection therapy, which combines acupuncture and medicine, for treatment of complex regional pain syndrome. Chapter Two reviews recent updates on the pathogenesis, diagnosis, and management of iron deficiency anemia. Chapter Three reviews and explores the effects of the Mediterranean diet on age-related cognitive decline and the development of neurocognitive disorders. Chapter Four discusses the incidence and prognostic significance of sepsis-associated thrombocytopenia, summarizes the possible underlying mechanisms, and considers future directions of research. Chapter Five examines the prevalence, risk factors, and treatment of colorectal polyps, which are the most common benign tumors of the large intestine. Chapter Six covers the epidemiology, diagnosis, and treatments available for Tourette’s Syndrome. Chapter Seven focuses on the link between type 2 diabetes mellitus and cognitive impairment and discusses therapies to improve cognitive functioning and increase patients’ quality of life. Lastly, Chapter Eight reviews the clinicopathologic manifestations of neurosarcoidosis, including pathologic differential diagnostic considerations.

Advances in Health and Disease – Volume 36
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 05/14/2021
232 pp.
Hardcover: 978-1-53619-569-9. $250.00
e-book: 978-1-53619-605-4. $250.00
"Advances in Health and Disease – Volume 36" focuses on the latest research on medicine and health. The chapters cover managing kidney disease in gout; vancomycin encapsulated in nanocarriers as therapy for infections caused by resistant bacteria; the etiopathogenesis, evaluation and management outcomes for neutropenia; air pollution and bone mineral density and a review of the literature on health care access and health care utilization on infant mortality rates.

Advances in Health and Disease – Volume 37
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 05/24/2021
234 pp.
Hardcover: 978-1-53619-671-9. $250.00
e-book: 978-1-53619-700-6. $250.00
This book is comprised of eight chapters, each of which describes a recent advancement in the field of health and disease. Chapter One discusses the opportunities created by technological advancement for treatment of Acute Lymphoblastic Leukemia. Chapter Two presents a review of the last five years of pharmacological development related to treatment of high uric acid levels in blood and gout. Chapter Three describes the patterns of behavior that put adolescents at risk for developing obesity or overweight and details prevention and treatment methods. Chapter Four describes principle complications and their management associated with endoscopic sinus surgery. Chapter Five proposes a review of classification of transphenoidal skull base approaches and shows the main transnasal corridors to the sphenoid sinus based on the anatomical sphenoidal target and extension of pathology. Chapter Six discusses the minimally invasive sinus technique and the differences between it and functional endoscopic sinus surgery. Chapter Seven evaluates the efficacy and safety of prolonged low-dose clarithromycin therapy in patients with chronic polyp rhinosinusitis after endoscopic breast surgery. Finally, Chapter Eight evaluates the usefulness of computer-assisted navigation in endoscopic sinus surgery.

Advances in Health and Disease – Volume 38
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 06/11/2021
228 pp.
Hardcover: 978-1-53619-723-5. $250.00
e-book: 978-1-53619-780-8. $250.00
This monograph consists of eight chapters that provide updates in the field of health and disease. Chapter One describes orthostatic hypotension, a geriatric syndrome caused by postural blood pressure change, and its impact on quality of life in the elderly. Chapter Two describes the causes and effects of endometriosis, a common condition in women of reproductive age that is very frequently associated with infertility. Chapter Three also relates to infertility, as it presents up-to-date information on the impact of stress, anxiety, and depression on conception, impaired fertility, and infertility. Chapter Four investigates the possible involvement of the superior colliculus in eye movement
problems associated with progressive supranuclear palsy, a rare type of “parkinsonism” that can affect all types of eye movement. Chapter Five summarizes the recently published, epidemiological findings referring to the impact of environmental and occupational factors on fecundity and fertility. Chapter Six describes the use of electrodiagnostic evaluation for lumbar spinal stenosis, which in many cases correlates with symptoms better than diagnostic imaging. Chapter Seven investigates the association between substance abuse and the decision to seek abortion among low-income women. Finally, Chapter Eight shows how the qualitative and quantitative properties of eigenvalues can explain phenomena ranging from the dynamics of human reactions in tactile environments to the dynamics of the COVID-19 pandemic.
In the first chapter, the authors intend to carry on a critical review of the different methods and approaches to determine the biomechanical output of joint stiffness, designated as dynamic joint stiffness by the authors. The second chapter summarizes several preceding articles on invasive procedures applied with questionable clinical indications in the former Soviet Union. The aim of the third chapter is to give information about how to use tacrolimus, in which type of glomerulonephritis and what are the treatment results, especially remission and relapse rates. In the fourth chapter, a ten-week experiment was conducted to assess the effect of supplementing Synechococcus sp. and Synechocystis sp. on the growth performance, haematology, serology and disease resistance in Oreochromis mossambicus. In the final chapter, discussions of the special properties of endothelial cells and their ability to generate the thrombotic microangiopathic syndrome and ARDS are undertaken based upon current knowledge of the capillary endothelial cells. Attempts are made to address the current pathophysiology of non-idiopathic thrombotic microangiopathy.

Advances in Medicine and Biology. Volume 176
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 04/15/2021
242 pp.
Hardcover: 978-1-53619-367-1. $250.00
e-book: 978-1-53619-481-4. $250.00
This compilation comprises 8 chapters, each of which details a recent advancement in medicine and biology. Chapter 1 describes innate immune responses and their role in controlling infections, including the relationship between innate and adaptive immune responses during infections. Chapter 2 focuses on the structural characteristics of transforming growth factor beta (TGF-β) and its diverse biological activities in cancer signaling pathways and presents current information about the role of TGF-β in cancer cell signaling. Chapter 3 summarizes several preceding articles on invasive procedures applied with questionable clinical indications in the former Soviet Union. Chapter 4 provides information about the physical properties, isomerism, synthesis and reactions of thiadiazole, with emphasis placed on the current studies of various syntheses of thiadiazole compounds and their important biological properties. Chapter 5 evaluates the antifungal activity of the leaf ethanolic extract of Persea americana, popularly known as avocado, and its modulatory potential in association with fluconazole to verify its action on Candida micromorphology as well as its chemical characterization. Chapter 6 explores the step-by-step role of TGF-β during the process of wound healing. Chapter 7 describes hypophosphatasemia, a rare pathophysiological condition that causes various diseases, and includes new information about hypophosphatasemia that has assisted with the diagnosis of Kikuchi Fujimoto disease and can help to predict the outcome of cardiac surgery and septic shock. Finally, Chapter 8 summarizes the evolution of digital holography, including the latest results on visualizing and distinguishing different types of blood cells.

Advances in Medicine and Biology. Volume 177
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 04/15/2021
236 pp.
Hardcover: 978-1-53619-491-3. $250.00
e-book: 978-1-53619-509-5. $250.00
This compilation comprises 6 chapters, each detailing a recent advancement in medicine and biology. Chapter 1 deals with tuberculosis (TB), describing current knowledge of disease pathogenesis, epidemiology of TB and drug-resistant TB, evolution and molecular mechanisms of drug resistance, fitness compensatory mechanisms and laboratory methods for the diagnosis of susceptible and drug-resistant TB. Chapter 2 details the use of B cell-targeted therapy for treatment of autoimmune and chronic inflammatory diseases. Chapter 3 concerns peptic ulcer disease and the various therapeutic approaches used to treat ulcers or lesions in the gastrointestinal tract. Chapter 4 discusses the efficacy of in vitro cultures of Astragalus for biomass and secondary metabolite production. Chapter 5 describes the B lymphocyte activation factor (BAFF), a potent cell-survival factor expressed in many hematopoietic cells. Finally, Chapter 6 presents a review of the literature to determine the relationship between non-alcoholic fatty liver disease, non-alcoholic steatohepatitis and hepatocellular carcinoma to establish a guideline for monitoring patients.
Advances in Medicine and Biology. Volume 178
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 06/30/2021
278 pp.
Hardcover: 978-1-53619-706-8. $250.00
e-book: 978-1-53619-738-9. $250.00
This monograph includes seven chapters that describe recent advances in medicine and biology. Chapter One discusses glutathione transferases (GSTs) from helminth parasites in the host-parasite interaction and candidates for vaccine development targeting parasitic GSTs. Chapter Two reviews the pharmacological and therapeutic effects of onion and its constituents in allergic and immunologic disorders. Chapter Three discusses state-of-the-art knowledge of apolipoprotein E (ApoE) polymorphism to demonstrate its wide biological properties and its effects on how medical conditions can be managed. Chapter Four introduces the antiviral and immunomodulatory effects of macrolides and the associated mechanisms in the human airway and lung cells. Chapter Five evaluates the role of several genes that are likely to be involved in diabetic neuropathy by employing transcriptome analysis. Chapter Six details diagnosis, risk factors, and treatment of nephrotic syndrome, the frequent cause of chronic kidney diseases observed in children and adults. Finally, Chapter Seven describes the characteristics of the Michigan Cancer Foundation-7 (MCF-7) cell line and its significant role in the anticancer research paradigm.

Advances in Medicine and Biology. Volume 179
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 07/22/2021
278 pp.
Hardcover: 978-1-53619-764-8. $250.00
e-book: 978-1-53619-847-8. $250.00
This edited volume includes eight chapters, each of which describe recent advances in medicine and biology. Chapter One discusses dietary recommendations and beneficial compounds, such as vitamin D, omega-3 fatty acids, antioxidants, and phytochemicals to aid the management of abnormal lipid metabolism in postmenopausal women. Chapter Two discusses the role of viral infection and features from the host that take part in the development of hemophagocytic lymphohistiocytosis (HLH). Chapter Three analyzes the effects of caffeine and coffee consumption on airways and lung function, particularly in the case of asthma. Chapter Four describes the use of natural and herbal drugs in the treatment of hepatitis B. Chapter Five presents the results of a genetic survey for carbapenem-resistant Klebsiella pneumoniae (CRKP). Chapter Six describes the treatment of degenerative lumbar spinal stenosis using soft interspinous process device. Chapter Seven reviews the efficacy of tonsillectomy for rheumatic diseases. Finally, Chapter Eight summarizes the available literature concerning graft pre-soaking in anterior cruciate ligament reconstructions as a method of reducing the likelihood of post-operative infections, which can lead to septic arthritis.

Advances in Medicine and Biology. Volume 180
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 06/11/2021
236 pp.
Hardcover: 978-1-53619-765-5. $250.00
e-book: 978-1-53619-807-2. $250.00
This monograph contains six chapters, each of which provides details about recent advancements in the field of medicine and biology. Chapter One describes the discovery of AZQ, a drug specifically designed to shut off genes that cause brain cancer. Chapter Two analyzes the structure, stability, adaptation to extreme environments and the catalytic mechanism of α-helical membrane proteins. Chapter Three provides an up-to-date overview of artificial intelligence (AI) in assisted reproductive treatment (ART) clinics and explores how AI learns and develops a dataset to provide clinical guidance. Chapter Four consists of a study focused on the etiopathogenesis of primary open angle glaucoma using laboratory mice. Chapter Five presents and comments on the current evidence regarding diagnostics in patients with metastatic breast cancer based on circulating tumor cells (CTCs). Lastly, Chapter Six reviews the pathogenetic and clinical features of inner ear involvement in congenital cytomegalovirus (cCMV), the most frequent non-genetic cause of permanent sensorineural hearing loss in childhood.
Advances in Medicine and Biology. Volume 181
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 06/25/2021
243 pp.
Hardcover: 978-1-53619-747-1, $250.00
e-book: 978-1-53619-810-2, $250.00
This book includes five chapters, each representing a recent advancement in medicine and biology. Chapter One discusses future aspects of sports medicine and their applications. Chapter Two deals with clinical visual impairment in the elderly population resulting from neurodegenerative diseases such as Alzheimer’s disease. Chapter Three reviews recent promising alternatives to protamine, which is currently used as a heparin antagonist but can cause dangerous side effects. Chapter Four describes the factors responsible for the development of diseases such as SARS, MERS, and Ebola. Finally, Chapter Five discusses the future applications of Drosophila melanogaster in neurobehavioral studies.

Advances in Medicine and Biology. Volume 182
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 08/11/2021
245 pp.
Hardcover: 978-1-53619-953-6, $250.00
e-book: 978-1-53619-973-4, $250.00
This edited volume contains seven chapters, each detailing recent advancements in medicine and biology. Chapter One presents an overview of drug-related problems in pediatrics. Chapter Two evaluates the role that Maytenus ilicifolia can play in the treatment of melanoma skin cancer. Chapter Three presents a review of biosensors for lipopolysaccharides and assays for studies of lipopolysaccharide binding interactions. Chapter Four presents a literature review of treatment options for carpal tunnel syndrome. Chapter Five describes the application of metabolomics, a science that quantifies and qualifies metabolites in an organism, in bio-medical research. Chapter Six presents the results of a systematic screening that was performed to identify macromolecules that are able to induce accumulation of ascitic fluid in rodents. Finally, Chapter Seven describes a study wherein the method of gravitational mass spectroscopy was used to study the long-range order in an ensemble of atomic nuclei clusters in chicken egg yolk before and after adsorption by beet sugar on the chromosomes.

Advances in Medicine and Biology. Volume 183
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 07/30/2021
262 pp.
Hardcover: 978-1-53619-938-3, $250.00
e-book: 978-1-53619-945-1, $250.00
This edited volume contains six chapters that each describe recent advancements in medicine and biology. Chapter One summarizes recent discoveries regarding the immunomodulatory effects of vitamin D3 on human health with an emphasis on the interplay of transcription factors and reviews the most recent recommendations based on new clinical evidence for vitamin D3 dosages for the prevention and treatment of COVID-19. Chapter Two focuses on idiopathic membranous nephropathy, the most common cause of nephrotic syndrome in adults who do not suffer from diabetes mellitus. Chapter Three details the emerging worldwide prevalence of myopathies, their evolving diagnostic parameters, and the newer therapeutic modalities. Chapter Four includes a review of medroxyprogesterone, which is a type of progestin that is used as a long-lasting injectable contraceptive and for the treatment of hormone-dependent tumors. Chapter Five describes synovial fluid, which lubricates and cushions joints during motion, and the effects of viscosupplements on the function of synovial fluid. Lastly, Chapter Six introduces the properties of dopamine acrylamide and discusses its application potential in detail.
Advances in Medicine and Biology, Volume 184
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 08/11/2021
293 pp.
Hardcover: 978-1-53619-936-9. $250.00
e-book: 978-1-53619-999-4. $250.00
This edited volume presents seven chapters detailing recent advancements in the fields of medicine and biology. Chapter One describes the regularities of abzyme production in patients with autoimmune diseases as well as in experimental mice. Chapter Two reviews the partners that assist polytopic membrane proteins in their way to acquiring their final structure. Chapter Three presents an approach for the development of an efficient biological sensor for the detection of biochemicals in large scales. Chapter Four shows the different flavin-based fluorescent proteins and fatty-acid-binding proteins and the advantages and disadvantages of using these anaerobic fluorescent proteins for real-time imaging in complex systems versus aerobic fluorescent proteins. Chapter Five discusses the main benefits of exercise for cirrhotic patients and current exercise prescription guidelines for this population. Chapter Six concerns the role thiamine deficiency plays in causing pediatric lactic acidosis. Finally, Chapter Seven discusses the mechanism of wound healing involving stem cells in IIIa burns and proposes using the state of NC1 conformations as an objective indicator of epidermal restoration and the topology of solenoid chromosome construction as an indicator of dermis restoration.

Bioactive Nutraceuticals for Brain Disorders
Aman B. Upaganlawar (Department of Pharmacology, SNJBS SSDJ College of Pharmacy, Neminagar, Chandwad, India), Md. Sahab Uddin (Department of Pharmacy, Southeast University, Dhaka, Bangladesh) and Chandrashekhar D. Upasani (Department of Pharmacology, SNJBS SSDJ College of Pharmacy, Neminagar, Chandwad, India)
In series: New Developments in Medical Research
Publication Date: 05/14/2021
411 pp.
Hardcover: 978-1-53619-463-0. $230.00
e-book: 978-1-53619-608-5. $230.00
Over the past several years research concerning brain health and nutraceuticals has received much attention due to their potential neuroprotective properties and few or no side effects. Nutraceuticals exert copious effects in several biological processes, including antioxidant defenses, cell proliferation and differentiation, gene expression, signal transduction, and safeguarding of mitochondrial integrity. It is very likely that the brain health of an individual is affected by his or her dietary pattern. Intake of a well-nourished diet in the earliest stages of life builds a strong foundation of the brain which helps to maintain brain health in later stages of life. On the other hand, nutritional deficiency can disrupt the structure and function of the human nervous system and increases the risk of brain disorders and early death, affecting all age groups. Although nutraceuticals are popular for health, wellbeing, and illness, the efficacy of common supplements to combat brain disorders is not clearly understood. Bioactive Nutraceuticals for Brain Disorders aims to describe the importance of nutraceutical intervention on different brain disorders to highlight the therapeutic as well as preventive potential.

Building Children and Youth for the Future: Some International Aspects
Joav Merrick MD, MMediSci, DMSci, (National Institute of Child Health and Human Development, Jerusalem, Israel; Division of Pediatrics, Hadassah Hebrew University Medical Centers, Mt Scopus Campus, Jerusalem, Israel, Division of Adolescent Medicine, KY Children’s Hospital, Department of Pediatrics, Lexington, Kentucky, USA; School of Public Health, Georgia State University, Atlanta, Georgia, USA), Ariel Tenenbaum, MD (Director, Center for Children with Chronic Diseases and Down Syndrome Center Jerusalem, Division of Pediatrics, Hadassah Hebrew University Medical Center Mount Scopus Campus, Jerusalem, Israel) and Hatim A. Omar, MD
In this book we have brought together research from international clinicians, practitioners and researchers from various backgrounds and communities. Some of the papers were presented at the annual Stop Youth Suicide conference in Lexington, Kentucky in November 2019 and some at the Fifth International Conference on Child Health, Development and Welfare in Jerusalem, Israel during December 2019. The topics in this international potpourri of presentations are from a college experience program for people with intellectual disabilities in New York, migration from South Korea, which has emerged as one of the world's largest diaspora nations, discussions on abuse head trauma and adolescent suicide to risk factors for impaired early childhood development in rural India. We hope this collection of papers will be of interest to our international audience and hope you will find useful information from this research.

Chikungunya: Epidemiology, Transmission and Therapeutics
Phillip Galvan
In series: Tropical Diseases - Etiology, Pathogenesis and Treatments
Publication Date: 08/10/2021
115 pp.
Softcover: 978-1-53619-978-9. $82.00
e-book: 978-1-53619-987-1. $82.00
Chikungunya (CHIKV) is a viral infection spread by mosquitoes that can cause symptoms such as fever, joint pain, muscle pain, headache, fatigue, and rash, which can become severe. While symptoms generally subside within a week or two, the disease nonetheless imposes a burden on societies around the world and carries a death risk of 1 in 1,000 infections. Chapter One details the history and evolution of the virus, including its epidemiology and extensive spread, and discusses disease prevention and vector control measures. Chapter Two describes the geographical distribution, transmission, and alternative hosts of Chikungunya. Chapter Three provides an insight into the different immunotherapy and immunoprophylaxis strategies that have demonstrated promising results so far for the treatment of this disease. Lastly, Chapter Four provides an overview of the potential therapeutics that have been proposed and developed for CHIKV.

COVID-19 and the Rise of Telemedicine: Benefits and Challenges
Christina B. Willis
In series: Public Health in the 21st Century
Publication Date: 01/29/2021
118 pp.
Softcover: 978-1-53619-081-6. $82.00
e-book: 978-1-53619-201-8. $82.00
This book focuses on the benefits and challenges of telemedicine in the age of and when treating COVID-19. Telemedicine can be considered to play a major part in COVID-19 patients’ management, because it provides a quick and precise diagnosis that is obtained without unnecessary exposure of the medical personnel. The first chapter focuses on arrhythmias in COVID-19 patients. It is mandatory to assess whether arrhythmias in COVID-19 patients are preventable, treatable or permanent, or if they have long-term effects on the patient’s cardiovascular status. The second chapter examines the future of Internet healthcare on the foundation of a traditional model in the age of COVID-19. Next, the pros and cons of telemedicine, including the ways in which virtual telemedicine platforms rationalize and address the costs, accessibility, and quality of care that affect healthcare management are explored. The authors of the fourth chapter look at the legal ethical dilemmas related to the care of COVID-19 patients through telemedicine. And finally, the role of telemedicine in COVID times for neurologists and neurosurgeons in particular are explored in detail.
Emotionality of COVID-19. Now and After: The War Against a Virus

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In series: Public Health in the 21st Century
Publication Date: 04/21/2021
234 pp.
Hardcover: 978-1-53619-534-7. $160.00
e-book: 978-1-53619-557-6. $160.00

Similarly to the attacks on the World Trade Center on September 11 of 2001, a foundational event that marked the turn of the century, the recent virus outbreak in Wuhan, China resonates heavily in the social imaginary of West. Both events have differences and of course commonalities. 9/11 epitomizes the struggle of Western civilization against an invisible enemy, terrorism, while now the target is a virus. Both emulate the doctrine of living with the enemy inside. Another commonality rests on the fact the same transport means that facilitate the state of emergency are paradoxically and at the same time mainly victims. Based on the invitation of well- renowned experts coming from four continents, the present book discusses critically the effects of COVID-19 as well as the global pandemic in society. To some extent, experts and colleagues of all pundits energetically emphasize the economic crisis of COVID-19 overlooking the durable effects in the societal background. This book intends to fill the gap giving a fresh insight which explains the role of social distancing and the lockdown in a new emerging society. Although chapters can be read separately, they are finely grounded into a common argumentation, as the pandemic affirms not only the geopolitical tensions of what Scambler dubbed as a fractured society but also starts a feudalization process where the Spectacle of Death prevails.

Extracorporeal Membrane Oxygenation: Types, Medical Uses and Complications

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In series: Medical Procedures, Testing and Technology
Publication Date: 01/20/2021
377 pp.
Hardcover: 978-1-53618-915-5. $230.00

Extracorporeal membrane oxygenation (ECMO) is an innovative therapy that is used to support the physiologic needs of a patient during illnesses associated with acute severe respiratory and/or cardiac failure. ECMO is used in those life-threatening situations in which the oxygenation, ventilation, and circulatory support needs of the patient cannot be adequately maintained with a maximal conventional ventilator or pharmaceutical support. Essentially, ECMO is a simple pump circuit that can be used to support the role of failing lungs or hearts while therapies are aimed at organ recovery. While simple in concept and theory, this text illustrates the complexities associated with clinical use. The use of ECMO has evolved substantially overall the years–in part due to broader and growing applications, a better understanding of the technologies and how they can be used (especially in the context of long term human-ECMO circuit interactions), objective tools for patient selection, management protocols, and, most importantly, a growing body of evidence-based science and literature that demonstrates the effectiveness of this highly invasive, resource-intensive, and complex tool.

The goal of this text is to draw from established thought leaders and experts around the world and present a comprehensive review of the rapidly-evolving and expanding literature regarding the spectrum of applications for ECMO. While by no means is this implied to be the final and exhaustive text on this topic, it does aim to be as comprehensive and up-to-date as possible which is, in itself, a challenge given how quickly this field is evolving.

This text is aimed at students and providers, at all levels, who might have interest or be involved in the care of these critically ill patients. Chapters focus on how programs can be structured, the specific details of patient selection, management, and expanding roles of ECMO. Both basic and sophisticated concepts are presented with the goal that all may learn. We also present an objective assessment of some of the evolving challenges and limitations to ECMO in the context of the increased utilization and expansion of this therapy, combined with “sicker” patients, and the ongoing journey towards improved outcomes while offering a salvage therapy to patients who might otherwise die.
Immunizing the Human Body: The Role of Non-Descript and Traditional Edible Green Leaves

Dr. A.B. Sharangi (Professor and Former HOD, Plantation, Spices, Medicinal & Aromatic Crops, Faculty of Horticulture, BCKV-Agricultural University, Mohanpur, Nadia, WB, India), Dr. S. K. Acharya (Professor and Former HOD, Department of Agricultural Extension, BCKV-Agricultural University, Mohanpur, Nadia, WB, India) and Dr. Suddhasuchi Das (Plantation, Spices, Medicinal & Aromatic Crops, Faculty of Horticulture, BCKV-Agricultural University, Mohanpur, Nadia, WB, India)

In series: Health Care in Transition
Publication Date: 02/05/2021

251 pp.
Hardcover: 978-1-53619-136-3. $195.00
e-book: 978-1-53619-161-5. $195.00

The entire human civilization is now facing the disastrous impact of the pandemic. It seems to pose an apocalyptic consequence unless there is a vaccine in existence. Out of so many options, one option is creating immunity in the absence of a real vaccine. So immunizing human health and life can be and would be the most important option in combating COVID-19. Now the question is how to build up this hard immunity.

The present book takes into account accumulated facts, information and technology to describe green vegetables as a fresh source and booster of human immunity free from application of pernicious chemicals in the form of pesticides, fertilizers etc. The food should be strong enough to contribute to one's immunity.

The authors hope that this book will create a long-lasting impact, away from the classical way of building immunity.

Mobile Health: Advances in Research and Applications

Dr Gaurav Gupta (Assistant Professor, Yogananda School of AI Computers and Data Science, Shoolini University, Solan, H.P. India), Dr Nagesh Kumar (Assistant Professor Yogananda School of AI Computers and Data Science, Shoolini University, Solan, H.P., India), Dr Yashwant Singh (Associate Professor Central University, Jammu. J&K, India) and Dr Varun Jaiswal (Assistant Professor, BioNano Technology, Department of Food & Nutrition Gachon University, Republic of Korea)

In series: Health Care in Transition
Publication Date: 04/08/2021

330 pp.
Hardcover: 978-1-53619-420-3. $230.00
e-book: 978-1-53619-468-5. $230.00

Smart health technologies continue to gain research interest across the globe in this digital era. Researchers are focusing on advancements in healthcare systems to make human life better. Also, such advancements help in early disease diagnosis and prevention of the worst diseases. Designing smart healthcare systems is possible only because of recent developments in artificial intelligence, machine learning and IoT technologies. Though mHealth refers to all mobile devices which can communicate data, mobile phones are presently the most popular platform for mHealth delivery. Ninety-four percent of the world population owns/uses a mobile phone, making mobile phones an optimal delivery platform for mHealth interventions. mHealth may catalyse the healthcare delivery model from a historical/episodic model into a tangible/patient-centric model. mHealth is being viewed progressively by many as an essential technology metaphor to achieve rich, vigorous patient engagement, ultimately achieving a patient-centric paradigm change.

This book will discuss diverse topics to explain the rapidly emerging and evolving mobile health and artificial perspective, the emergence of integrated platforms and hosted third-party tools, and the development of decentralized applications for various research domains. It presents various applications that are helpful for research scholars and scientists who are working toward identifying and pinpointing the potential of as well as the hindrances to mHealth. The wide variety in topics it presents offers readers multiple perspectives on a variety of disciplines.

The aim of this edited book is to publish the latest research advancements in the convergence of automation technology, artificial intelligence, biomedical engineering and health informatics. This will help readers to grasp the extensive point of view and the essence of recent advances in this field. This book solicits contributions which include theory, case studies and computing paradigms pertaining to healthcare applications. The prospective audience would be researchers, professionals,
practitioners, and students from academia and industry who work in this field. We hope the chapters presented will inspire future research from both theoretical and practical viewpoints to spur further advances in the field. A brief introduction about each chapter follows.

Chapter 1 focuses on the role of Internet of Things (IoT) technologies in healthcare which provides an overview of the various types of IoT devices and data generating equipment for medical information.

In Chapter 2, the objective is to provide a brief discussion about the advantages and disadvantages of using IoT based technologies in healthcare such as wearable devices.

Chapter 3 deals with important aspects of data science for healthcare systems, which includes various algorithms for decision support system algorithms.

Chapter 4 discusses various innovative technologies like digital twins for healthcare and medical diagnosis.

Chapter 5 discusses research investigating the long-term effects of pregnancy and lactation on the female body.

Chapter 6 summarizes recent advances in machine and deep learning techniques for smart healthcare applications.

Chapter 7 explores the research insights on using an artificial neural network with a wrapper-based feature selection to predict heart failure.

Chapter 8 presents a review on context-aware mobile healthcare for smart health services in nursing homes.

Chapter 9 focuses on certain machine learning methods that can help in early prediction of pandemics.

Chapter 10 explores techniques and methods based on machine learning for malaria diagnosis.

Chapter 11 is a complete discussion about mobile health technology to improve health-related quality of life of chronic disease patients in emerging economies.

We are grateful to the authors and reviewers for their excellent contributions for making this book possible.

The Bible and Medicinal Plants: The Healing Power of Natural Medicines
Mohamad Hesam Shahrajabian (Biotechnology Research Institute, Chinese Academy of Agricultural Sciences, Beijing, China) and Ted Trandahl (Pastor, Christ for the Nations Institute, Dallas Texas, USA; The King’s University South Lake, Texas, USA)

In series: Natural Products and Therapeutics
Publication Date: 03/17/2021
197 pp.
Hardcover: 978-1-53619-391-6, $160.00
e-book: 978-1-53619-431-9, $160.00

Religious books, especially the Bible, include many plants and herbs which have been used as traditional medicines for thousands of years. Aloe vera (John 19:39-40), Anise (Matthew 23:23), Balm (Ezeiel 27:17, Genesis 37:25, Genesis 3:25, Jeremiah 8:22, Jeremiah 46:11, Jeremiah 51:8), Bitter herbs such as Coriander seed, Cilantro root, Wild lettuce, Wild endives (Exodus 2:8, Exodus 12:8), Cassia (Exodus 30:24, Ezekiel 27:19, Psalms 45:8), Cinnamon (Exodus 30:23), Cumin (Isaiah 28:25), Fig (Judges 9:10-11, Numbers 13:21-23, Numbers 20:5, Deuteronomy 8:7-9, 1 Samuel 30:11-12, Nehemiah 13:15, 1 Samuel 25:18, 2 Samuel 16:1, 1 Chronicles 12:40, 2 Kings 20:107, Genesis 3:6-7, Isaiah 38:21, and etc.), Flax (Leviticus 6:10), Frankincense (Matthew 2:10-11, Exodus 30:24), Garlic (Numbers 11:5-6), Hyssop (1 Kings 4:33, Psalm 51:7), Mandrake (Genesis 30:14, Song of Songs 7:13), Milk thistle (Genesis 3:8), Mint (Luke 11:41, Matthew 23:23), Mustard seed (Luke 17:6), Myrrh (Esther 2:12, Genesis 43:11, Proverbs 7:17), Nard (Song 1:12, Song 4:13, Song 4:14, Mark 14:3, John 12:3), Pistachio nuts and Almond (Genesis 43:11), Saffron (Song of Solomon 4:14), and Turmeric (Song of Solomon 4:14-15) are important medicinal plants which have been mentioned in the Bible. In recent years, the use of herbal medicines and their natural products has increased rapidly across the world. The aim of this manuscript is to review the notable health benefits and pharmaceutical advantages of medicinal plants and herbs which have been mentioned in the Bible.

The History of Extra-Corporeal Membrane Oxygenation (ECMO): From Start to COVID
Michael S. Firstenberg, MD (Director of Research and Special Projects, William Novick Global Cardiac Alliance, Cardiothoracic and Vascular Surgery, The Medical Center of Aurora, CO, USA)

In series: Medical Procedures, Testing and Technology
Publication Date: 01/05/2021
226 pp.
Hardcover: 978-1-53618-961-2, $160.00
e-book: 978-1-53619-040-3, $160.00

The history of extra-corporeal membrane oxygenation (ECMO) reflects a true medical success story that has been the result of tremendous dedication, perseverance, teamwork,
and years—if not decades—of hard work by countless providers, students, and advocates. This book, the final in a series of three on ECMO, traces the history of extra-corporeal support from the early years when therapy was offered as a last attempt at salvaging those patients who had lost almost all hope of survival, to the modern era and the role of ECMO in the contemporary management of critically ill patients, especially during the COVID-19 pandemic. The chapters illustrate how the technical aspects of ECMO have evolved, as well as the growing role of patient selection and team-based management. Although the role of ECMO for COVID-19 is still evolving, the chapters addressing this topic can serve as a foundation for the many complex systematic issues, beyond just the bedside care of ECMO patients, that must be acknowledged.

Jorge Agustín Nicolás Ruiz de Santayana y Borrás, also known as George Santayana, has been credited with the quote: “Those who cannot remember the past are condemned to repeat it,” [George Santayana (1905) Reason in Common Sense, p. 284, volume 1 of The Life of Reason] a concept that clearly resonates with those involved in ECMO program development, patient selection and management. As such, the primary goal of this text is to help scholars of all levels better understand where we have been and where we are going.

The Practice and Principles of Extra-Corporeal Membrane Oxygenation (ECMO)

Michael S. Firstenberg, MD (Director of Research and Special Projects, William Novick Global Cardiac Alliance, Cardiothoracic and Vascular Surgery, The Medical Center of Aurora, CO, USA)

In series: Medical Procedures, Testing and Technology

Publication Date: 01/27/2021

369 pp.

Hardcover: 978-1-53618-960-5. $230.00

As demonstrated in the first book, the management of patients with profound respiratory failure or cardiogenic shock has evolved significantly over the years with advances in diagnostic and therapeutic options. While the mortality for these often-overlapping problems remains high, progress in the multi-disciplinary approach to these complex clinical problems has improved survival substantially. The focus of this second book is to explore some of the advanced topics and current literature regarding the management of patients requiring extra-corporeal membrane oxygenation (ECMO). As illustrated in the spectrum of topics discussed, ECMO is not only a complex therapy in itself, but the challenges, problems, and complications that arise in this unique area of medicine require engagement by many diverse disciplines. While there are many physiological issues such as organ protection, management of circuit complications, and optimal lung and cardiac protection for recovery, the use of ECMO also introduces a variety of legal and ethical challenges, particularly end-of-life issues (including brain death) in patients for whom recovery, despite extra-corporeal support, is most likely futile. Each of the chapters, written by world-renowned experts in the field, highlights a different important aspect in understanding the complex dynamics of extra-corporeal support and its impact on human pathophysiology. While many of the topics discussed involve sophisticated concepts, each chapter was written with the goal of providing a comprehensive review suitable for any level of training and experience. Many of the topics discussed highlight the state-of-the-art literature along with expert experiences and perspectives as we try to learn more about the overlapping art and science of a field of medicine that has only recently been accepted as a mainstream treatment option. Students of ECMO, ranging from early stage healthcare providers to master physicians, will benefit from the insights presented.

Use of Nursing Models and Theories from a Sexuality Perspective

Martha Ofelia Valle Solis (Universidad Autónoma de Nayarit, Mexico)

In series: Nursing - Issues, Problems and Challenges

Publication Date: 03/09/2021

371 pp.

Hardcover: 978-1-53619-180-6. $230.00
e-book: 978-1-53619-308-4. $230.00

The book presents research studies where models and theories of nursing from the perspective of sexuality were used. Theory is essential to explain and understand nursing practices. Likewise, it favours planning, predicting and evaluating the outcomes of care. Therefore, the theoretical approach is a useful tool for reasoning, critical thinking and, in addition, it helps nurses to be able to use and manage all the information about the patient and to manage the practice of care in an orderly and effective way.

The use of conceptual models of nursing in care ensures that all nurses share a common language and similar conceptions regarding the nursing, person, health, environment and care paradigms that characterize the professional role. Here, a reflection is posed about what still, and even though it is a very important topic, maintains the dichotomy between nursing practice and nursing theory.
The book is aimed at undergraduate and graduate students in the area of health, as well as at health professionals interested in using such models or theories related to human sexuality in different age groups.

SURGERY AND SURGICAL SPECIALTIES

Craniospinal Vascular Diseases and Endovascular Neurosurgery
Xianli Lv MD (Neurosurgery Department, Beijing Tsinghua Changgung Hospital, School of Clinical Medicine, Tsinghua University, Beijing, China), Guihuai Wang MD (Neurosurgery Department, Beijing Tsinghua Changgung Hospital, School of Clinical Medicine, Tsinghua University, Beijing, China) and James Wang MD (Neurosurgery Department, Beijing Tsinghua Changgung Hospital, School of Clinical Medicine, Tsinghua University, Beijing, China)

In series: Neurosurgery Research Progress
Publication Date: 03/24/2021
496 pp.
Hardcover: 978-1-53619-342-8. $310.00
e-book: 978-1-53619-357-2. $310.00

Endovascular neurosurgery is now the most commonly practiced therapeutic approach for most vascular lesions involving the brain and spinal cord. At the beginning, balloons were the only available technique; later coils, embolic agents, and stents are introduced. With the expansion of endovascular devices and techniques, the treatment strategies for cerebrospinal vascular diseases have been refined. Neurosurgeons must have the mindset to embrace and nurture progress and technological advances. The pioneers of endovascular neurosurgery considered the impossible and tenaciously stood by their dreams. Their revolutionary ideas and inventions truly reflected their courage, faith, and determination. The shift away from open surgical approaches has had far-reaching implications for how we train neurosurgical residents and fellows and how we certify these individuals once their training is completed. With the maturity of endovascular neurosurgery technology, we need to give the resident and fellow training for neurovascular surgery. This book describes the endovascular diagnosis and treatment of vascular lesions involving the brain and spinal cord using catheters in the DSA (digital subtraction angiography) unite. The field of endovascular neurosurgery has resulted in effective endovascular therapies for carotid-cavernous fistulas (CCFs), intracranial aneurysms, arteriovenous malformations (AVMs), dural arteriovenous fistulas, atherosclerosis of cerebral arteries, acute stroke, carotid artery disease, and vascular tumors of the head, neck, and spinal vascular malformations and tumors. The scope of practice of neurovascular endovascular surgery has become complex, requiring training in specific skill sets and techniques. The evolution of the neuroendovascular field has resulted in the development of program requirements for residency or fellowship education in endovascular neurosurgery.

Enhanced Recovery After Surgery: Perspectives, Protocols and Efficacy
Stan Waechter

In series: Surgery - Procedures, Complications, and Results
Publication Date: 06/21/2021
125 pp.
Softcover: 978-1-53619-548-4. $82.00
e-book: 978-1-53619-604-7. $82.00

This book brings to light the latest research on enhanced-recovery after surgery or ERAS. The chapters focus on ERAS in head and neck surgery, protocols in thoracic surgery, the impact of perioperative immunonutrition on complications in patients undergoing radical cystectomy and ERAS in gynecological surgery.
Peritonitis: Causes, Diagnosis and Treatment  
David F. Walker  
In series: Emergency and Intensive Care Medicine  
Publication Date: 06/10/2021  
107 pp.  
Softcover: 978-1-53619-624-5. $82.00  
e-book: 978-1-53619-641-2. $82.00  
This book contains three chapters about peritonitis, which is an inflammation of the membrane lining the abdominal wall and covering the abdominal organs. Chapter One presents classification of postoperative peritonitis, describes symptoms, reviews the current understanding of the phases and stages of development and features of the disease, and discusses the usefulness of different prognostic scales for assessment of complicated intra-abdominal infections. Chapter Two studies assisted peritoneal dialysis, wherein a nurse goes to the patient’s home to perform the dialysis technique when the patient is unable to do it himself. Chapter Three discusses in detail different types of peritoneal infections, including their principles of diagnosis and treatment options.

Surgeon’s Perspective on Dialysis Patient  
Maria Frankovicova (University Pavol Jozef Safarik, Professor of Surgery; Chief of Department of Vascular Surgery, East Slovak Institute of Cardiovascular Diseases, Medical Faculty of Safarik University, Kosice, Slovakia)  
In series: Surgery - Procedures, Complications, and Results  
Publication Date: 04/08/2021  
357 pp.  
Hardcover: 978-1-53619-262-9. $230.00  
e-book: 978-1-53619-314-5. $230.00  
Every year a large number of chronic patients undergo dialysis at dialysis departments in the Slovak Republic. Each one of them is connected to the artificial kidney 100 to 160 times. The most valuable property of these patients is a quality and long-term functioning arteriovenous fistula since it is one of the essential conditions for successful dialysis. The surgeon who creates arteriovenous access must thoroughly examine the patient before the operation, properly evaluate the vascular system and choose the most favorable way of the vascular access for long-term hemodialysis. Patients with chronic renal failure have impaired hemostasis, several of them have diabetes and their vascular system is affected by atherosclerosis. Determination of the operational plan and optimal vascular access is strictly individual and depends not only on the vascular system of the patient but also on the general condition, age and prognosis of the disease. A quality arteriovenous fistula should conform to the requirements of the simplest and the shortest operation as possible, using local anesthesia. Underestimation of any fact can result in the creation of many non-functional AV fistulas. AV fistulas operations for the purpose of long-term hemodialysis are an integral part and one of the most problematic issues of Vascular Surgery. There are more and more patients who are in the long-term hemodialysis program. The average age of patients is increasing. All these factors have resulted in the need to create more and more AV fistulas because their usability is limited. The correct operational tactics, individual approach to the patient and precise surgical technique of the vascular surgeon contributes to the improvement of the quality of life of sick patients, of whom only a small percentage is so lucky that the disease is cured by successful kidney transplantation.

What’s New in Hip Arthroscopy  
Alessandro Aprato, M.D.(Orthopaedic Surgeon, University of Turin, Turin, Italy)  
In series: Orthopedic Research and Therapy  
Publication Date: 03/17/2021  
241 pp.  
Hardcover: 978-1-53619-321-3. $160.00  
e-book: 978-1-53619-397-8. $160.00  
Hip arthroscopy has seen significant developments in the last 25 years. Until a decade ago, it was considered an emerging surgical technique, but today it is an established and effective treatment for various hip pathologies. The development of hip arthroscopy is strictly linked with the evolution of the concept of femoracetabular impingement. The description of this new pathology and the open surgical treatment described by Professor Ganz were actually the basis for the development of hip arthroscopy.
Femoroacetabular impingement is, nowadays, the main indication for hip arthroscopy. Femoroacetabular syndrome should be regarded as a triad of symptoms, clinical signs and imaging findings. The goal of the treatment, in these cases, should not be simple anatomic correction but to obtain a hip without impingement in the normal range of motion. In addition, labrum, cartilage, capsule and soft tissues should be evaluated and lesions should be treated. In particular, the role of the labrum has been investigated during the last several years and several techniques for labral repair and labral reconstruction have been developed. Despite the progress in diagnosis and treatment of several hip pathologies, the exact indications of hip arthroscopy are still debated. Defining the limits for arthroscopic treatment in cases of advanced osteoarthritis, bone deformity and periarticular soft tissues pathologies is one of the goals of current investigations concerning hip arthroscopy. This book is intended as a guide to the innovation and development in hip arthroscopy over the last 10 years ranging from an update of the surgical indications to rehabilitation after hip arthroscopy. In every chapter, an expert in hip arthroscopy discusses a specific subject focusing on latest trends and surgical techniques. Attention is focused especially on surgical indications, patient positioning and approaches, labral and capsular management, ischiofemoral impingement management, extra-articular pathologies, trauma and finally post-operative rehabilitation.

Combating Canine Cancers with Phytochemicals
Katrin Sak, PhD (Head of the NGO Praeventio, Tartu, Estonia)

Cancer is a serious and ever-growing health concern not only in humans but also in dogs. Considering the differences in average lifespans, people commonly experience the loss of their companion dogs, representing a traumatic event to pet owners. On the one hand, better nutrition and improved care with many recent advancements in veterinary medicine have allowed dogs to live longer. On the other hand, this has involved an increased prevalence of aging-related diseases, including different types of malignancies. In fact, cancer affects one in every three dogs, being the most common cause of canine death. Hence, dogs with cancer require treatment, but differently from the human oncology, there are only few established standards of care for clinical management of canine tumors, besides the lack of effective drugs. Research into identification of novel efficient anticancer compounds and development of new therapeutic options are therefore highly needed to help man’s best friend in combating malignant neoplasms. Over the past few decades, researchers have paid attention to the health benefits of various plant secondary metabolites, leading to the development of several new drugs for human medicine. Proceeding from this success, in this book, the current knowledge about anticancer effects of plant-derived compounds in different canine cancer models is compiled, discussing the role of phytochemicals in vitro canine cancer cell lines, in vivo xenografted mice, and in tumor-bearing dogs. Although still limited, these data reveal a great potential of plant compounds in reducing proliferation and inducing death of cells derived from different types of canine tumors, allowing these natural substances to be considered as promising anticancer drug candidates for dogs. This approach can not only result in the development of more efficient therapeutic agents for canine oncology in the future, but also provide new possibilities for chemopreventive strategies. Finally, considering the high biological, histological, and clinical similarities between canine and human tumors, knowledge on bioactivities of specific phytochemicals in cancer-bearing dogs can ultimately benefit both species, accelerating drug development paths for humans and promoting general advancement of oncological discipline.
A Look at Maternal Health and Reproductive Rights
Lisa R. Flores
In series: Women's Issues
Publication Date: 07/22/2021
348 pp.
Hardcover: 978-1-53619-760-0, $230.00
e-book: 978-1-53619-832-4, $230.00
The United States is the most dangerous place in the developed world to deliver a baby. Each year, about 700 American women die and 50,000 women are severely injured due to complications related to childbirth. If you are a Black woman in the United States, it is even more dangerous to give birth. Chapter 1 reports on ways to save mothers’ lives. Chapters 2 and 3 examine how state and federal policies are impacting residents’ access to comprehensive reproductive healthcare services, including abortion.

Eclampsia: Prevalence, Risk Factors and Complications
Sharon Wright
In series: Pregnancy and Infants: Medical, Psychological and Social Issues
Publication Date: 05/10/2021
134 pp.
Softcover: 978-1-53619-574-3, $82.00
e-book: 978-1-53619-674-0, $82.00
This book is composed of three chapters about eclampsia, which is a condition involving seizures that occur during a woman’s pregnancy or shortly after giving birth. Chapter One analyses the clinical profile, neurological manifestations, imaging features, prognosis and risk factors which can predict neurological complications in eclampsia patients. Chapter Two describes the discovery of phosphoester steroid conjugates and proposes a role for them in pre-eclampsia. Chapter Three discusses postpartum eclampsia and describes which medications should be used for management of symptoms in patients who show signs of pre-eclampsia.

The Thin Pink Line: Regulating Reproduction
Carol Lynn Curchoe Burton, PhD (Newport Beach, CA, USA)
In series: Obstetrics and Gynecology Advances
Publication Date: 02/15/2021
140 pp.
Softcover: 978-1-53619-150-9, $95.00
e-book: 978-1-53619-191-2, $95.00
The Thin Pink Line: Regulating Reproduction is a critical exploration of historical perspectives to modern controversial topics in gynecology; from birth control to sterilization, to episiotomies and the “husband stitch,” to “educational” pelvic exams, shackling laboring convicts, gender affirming surgery, human embryo research, assisted reproduction and much more. This book poses questions for us to consider about the current and future reproductive ethical decisions. Does reproductive health need more or less regulation? Who should be deciding? The Thin Pink Line: Regulating Reproduction is a brave and honest look at where we have been, so we can figure out where we want to go. The Thin Pink Line: Regulating Reproduction is intended to educate a wide audience of womynx, men, femmes, gender non-conforming folks, uterus owners, and everyone in between. It has a specific intersectional focus on the impact that the current reproductive regulatory framework has on disenfranchised groups, such as people of color, LQBTQ individuals, and the lower socioeconomic strata.
UPCOMING PUBLICATIONS

Geriatrics

Social and Health Issues among Older Adults in India
Supa Pengpid, MPH, DrPH, MBA (Professor at ASEAN Institute for Health Development, Mahidol University Thailand), Karl Peltzer, MA Clin Psych, PhD, Dr Habil (Department of Research Administration and Development, University of Limpopo, South Africa) and Joav Merrick, MD, MMedSci, DMSc (Professor of Pediatrics at the Division of Pediatrics, Hadassah Hebrew University Medical Center, Mt Scopus Campus, Jerusalem, Israel, Kentucky Children’s Hospital, University of Kentucky, Lexington, United States and Professor of Public Health at the Center for Healthy Development, School of Public Health, Georgia State University, Atlanta, United States, the Former Medical Director of the Division for Intellectual and Developmental Disabilities, Ministry of Social Affairs and Social Services, Jerusalem and the Founder and Director of the National Institute of Child Health and Human Development in Israel)
In series: Health and Human Development
Expected Publication Date: 09/15/2021
374 pp.
Hardcover: 978-1-53619-937-6. $230.00
e-book: 978-1-60876-522-5. $230.00

With longevity and declining fertility rates, the population of older persons (60 years and above) is globally growing faster than the general population. The percentage of the elderly in India for example has been growing at an increasing rate in recent years and the trend is likely to continue in the coming decades. The share of population over the age of 60 years is projected to increase from 8 percent in 2015 to 19 percent in 2050. By the end of the century, the elderly will constitute nearly 34 percent of the total population in the country. In this book we aimed to identify trajectories of health and their associations with lifestyle factors in a nationally representative cohort study of middle-aged and older Indians. We discuss self-rated health status, age discrimination, major injuries, recurrent falls, perceived everyday discrimination, elder abuse, hypertension, diabetes, angina pectoris, stroke, arthritis, back pain or problems, oral health problems, cataract, edentulism, hearing loss, tobacco use, alcohol use, loneliness, health care discrimination, weight discrimination, religiosity and well-being. We hope that the findings may aid public policy and programmes for middle-aged and older adults in India.

Health Care

Advances in Health and Disease. Volume 42
Lowell T. Duncan
In series: Advances in Health and Disease
Expected Publication Date: 08/20/2021
260 pp.
Hardcover: 978-1-68507-010-6. $250.00
e-book: 978-1-68507-046-5. $250.00

This edited volume includes seven chapters, each of which details a recent scientific advancement in health and disease. Chapter One describes polycystic ovary syndrome (PCOS) and elaborates various treatment, therapeutic, and management strategies for PCOS which may help in relieving its economic and social burden. Chapter Two addresses the ethical problems of the use of human fetal cell cultures in the manufacture of vaccines as well as other ethical dilemmas associated with vaccines. Chapter Three reviews fundamental aspects of imaging in the diagnosis of pneumomediastinum, including the normal mediastinal anatomy and relevant variants in plain radiography and computed tomography. Chapter Four summarizes current literature involving fasted exercise and health benefits and discusses the proposed mechanisms, aiming to determine fasted aerobic exercise applicability as a health-promoting strategy. Chapter Five examines the role that aerobic exercise plays in osteoporosis prevention and management, and how different exercise modalities contribute to bone health. Chapter Six reviews the main features of spontaneous pneumomediastinum, both in its asymptomatic and emergent forms, with focus on clinical signs and symptoms, natural course and the differential diagnosis. Lastly, Chapter Seven covers the current strategies for the management of gestational diabetes mellitus.
Advances in Health and Disease. Volume 43
Lowell T. Duncan
In series: Advances in Health and Disease
Expected Publication Date: 10/20/2021
249 pp.
Hardcover: 978-1-68507-013-7. $250.00
e-book: 978-1-68507-050-2. $250.00
This edited volume includes six chapters detailing recent advancements in health and disease. Chapter One describes the set-up and characteristics of various endoscopic submucosal dissection devices. Chapter Two explains neural plasticity, or the brain’s ability to rewire itself, and how it relates to the treatment and progression of various neurological conditions. Chapter Three discusses a range of medical interventions where progesterone has been found useful, highlighting its exceptional role in supporting pregnancy to full term. Chapter Four details the characteristics, classification, pharmacokinetics, drug interaction, clinical uses and adverse effects of anticoagulants. Chapter Five analyzes how emergency medical services responded to the global pandemic of 2020. Lastly, Chapter Six summarizes published results on the influence of low birth weight, prematurity, and nutritional status during childhood on the tooth eruption of deciduous and permanent teeth.

Infectious Disease and Microbiology

Antimicrobial Peptides: Function, Mechanisms of Action and Role in Health and Disease
Paresh Chandra Ray (Professor of Chemistry, Physics and Atmospheric Sciences, Jackson State University, Jackson, MS, USA)
In series: Microbiology Research Advances
Expected Publication Date: 09/30/2021
248 pp.
Hardcover: 978-1-68507-005-2. $160.00
e-book: 978-1-68507-082-3. $160.00
The increasing prevalence of antibiotic-resistant bacteria, known as superbugs, has threatened the field of infectious disease medicine over most of the past century. Antimicrobial peptides, a crucial part of innate immunity that exists in most living organisms, have become a central pillar for the next generation of medical challenges for infectious diseases, cancer, and other health problems. The development of new antimicrobial peptides to tackle ongoing superbug infections, cancer and other diseases is a fast-growing research area for chemistry, medical physics, biological science, food and agricultural science and different disciplines of medicine. This volume discusses the basic science behind potential pharmacological agents, which is necessary to understand how these peptides can be used in our daily lives. The book provides a foundation for a wide variety of antimicrobial peptide-based therapeutic approaches, which is invaluable for established scientists, junior researchers, and students involved in basic science, material science, the medical field and different disciplines of engineering. It contains nine chapters written by world leaders in this area, covering basic science and possible therapeutic applications with immense societal implications. Antimicrobial peptides are an exciting new therapeutic agent with promising applications for a wide variety of illnesses.

COVID-19 by Cases: A Pandemic Review
Sujanthy S. Rajaram, Anthony Longo and Nicole Burak
In series: New Developments in Medical Research
Expected Publication Date: 10/25/2021
442 pp.
Hardcover: 978-1-68507-099-1
A clinical account written by front-line providers, COVID-19 by Cases is the first comprehensive review text on COVID-19. As such, the inventive format features a case-based and systems-based review of observations, clinical knowledge, basic science, ethics, and personal experiences during the COVID-19 pandemic. With each systems-based chapter encompassing a case report, literature review, and discussion, COVID-19 by Cases is intended for a broad audience, including clinical providers, clinical educators, and students. It also serves as a standalone account to preserve this unique time in human history. COVID-19 by Cases is a multi-institutional effort with input from hospitalists, outpatient physicians, specialists, residents, nurses, pharmacists, clinical educators, and students.
Impacts and Implications of COVID-19: An Analytical and Empirical Study
Dr. Anand Sharma, Dr. Prateek Agrawal, Ms. Vishu Madaan and Mr. Anuj Agarwal
In series: Infectious Diseases and Microbiology
Expected Publication Date: 09/30/2021
Hardcover: 978-1-53619-670-2. $160.00
e-book: 978-1-68507-081-6. $160.00

Impacts and Implications of COVID-19: An Analytical and Empirical Study describes the most recent research developments regarding COVID-19. This book includes a wide range of interdisciplinary submissions that address the latest findings regarding a wide variety of psychological, social, managerial, and technological issues for fighting COVID-19.

Chapter One discusses how machine learning applies to prediction, forecasting, screening, contact tracing, treatment, medication and the drug or vaccine invention process in connection with COVID-19. Chapter Two deals with immunomodulatory therapy for clinical management of COVID-19 patients. Chapter Three describes the importance of social distancing and the development of a tool to detect social distancing. Chapter Four discusses the impact of COVID-19 on the education sector, and Chapter Five focuses on the impacts of COVID-19 on employment, e-commerce, and e-pharmacies.

Chapter Six gives an insight into the policies regarding COVID-19 in India, and Chapter Seven compares vaccine candidates based on their status in trial phases, route of administration, dosage, efficacy, and safety. Chapter Eight explores how the pandemic has impacted human communication and relationships, as people have been forced to interact in the digital space rather than the physical one. Chapter Nine describes the urgent need to devise sustainable and effective strategies to mitigate the problems relating to shortages of labor and equipment in the agricultural sector due to the pandemic. Finally, Chapter Ten describes the role of physical therapy in the recovery of COVID-19 patients.

Nephrology and Urology

Issues in Kidney Disease – Acute Kidney Injury
Stephen Z. Fadem and Ahmed Arslan Yousof Awan
In series: Issues in Kidney Disease
Expected Publication Date: 09/30/2021
Hardcover: 978-1-68507-002-1. $145.00
e-book: 978-1-68507-125-7. $145.00

Issues in Kidney Disease – Acute Kidney Injury is a collection of nineteen independent chapters written by internationally renowned authors, covering a wide range of topics, including the basic concepts and management of acute kidney injury (AKI), contrast induced nephropathy, acute tubular necrosis, interstitial nephritis, glomerulonephritis, obstructive uropathy, COVID-19, cardiorenal and hepatorenal syndrome. This book also addresses kidney injury in specialized populations like pregnant patients and patients with kidney transplant. A whole chapter is also dedicated to imaging in patients with kidney injury.

This book will appeal to renal fellows, nephrologists, and practicing physicians involved in the care of AKI patients in critical care units and medical floors, including all those interested in the advances and innovations undergoing in this field. It brings timely and updated reviews and addresses trends, challenges, and controversies of kidney injury.

Issues in Kidney Disease – Chronic Kidney Disease
Stephen Z. Fadem and Samaya Javed Anumudu
In series: Issues in Kidney Disease
Expected Publication Date: 09/30/2021
Hardcover: 978-1-68507-001-4. $145.00
e-book: 978-1-68507-124-0. $145.00

Issues in Kidney Disease – Chronic Kidney Disease (CKD) is a collection of 17 detailed chapters written by world leaders and experts in nephrology in order to provide a comprehensive review of kidney disease using evidence-based recommendations and guidelines. This book starts with an excellent introduction and classification of CKD and progresses into various important aspects of CKD care including prevention, diabetes, hypertension, acid-base disturbances, genetic and age considerations, glomerulonephritis, interstitial nephritis, aging, as well as considerations for patients in pregnancy and with malignancy.

This book will appeal to trainees and practicing clinicians in internal and family medicine, as well as nephrology, who would like current and practical clinical knowledge of chronic kidney disease to help improve the lives of patients with this condition.
Issues in Kidney Disease – Dialysis
Stephen Z. Fadem and José A. Moura-Neto

In series: Issues in Kidney Disease
Expected Publication Date: 09/30/2021
Hardcover: 978-1-68507-000-7. $145.00
e-book: 978-1-68507-123-3. $145.00

Issues in Kidney Disease – Dialysis is a collection of nineteen independent chapters written by internationally renowned authors, covering a wide range of topics, from the history and milestones to the future, in different renal replacement therapy modalities, such as hemodialysis, online hemodiafiltration, and peritoneal dialysis.

This book will appeal to renal fellows, nephrologists, and physicians involved with chronic kidney disease patients on maintenance dialysis, including all those interested in the advances and challenges still facing medicine. It brings timely and updated reviews and addresses trends, challenges, and controversies of dialysis therapies.

Neuroscience

Horizons in Neuroscience Research. Volume 44
Andres Costa and Eugenio Villalba

In series: Horizons in Neuroscience Research
Expected Publication Date: 09/30/2021
254 pp.
Hardcover: 978-1-68507-072-4. $250.00
e-book: 978-1-68507-085-4. $250.00

This edited volume includes seven chapters, each detailing recent advancements in the field of neuroscience. Chapter One evaluates the role of several factors, including health system barriers, cultural beliefs and knowledge of Alzheimer’s disease in predicting help-seeking intentions for early symptoms of Alzheimer’s disease among American Indians and Alaska Natives. Chapter Two examines the utility of transcranial magnetic stimulation to support and predict the clinical diagnosis of the most common neurodegenerative dementias. Chapter Three discusses the results of migraine-candidate gene association studies conducted in the last three decades. Chapter Four reviews the history, types, indications, benefits, and complications of telemetric intracranial pressure monitoring. Chapter Five reviews the current concepts on pathophysiologic mechanisms involved in the development of neurogenic pulmonary edema and discusses the associated clinical and therapeutic aspects. Chapter Six follows the evolution of the dopamine receptor blocking agent medication class and the consequential changes in our knowledge of dopamine’s role in psychotic disorders. Finally, Chapter Seven describes patient selection criteria, diagnostic work-up, medical management and surgical techniques for patients with recurrent strokes secondary to steno-occlusive cerebrovascular disease.

Nutrition and Diet

Spirulina and its Health Benefits
Jaylee Cochran

In series: Nutrition and Diet Research Progress
Expected Publication Date: 09/30/2021
201 pp.
Softcover: 978-1-68507-018-2. $95.00
e-book: 978-1-68507-084-7. $95.00

This monograph includes five chapters describing spirulina, a biomass of cyanobacteria with strong antioxidant effects and various other health benefits. Chapter One addresses the boosting effect on the immune system by spirulina, exploring its antiviral activity and respective mechanisms. Chapter Two evaluates the neuroprotective effect of spirulina and its aqueous extract in two models of fetal alcohol syndrome in mice. Chapter Three reviews biomolecules of industrial interest with health benefits that can be extracted from spirulina biomass and describes the factors that influence their synthesis as well as their application in food and pharmaceutical industries. Chapter Four provides a broad overview of the various health benefits of spirulina. Finally, Chapter Five describes the beneficial effects of spirulina on conditions including obesity, cardiometabolic disturbances, and immunitary processes.
Oncology

Burkitt Lymphoma: Diagnosis, Risk Factors and Treatment

Douglas V. Berthelot

In series: Cancer Etiology, Diagnosis and Treatments

Expected Publication Date: 09/30/2021

271 pp.

Hardcover: 978-1-68507-071-7. $195.00

e-book: 978-1-68507-083-0. $195.00

Burkitt lymphoma (BL) is a form of non-Hodgkin’s lymphoma in which cancer starts in immune cells called B-cells. If left untreated, it is rapidly fatal. Chapter One of this monograph evaluates the etiology, pathological issues, diagnosis, clinical manifestations, epidemiology, research, innovation and treatment issues of BL using the clinical systematic review research method and experts’ opinion analysis approach. Chapter Two reviews the spectrum, unique characteristics and special management considerations when BL develops in specific subgroups of patients with primary immune deficiency disorders. Chapter Three reviews the incidence, clinicopathological and epidemiologic features, treatment and outcome data available in pediatric and adult patients with post solid organ transplant BL. Chapter Four focuses on the pathobiology and the treatment of first-line and relapsed/refractory cases of BL and describes new therapeutic strategies which could improve results in this pathology. Chapter Five examines the therapeutic advances in BL and its variants. Finally, Chapter Six explores and emphasizes the trends and issues in research and innovation in the characteristics, clinical updates and management approaches of BL.

Ophthalmology

Keep It Simple and Single – Binocular Vision Testing Made Easy

Dr. Jameel Rizwana Hussaindeen and Dr. Mitchell Scheiman

In series: Eye and Vision Research Developments

Expected Publication Date: 09/30/2021

Hardcover: 978-1-53619-941-3. $230.00

e-book: 978-1-68507-111-0. $230.00

Pain Management

Antinociceptive Tolerance to NSAIDs in Brain Limbic Areas: Role of Endogenous Opioid and Cannabinoid Systems

Natia Tsagareli, PhD (Laboratory of Pain and Analgesia, Ivane Beritashvili Center for Experimental Biomedicine, Tbilisi, Georgia), Nana Tsiklauri, PhD (Laboratory of Pain and Analgesia, Ivane Beritashvili Center for Experimental Biomedicine, Tbilisi, Georgia) and Merab G. Tsagareli, DSc, PhD (Laboratory of Pain and Analgesia, Ivane Beritashvili Center for Experimental Biomedicine, Tbilisi, Georgia)

In series: Pain Management - Research and Technology

Expected Publication Date: 08/20/2021

158 pp.

Softcover: 978-1-53619-814-0. $95.00

e-book: 978-1-53619-881-2. $95.00

The development of pain as a common experience and its treatment is very important, not only where it is caused by injury or inflammation, but also in chronic states where the nerves themselves are damaged. Even though we already know from physiological studies that special pain receptors or nociceptors are responsible for conducting pain sensations to the brain, the phenomenon of pain remains a medical and social problem. Pain relief or analgesia can be achieved using several different approaches and strategies.

Non-steroidal anti-inflammatory drugs are the most widely used analgesics. They have analgesic, antipyretic, and, at higher doses, anti-inflammatory actions. However, a few recent studies have demonstrated that in the case of their prolonged use, these non-opioid drugs elicit the opioid-like effect of tolerance, which alongside drug withdrawal syndrome may entail serious adverse effects.

This book provides up-to-date review information and experimental findings concerning antinociceptive tolerance to NSAIDs. The first three chapters after the introduction are devoted to literature reviews on brain limbic areas, opioid and cannabinoid systems, and non-opioid antinociceptive tolerance. Chapters Five, Six and Seven describe research data on antinociceptive tolerance to NSAIDs and opioid and cannabinoid mechanisms of attenuation of nociceptive hyperalgesia in the cingulate cortex, insular cortex, and central amygdala. Chapters Eight, Nine and Ten include discussion, summary and conclusions, as well as a detailed description of experimental materials and methods.
Effective Use of Creative Writing in the Treatment of Addiction to Chemical Substances

Eric A. Kreuter, PhD

In series: Alcohol and Drug Abuse

Expected Publication Date: 08/20/2021

536 pp.

Hardcover: 978-1-53619-946-8. $310.00

e-book: 978-1-68507-036-6. $310.00

It has long been established that addiction or SUD – Substance Use Disorder – ruins lives and leads to illness, destruction of families, and death. Chasing the “high” often brings the user closer to death each time the use is increased even though the person may choose to ignore the risk. Effective treatment is essential to help recovering addicts change their lives and become productive citizens, leading happy lives in perpetual sobriety. Helping them adjust their focus from shame and guilt to improved self-esteem and renewed sense of purpose in life is essential for avoiding prolonged substance abuse. In addition to traditional approaches, the use of creative writing as a treatment modality can help the addicted person obtain and deploy the tools necessary to remain sober. In this way, creative writing can help actualize the whole person. Inviting people with addictions to share their creative writing with the world helps them to connect their experiences, observations, and recommendations to others.

This book is a collaborative effort between research, facilitation, and contributions of the creative men at St. Christopher’s Inn. Adding to the variety and depth of the creative productions is the incorporation of post-program writing from men who have completed the program at St. Christopher’s and have remained connected in this special endeavor. This allows a window into the minds of the longer-term recovering addicts, especially relating to the tools that help them through life’s persistent challenges. With this book, we hope to show that writing does help in the treatment of chemical addiction.

Special Topics

Advances in Medicine and Biology. Volume 185

Leon V. Berhardt

In series: Advances in Medicine and Biology

Expected Publication Date: 10/20/2021

233 pp.

Hardcover: 978-1-68507-021-2. $250.00

e-book: 978-1-68507-051-9. $250.00

This monograph consists of six chapters, each describing recent advancements in medicine and biology. Chapter One details the use of radiology as an imaging method in diagnosis and risk-assessment of osteoporosis. Chapter Two describes research that aims to better understand the mechanisms involved in the onset of extrapyramidal side effects following treatment with antipsychotics. Chapter Three deals with issues related to endoscopic submucosal dissection (ESD), including diagnosis, endoknives, procedure, traction method, management of complications, and more. Chapter Four discusses ESD in the context of colorectal neoplasia. Chapter Five discusses estrogen receptor mutations that have been described in the ligand binding domain as well as the proposed treatments for patients with breast cancer ESR1 mutant-bearing tumors. Finally, Chapter Six discusses the role of estradiol in the regulation of the immune response of the host during parasitic infections and how estradiol affects parasite physiology.

Advances in Medicine and Biology. Volume 186

Leon V. Berhardt

In series: Advances in Medicine and Biology

Expected Publication Date: 09/30/2021

This edited monograph contains five chapters that present advancements in the fields of medicine and biology. Chapter One provides a comprehensive review of the biological specimens used to monitor antipsychotic drugs as well as the analytical methods and sample preparation techniques used for their determination. Chapter Two focuses on estradiol and how it regulates the biology of innate and adaptive immune cell subpopulations, and how it may contribute to the resolution, exacerbation, or treatment for colorectal cancer. Chapter Three discusses the involvement of vitamin A in different areas such as embryonic development, development of the nervous system, and diseases. Chapter Four describes environmentally friendly methods for the production of bismuth nitrate solutions and conditions for the hydrolytic purification of bismuth from the main metal impurities, specifies the compositions of the compounds used in medicine, and gives the production conditions for high purity bismuth compounds and the data on their toxicity. Finally, Chapter Five describes the use of gravitational mass spectroscopy to study the evolution of muscles.
Advances in Medicine and Biology. Volume 187
Leon V. Berhardt

In series: Advances in Medicine and Biology
Expected Publication Date: 09/30/2021
Hardcover: 978-1-68507-107-3. $250.00
e-book: 978-1-68507-121-9. $250.00
This edited monograph includes eight chapters, each discussing recent advancements in the fields of medicine and biology. Chapter One provides information on the mechanisms of polyurethane degradation. Chapter Two reviews the inhibitory effect of chlorogenic acid on metabolic syndrome-related vascular endothelial cell damage, type 2 diabetes, hypertension, and dyslipidemia. Chapter Three investigates the development of fatigue of rat skeletal muscle under the action of water-soluble pristine C60 fullerenes as powerful antioxidants. Chapter Four discusses advances in the generation of immune cells from pluripotent stem cells and the potential of chimeric antigen receptor cells in cancer treatment. Chapter Five describes the targeted delivery of immunosuppressants. Chapter Six focuses on the in vitro degradation of biopolymers using enzymes and microorganisms. Chapter Seven reviews the risk factors for hearing loss in infants admitted to the neonatal intensive care unit and the management of such patients detected with hearing loss. Finally, Chapter Eight describes recently developed methods and tools used in physiological studies of human sensory neurons induced from human pluripotent stem cells.

Surgery and Surgical Specialties

Enhanced Recovery after Surgery (ERAS) in Bariatric Surgery
Jaime Ruiz-Tovar, MD, PhD (Professor of Surgery, Universidad Rey Juan Carlos, Madrid, Spain)

In series: Surgery - Procedures, Complications, and Results
Expected Publication Date: 09/15/2021
357 pp.
Hardcover: 978-1-53619-976-5. $230.00
e-book: 978-1-68507-026-7. $230.00
Enhanced recovery after surgery (ERAS) programs are a multidisciplinary approach in the perioperative care of the patient undergoing major surgery, including pre, intra and postoperative measures, based on the actual evidence published in literature (evidence-based medicine), to improve the postoperative recovery of the patient. ERAS protocols have been widely developed in colorectal surgery, but, given their excellent results, new protocols and guidelines have been developed in other surgical fields, including abdominal and extra-abdominal areas. In the last decade, several ERAS protocols have been implemented worldwide in bariatric surgery, confirming their safety and advantages of ERAS approaches, even on morbidly obese patients. The aim of this book is to update the actual evidence about ERAS protocols on bariatric surgery, analyzing separately the different components and multidisciplinary approach of the ERAS programs.

Women’s Health

Cancer and Pregnancy: A Practical Approach for the Gynecologist
Elisa Picardo, MD (Ginecologia e Ostetricia SC4, Città della Salute e della Scienza di Torino, Ospedale Sant’Anna, Torino, Italy), Marco Mitidieri, MD (Ginecologia e Ostetricia SC4, Città della Salute e della Scienza di Torino, Ospedale Sant’Anna, Torino, Italy) and Saverio Danese, MD (Ginecologia e Ostetricia SC4, Città della Salute e della Scienza di Torino, Ospedale Sant’Anna, Torino, Italy)

In series: Obstetrics and Gynecology Advances
Expected Publication Date: 08/20/2021
286 pp.
Hardcover: 978-1-53619-844-7. $195.00
e-book: 978-1-53619-928-4. $195.00
Cancer during pregnancy is a rare event, occurring approximately once per 1,000 pregnancies annually, corresponding to 0.07% to 0.1% of all malignant tumors. The incidence of cancer in pregnancy is increasing maybe due to trends in delayed childbearing. The most common malignancies associated with pregnancy are, in order of decreasing frequency, melanoma and breast cancer, cervical cancer, lymphomas and leukemias. Melanoma, hematopoietic malignancies and lung cancer are the only cancers that have been reported to metastasize to the placenta and fetus, while melanoma accounts for almost one third of all cases. Imaging during pregnancy should consider risks to the fetus. Treatment of cancer can often be safely administered with good maternal and fetal outcomes. Chemotherapy, radiotherapy, and surgery must be adapted to the pregnancy state. Psychological support is needed at all levels of care.
In addition, the diagnosis of cancer during reproductive age is increased, so procedures for counseling women with newly diagnosed cancer for fertility preservation are necessary. Due to high survival rates and high quality of life after cancer, women should be given the opportunity to plan motherhood after cancer actively. This work will provide an updated review of the diagnosis, staging and treatment options for cancer during pregnancy and the tools for a complete oncofertility counseling.
SCIENCE AND TECHNOLOGY
Infrastructure, energy or other large-scale public or private projects require acquisition, easement or rental of agriculture, pasture or forest land. Beside the specific country’s laws and regulations, investors have to follow various benchmarks applied by funding institutions as international standards. Together, these standards are designed to assure that adverse impacts on people, their rights, livelihoods, culture and environment are avoided or at least minimized, mitigated, offset and/or compensated. For these purposes, these projects are planned in remote rural areas, where there is a lack of land market because of limited transactions. A critical issue in this process is a fair economic valuation of agriculture, pasture or forest land using non-marked based valuation methods for compensation purposes.

This scientific monograph proposes some simple yet solid methods to value agriculture, pasture or forest land which could be applicable by the local or central administration without necessarily requiring on complex methodologies requiring data which are generally not available. More importantly, such methodologies are also difficult to understand by the landowners making the public consultation process non-transparent. The methods applied have been tested with success in several large-scale projects involving acquisition, easement or rental of land parcels in different soil and climatic conditions belonging to thousands of owners. A series of template will help the valuators to integrate all the variables and standardize data presentation. It can serve as a reference to comply with land easement and acquisition strategies and aforementioned international standards, for example, the Performance Requirements of the European Bank for Reconstruction and Development (EBRD), Performance Standards of the International Finance Corporation (IFC).

Opportunities and Challenges of Smallholders and Smallholding

Donát Horváth

In series: Agriculture Issues and Policies
Publication Date: 02/05/2021
332 pp.
Hardcover: 978-1-53619-135-6. $230.00
e-book: 978-1-53619-203-2. $230.00

Smallholder farms or smallholdings comprise livestock and livestock, livestock and crops and crops and crops farming systems. It involves nutritional inter-relationships of integration and interdependency between livestock and crop systems and crop and crop systems. There are an estimated 500 billion smallholder farms worldwide supporting livelihoods of about 2 billion people, most of who are in Sub-Sahara Africa and Asia. Smallholders make more than 60% of agricultural producers supplying local and international food markets, and employ about 70% of farming communities in Sub-Sahara Africa and Asia. However, these farming systems experience financial, technological, infrastructural, market access, environmental and policy and institutional framework challenges. Considering the importance of smallholder farming systems, attempts should be geared towards mitigating the challenges and promoting productivity and sustainability of these farming systems. This is expected to lead to improved food and nutrition security and food safety and translate to improved livelihoods of smallholder farmers and increased income from agriculture products. The authors’ of this book focus on the challenges and opportunities of smallholders and smallholding systems all over the world.
Handbook of Technical Terms of Soil and Water Engineering
Mohammad Albaji (Department of Irrigation and Drainage, Faculty of Water & Environmental Engineering, Shahid Chamran University of Ahvaz, Ahvaz, Iran), Lamya Neissi (Department of Irrigation and Drainage, Faculty of Water & Environmental Engineering, Shahid Chamran University of Ahvaz, Ahvaz, Iran) and Soroor Hendali (Department of Soil Science, Faculty of Agriculture, Shahid Chamran University of Ahvaz, Ahvaz, Iran)

In series: Environmental Science, Engineering and Technology
Publication Date: 02/10/2021
384 pp.
Hardcover: 978-1-61324-110-3. $230.00

This book is designed as a text for undergraduate soil and water engineering courses and as preliminary reading for postgraduate courses in soil and water engineering. It is hoped that it will also be of value to specialists, experts and engineers already in the field and to students preparing for the M.Sc. and PhD examinations. The texts and exercises are based on my lecture courses to undergraduate water science engineers augmented by material prepared for extramural short courses. Wherever possible, illustrations have been used to clarify the texts. The purpose of this book is to bring together and integrate in a single text the subject matter that deals with soil and water engineering. The book is divided into 24 chapters and is intended for students, researchers, and professionals working on various aspects of soil and water engineering. Various soil and water subjects have been discussed in the chapters.

Crops

Arachis hypogaea: Cultivation, Production and Nutritional Value
Richard J. Whitworth

In series: Agriculture Issues and Policies
Publication Date: 04/08/2021
239 pp.
Hardcover: 978-1-53619-386-2. $160.00
e-book: 978-1-53619-504-0. $160.00

Arachis hypogaea L., commonly known as the groundnut or peanut, is a versatile legume that is grown primarily for its edible seeds and is consumed worldwide. Groundnut requires a warm growing season with well distributed rainfall, and India and China are responsible for providing just over half of the world’s supply. However, in most African countries, groundnut is grown on marginal soil under low input and requires the attention of researchers and policy makers. Accordingly, the first two chapters of this monograph detail the cultivation, breeding, and nutritional value of groundnut. Chapter 3 deals with the management of peanut diseases, focusing specifically on the use of azoxystrobin plus benzovindiflupyr as a fungicide for treatment of early leaf spot, peanut pod rot, and other issues. Chapter 4 details how stored peanuts can be protected from fungi and aflatoxins contamination using free and microencapsulated 2(3)-tert-butyl-4 hydroxyanisole (BHA).

Hordeum vulgare: Production, Cultivation and Uses
Naveen Eslem

In series: Agriculture Issues and Policies
Publication Date: 02/15/2021
167 pp.
Softcover: 978-1-53619-137-0. $95.00
e-book: 978-1-53619-248-3. $95.00

Chapter 1 looks at the planting techniques of barley noting that the bidirectional planting technique had a significant effect on growth and yield of barley. Chapter 2 provides information about the molecular approaches and mutation breeding in barley.
Late spring frosts and drought are the most important abiotic stress factors that define the yield and quality performance of spring barley genotypes in breeding programs. For this purpose, the authors of Chapter 3 used in their study a total of 25 spring barley genotypes, including 20 advanced line and 5 standard varieties. The next chapter looks at the composite of barley and the health effects it has.

The last chapter, the author performs a study that investigates the effects of the short-term application (1 and 5 days) of arsenic, cadmium, and lead (15μM, 30μM, and 60μM mixtures) on the phenolic contents of a barley species that was registered by the Trakya Agricultural Research Institute in 2014.

Oil Crops: Growth, Uses, and Toxicity
María de Jesús Perea Flores (Professor, Instituto Politécnico Nacional, Centro de Nanociencias y Micro y Nanotecnologías, Ciudad de México, México), Brenda Hildeliza Camacho Díaz (Professor, Instituto Politécnico Nacional, Centro de Desarrollo de Productos Bióticos, San Isidro Yautepec Morelos, México) and María Ximena Quintanilla Carvajal (Full Professor, Universidad de La Sabana, Colombia)

In series: Agriculture Issues and Policies
Publication Date: 06/11/2021
284 pp.
Hardcover: 978-1-53619-708-2. $195.00
e-book: 978-1-53619-795-2. $195.00

The book “Oil Crops: Growth, Uses, and Toxicity” presents to the reader a compendium of advances and trends in the knowledge of edible and non-edible oilseeds. It includes ten chapters by twelve research and academic institutions from four countries: Colombia, Mexico, Brazil, and Turkey. This book encourages the reader to reflect upon the production and uses of different oilseeds and their byproducts, thus highlighting all the competing possibilities between the food and non-food industry.

Oryza sativa: Production, Cultivation and Uses
Herman N. Kearns

In series: Agriculture Issues and Policies
Publication Date: 02/17/2021
198 pp.
Hardcover: 978-1-53619-112-7. $160.00
e-book: 978-1-53619-256-8. $160.00

Chapter 1 focuses on some of the steps needed to increase the rate of growth in rice production especially for meeting the demands of population growth. Chapter 2 discusses the various conventional approaches used for rice improvement. Chapter 3 examines the role of SSR markers in breeding and improvement of rice. Following the finding that Microbispora are the dominant genus of Actinobacteria in rice (Oryza sativa L.) plants grown in a Vertisol soil from Yanco, NSW, Australia, the authors of Chapter 4 decided to test the hypothesis whether this observation was rice cultivar- or soil-dependent. Four rice cultivars grown in four agricultural soils were subjected to comparative assessment of their root and shoot endophytic actinobacterial population diversity, employing a classical culture-dependent approach as well as 16S rRNA gene PCR T-RFLP as the culture-independent method.

Chapter 5 focuses on many issues pertaining to the development of temperate and cold-tolerant rice varieties suitable for cultivation under irrigated conditions in Kashmir valley and the hills around it. We discuss the issues, the progress, and the way forward for rice research in this very significant Himalayan region where rice is a staple food.

The last chapter deals with the present distribution of the pest, adult description, host plants, life history, ecology, its association with various plant pathogens, damage and effect on yield, natural enemies and management practices.
Vigna radiata: Production, Cultivation and Uses
Martin L. Bech
In series: Agriculture Issues and Policies
Publication Date: 06/02/2021
357 pp.
Hardcover: 978-1-53619-464-7, $230.00
e-book: 978-1-53619-693-1, $230.00
This book contains ten chapters that each provide a different perspective on Vigna radiata, a species of plant in the legume family also known as green gram or mung bean that is used as an ingredient in savory and sweet dishes. Chapters One and Two discuss various potential modern approaches to improve green gram production, including prospects for genetic improvement. Chapter Three focuses on the impact of drought stress on green gram production and various approaches to manage the severity of drought stress. Chapter Four describes the application of Plant Growth Promoting Bacteria (PGPB) on green gram production, while Chapter Five reviews the nutritional composition and health promoting effects of green gram. Chapter Six discusses approaches to abiotic stress management in green gram, whereas Chapter Seven deals with improving soil fertility status for green gram production, and Chapter Eight discusses advanced strategies in disease management of green gram. Chapter Nine proposes various breeding strategies for enhancing or creating new traits in green gram, such as early maturity, long pods, and more seeds. Finally, Chapter Ten focuses on improving farmers’ livelihood by extending marketing strategies to solve problems such as unstable price, lack of marketing information, and inadequate storage facilities.

Zea mays L.: Cultivation, and Uses
Sarah Dunn
In series: Agriculture Issues and Policies
Publication Date: 02/09/2021
103 pp.
Softcover: 978-1-53619-181-3, $82.00
e-book: 978-1-53619-204-9, $82.00
Zea mays L. is a potential producer of cereal crops and the dominant primary energy source of feed for monogastric animals, such as poultry. The first chapter in this book aims to determine the potential of phytase-producing endophytic bacteria, as an invisible avail for Zea mays L. High phytate levels in maize seeds is a problem encountered when used as raw material in poultry feed. The second chapter of this book focuses on the physical traits, chemical composition, and their relationship with wet-milling properties and nutritional quality parameters of maize hybrids of different maturity groups and various endosperm types (dent, semi-dent and flint). Finally, Mesoamerican cultures are generally regarded as advanced societies that, among other contributions to humanity, are known to have domesticated cultivated plants as Zea mays. Maize is one of the staple foods of the Mexican population and the practice of nixtamalization of maize seeds before Spanish conquest in 1521, is fundamental in the preparation of dough for tortillas. The last chapter examines the effect of salicylic acid in maize bioproductivity.

Pest Control
Bacillus thuringiensis: Cultivation, Applications in Agriculture and Environmental Safety
David P. Sanders
In series: Agriculture Issues and Policies
Publication Date: 06/10/2021
118 pp.
Softcover: 978-1-53619-570-5, $82.00
e-book: 978-1-53619-640-5, $82.00
This monograph contains four chapters, each of which provides a different perspective on biopesticides. Chapter One concerns the use of biopesticides in sustainable agriculture, including the interactions between biopesticides and chemical pesticides, production issues, and opportunities for future research. Chapter Two describes the bottom-up approach for using Bacillus thuringiensis (Bt) as a biopesticide and for enhancing host plant resistance against major foliage feeders through deployment of suitable cry genes. Chapter Three reviews strategies for mitigating the spread of Bt resistance and improving insecticidal activity against Bt-susceptible pests. Lastly, Chapter Four aims to revise, debate, and evaluate the effects of Bt as phosphate solubilizing and phosphorus uptake by plant establishment.
Soil

Soil Conservation: Strategies, Management and Challenges
António Vieira
António Bento Gonçalves
In series: Air, Water and Soil Pollution Science and Technology
Publication Date: 05/24/2021
231 pp.
Hardcover: 978-1-53619-513-2. $160.00
e-book: 978-1-53619-600-9. $160.00
Along its existence, humans have used Earth resources in a reckless way, having little consideration for its importance, and for the future generations and their needs. Considering the complexity of this subject, and the extreme difficulty of analyzing all aspects of soil degradation, the Editors nonetheless gather here some contributions, each one addressing different soil conservation problems, strategies or methodologies, trying to add some contributions for the understanding of the overall problem of soil degradation and conservation in the world.
The seven chapters that comprise this book address topics related to soil degradation and conservation strategies, presenting some cases and methodological approaches, in different parts of the world, promoting scientific research developed with the objective of contributing to a better knowledge of the problem and to help in its mitigation.

Sustainable Soil Fertility Management
Hanuman Singh Jatav (Assistant Professor, Department of Soil Science and Agriculture Chemistry, Sri Karan Narendra Agriculture University, Jobner, Jaipur (Rajasthan) India), Dr. Satish Kumar Singh (Professor, Department of Soil Science and Agricultural Chemistry, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, India), Dr. Vishnu D. Rajput (Academy of Biology and Biotechnology, Southern Federal University, Rostov-on-Don, Russia) and Dr. Tatiana Minkina (Academy of Biology and Biotechnology, Southern Federal University, Rostov-on-Don, Russia)
In series: Agriculture Issues and Policies
Publication Date: 02/10/2021
342 pp.
Hardcover: 978-1-53619-055-7. $230.00
Sustainable Soil Fertility Management mainly focuses on issues related to soil management at the field level, which is a prime concern for crop production that may be improved by adopting several sustainable management practices. Soil fertility is the capability of soil to sustain plant growth and optimize crop yield. This can be enhanced through the use of organic and inorganic fertilizers. Several techniques are suggested that enhance soil fertility and crop production while minimizing environmental impact. Soil fertility can be further improved by incorporating cover crops that add organic matter to the soil, which leads to improved soil structure and promotes a healthy, fertile soil; by using green manure or growing legumes to fix nitrogen from the air through the process of biological nitrogen fixation; and by microbes. Fertile soil contains all the major nutrients necessary to sustain basic plant nutrition (e.g., nitrogen, phosphorus, and potassium), as well as other nutrients needed in smaller quantities (e.g., calcium, magnesium, sulfur, iron, zinc, copper, manganese, boron, molybdenum, nickel). The book focuses on global strategies with a possible solution for managing the fertility of soil. The book covers soil science, soil fertility, crop production, soil sustainability, and soil management with a modern scientific approach that is helpful for researchers, the scientific community, academicians, business farmers and policymakers.
Chapter one discusses the current information about the changes in chickpea’s nutritional value and health benefits given by its components after applying different kinds of food processes.

In the second chapter, the authors suggest a holistic framework for defining, evaluating and improving the governance of agroecosystem services in Bulgaria. The interdisciplinary Theory of Ecosystem Services and the New Institutional Economy are adapted, and an attempt is made to define the governance of agroecosystem services, to identify its agents, forms and mechanisms, to formulate an adequate criterion for evaluating its efficiency, and to characterize the stages for its analysis and improvement.

The aim of the third chapter was to develop a new “ready-to-eat” semi-solid CF product by using HHP at 600 MPa and 50°C for 15 or 25 min combined with final microwave heating prior to consumption. Eight combinations with a formulation that includes raw or toasted CF, with or without lemon juice, were evaluated using physicochemical (color and protein content, mechanical and rheological behavior), microbiological and sensory analyses.

Subtropical Scientific Centre scientists (Sochi, Russia) have a task to select the most promising peach varieties of early, average and late maturation that are grown in the region. The timing of fruit maturation depends on the climatic conditions of the area, so in chapter four authors gave a brief description of the varieties, based on their maturation time in the humid subtropics of Russia.

Chapter five, the authors discuss how they came to the conclusion that using the plant growth regulators in okra may be an effective strategy for improving growth, yield, and quality production.

In the last chapter, authors perform a study using anadenanthera colubrina var. cebil (leguminosae) to determine that the dynamic integration of the species biology, spatial ecology, and historical demographic events will provide valuable tools for a multi-scale understanding of gene dispersal processes and their consequences on genetic variability distribution.
Agricultural Research Updates. Volume 35
Prathamesh Gorawala and Srushti Mandhatri

In series: Agricultural Research Updates
Publication Date: 06/02/2021
224 pp.
Hardcover: 978-1-53619-546-0. $250.00
e-book: 978-1-53619-697-9. $250.00

This monograph contains six chapters, each of which provides an update in agricultural research. Chapter One describes the potential health benefits of Morus alba, known colloquially as mulberry, which include its qualities as an antioxidant and antidepressant. Chapter Two deals with the impact of droughts, which are increasing in severity due to climate change, on sugarcane production as well as potential drought response measures. Chapter Three also concerns sugarcane, specifically in connection with the narrow genetic base of current sugarcane varieties and possible solutions for improving genetic diversity. Chapter Four provides an overview of the use of chamomile as a natural food additive for livestock as an alternative to the use of antibiotics in animal diets. Chapter Five discusses the issue of fraudulent practices in food production, such as dilution, tampering, and misrepresentation, and discusses strategies for reducing this problem globally. Finally, Chapter Six details the major diseases of brinjal, also called eggplant, and how to manage them.

Agricultural Research Updates. Volume 36
Prathamesh Gorawala and Srushti Mandhatri

In series: Agricultural Research Updates
Publication Date: 07/22/2021
235 pp.
Hardcover: 978-1-53619-839-3. $250.00
e-book: 978-1-53619-866-9. $250.00

This four-chapter monograph provides updates in the field of agricultural research. Chapter One assesses the risks to human health and the environment posed by potentially toxic elements in the soil-grapevine-air systems of vineyards. Chapter Two describes the optimal techniques for proper crop rotation based on factors such as the local economy, soil, weather, and logistics, particularly in the northwestern region of the cold temperate Canadian prairies. Chapter Three describes three research products that were developed to study sustainable agriculture production systems. Chapter Four focuses on the role of PM H+–ATPases in plant growth and development, addressing their participation in cell expansion, axillary bud outgrowth, pollen tube growth and potato tuberization.

The Coconut Palm (Cocos nucifera): Production, Cultivation and Uses
Probir Kumar Ghosh, PhD (Head, R&D, Aseptic Laboratories, Varanasi, India)

In series: Agriculture Issues and Policies
Publication Date: 07/22/2021
353 pp.
Hardcover: 978-1-53619-768-6. $230.00
e-book: 978-1-53619-820-1. $230.00

The coconut tree has an immense impact not only as a food source, but for various non-food applications as well. These include shelter, medicinal use, and preparation of value-added products. They are a valued plantation around the globe, particularly along the coast lines. Islanders are the true appreciators of this bioresource, who derive most of their requirements from coconuts. The coconut meat (kernel), water, oil, leaves all have a use. Accordingly, there are many aspects of coconuts that pertain to production cultivation and uses, which are diverse.

Biotechnological intervention in coconut plant cultivation includes aspects of genetic improvement of strains, in vitro propagation, rhizosphere management, and coconut plant irrigation aspects. A well-planned cultivation strategy should provide opportunity to improve breed quality and production throughput. Agro-processing of coconut products is also important so that the fruits of the plant are made best use of. Sufficient knowledge of the coconut plant and its products would also provide opportunities to the local community.

Importance also resides in coconut constituents, such as coconut proteins, oil, and water. Coconut products also include haustorium, inflorescence, and derived products such as coconut palm sugar (a value-added product) as well as numerous nutraceuticals. These nutritional supplements can greatly circumvent dietary deficiencies and provide salutary gains. Coconut oil also has significant medical importance besides being a cooking oil, and could be considered for dermal care, both as a
cosmetic and a medical aid. In modern times, coconut could be considered as an effective source of holistic nutrients to alleviate malnutrition and disease. In fact, coconut oil is one of the richest sources of medium chain triglycerides, and lauric acid (coconut being second-richest natural source of lauric acid after breast milk). These nutrients have a significant impact in many ways.

There are also numerous non-food applications of coconuts that warrant attention. In fact, coconut-based nanomaterials are a very useful source for many sectors. Coconuts are also relevant in bioremediation and in waste disposal and management. Coconuts could even be a boon in restoring fecundity of cultivable land. These aspects highlight numerous possibilities with coconuts, not only as source of food and for non-food uses, but also in environmental management. In the present time, with mounting biological/chemical waste being created, such a utility is much welcome.

This book encompasses these various themes under dedicated chapters that provide readers a holistic understanding of the possibilities that exist with coconuts. These chapters should provide an insight on various important topics of interest and encourage cross-dimensional interdisciplinary research on coconuts. Possibilities with various lesser-known usage of products and cultivation techniques could also be envisaged and explored in the near future.

CHEMISTRY

Analytical Chemistry

A Textbook on Water Chemistry: Sampling, Data Analysis and Interpretation
A. G. S. Reddy
In series: Analytical Chemistry and Microchemistry
Publication Date: 07/15/2021
570 pp.
Softcover: 978-1-53619-870-6. $89.00
Hardcover 978-1-53616-703-0, e-book: 978-1-53616-704-7. $89.00

The aim of the book is to provide domain-specific text/reference material pertaining water chemistry/hydrogeochemistry catering to students of geology, hydrogeology, civil engineers, hydrochemistry and environmental sciences. It will also be very much useful to professionals involved in water supply, treatment, and researchers engaged in water chemistry. The book is intended to provide ample realistic examples on water quality pertaining to varied geological environs, which would help in easy understanding of concepts. Question bank and exercises with keys/answers are provided for each chapter, which would facilitate the readers to assess their understanding and also facilitate in competitive tests. The book covers all the topics related to water chemistry with emphasis on ground water. Interpretation techniques for major ion content of water are deliberated exhaustively. Procedure of preparation of plots, graphs and calculations of various indices both manually and using simple software are discussed in detail.

Mass Spectrometry: Theory and Applications
William O. Nichols
In series: Analytical Chemistry and Microchemistry
Publication Date: 07/06/2021
213 pp.
Hardcover: 978-1-53619-790-7. $160.00
e-book: 978-1-53619-874-4. $160.00

This book includes three chapters that discuss the analytical tool called mass spectrometry, which is used to measure the mass-to-charge ratio of ions. Chapter One describes the use of mass spectrometry in the determination of volatile organic compounds in natural matrices and in the characterization of wood extractives. Chapter Two summarizes the investigations by tandem mass spectrometry analysis in biodegradable polymers and the information achieved. Chapter Three discusses the most famous types of commercial Orbitrap analyzers, including LTQ Orbitrap, Orbitrap Elite, Q Exactive Orbitrap, and Orbitrap Fusion.
Biochemistry

A Closer Look at Glycation
Nadeem Ahmad Ansari, PhD (Department of Biotechnology, Faculty of Engineering and Technology, KMC Language University, Lucknow, U.P., India)

In series: Biochemistry Research Trends
Publication Date: 03/04/2021
254 pp.
Hardcover: 978-1-53619-176-9. $195.00
e-book: 978-1-53619-243-8. $195.00

This well-planned, logically structured and user-friendly book provides a useful insight into the world of non-enzymatic glycation from its early stages to an advanced level, with an eye on glycation agents, their enhancers and inhibitors. All chapters are of equal interest but the chapters on dietary AGEs and effects of AGEs on bone cells provide novelty in the area of glycation. These chapters also describe characterization of the glycation and its role in different types of age-related complications and diseases. A chapter on synthetic and plant-based natural inhibitors of glycation is also presented.

Written by a team of experts, this book makes the readers aware of the glycation process in various diseases and complications and creates enthusiasm in teaching key lessons to students of life and medical sciences. With the use of tables, figures and references, and a concise overview of the glycation mechanism and its inhibition on a single platform, this book is ideally suited as a resource for research and teaching purposes as well as contributes to knowledge of glycation inhibitors for controlling disease complications.

Biochemical Studies on Some Biomarkers of Xenobiotic Exposure
Vivek Kumar Gupta (Senior Research Fellow-ICMR, Department of Biochemistry, University of Allahabad, U.P., India) and Prof. Bechan Sharma (Professor of Biochemistry (Cadre), Department of Biochemistry, University of Allahabad, U.P., India)

In series: Biochemistry Research Trends
Publication Date: 04/15/2021
205 pp.
Hardcover: 978-1-53619-381-7. $160.00
e-book: 978-1-53619-500-2. $160.00

Pesticides belonging to carbamate and organophosphate groups have the potential to induce oxidative stress. However, the role of aqueous extract of A. vera has not been properly studied to demonstrate its ameliorative potential against the toxicity induced by these pesticides in single and combination in different organs of mammalian systems. After an extensive literature survey on the subject, an endeavor has been made to define the following objectives in order to fill up the existing lacuna of information about cartap and malathion induced oxidative stress in rat blood, brain and liver and its impact on neurotransmission as well as energy metabolism. Liver and blood were also included in this study for establishing a more meaningful agreement. The present study was therefore undertaken to delineate the differential impacts of cartap and malathion on the biochemical and histological parameters in Wistar rats. In addition, the prophylactic effect of aqueous extract of A. vera leaves has also been evaluated.

The objectives of the present study include: evaluation of xenobiotox-induced oxidative stress, determination of activity of acetylcholinesterase and other esterases in the brains of rats exposed to xenobiotics as potential biomarkers of neurotoxicity; evaluation of different enzymes of energy metabolism in rats exposed to xenobiotics; measurement of specific parameters concerning the function of the kidney and liver in rats exposed to xenobiotics; evaluation of AChE isozyme profile to specifically understand the target of xenobiotics in the brain of rats; analysis of patterns of major biomolecules (proteins/DNA) in rats exposed to xenobiotics for different treatment durations; and assessment of the ameliorative impact of phytochemicals, if any, on xenobiotics.

This book is divided into eight sections. Section 1 contains the general introduction and background of the study. Section 2 contains an extensive literature survey on the subject so as to present updated information. Section 3 demonstrates the main objectives of the study. Section 4 describes the various experimental designs, procedures, protocols, tools and techniques. Section 5 illustrates the data obtained from this study. Section 6 enumerates the discussion of the data and associated mechanisms. Section 7 includes the summary and conclusion of the entire study. Section 8 includes citations and references used in this work. This book contains many specific diagrams, illustrations and presentations in simple tables and figures which are self-explanatory so as to make any reader well versed to this subject. In addition, specific flow charts are added to simplify the presentation.

We hope that this publication will be of great use to graduates, postgraduates, researchers and faculty members who are studying in the field of plant-based principles for alleviating pesticide toxicity and associated diseases. The tools and
Glycome: The Hidden Code in Biology
Dipak K. Banerjee, Ph.D.
In series: Biochemistry Research Trends
434 pp.
Hardcover: 978-1-53619-377-0. $230.00
e-book: 978-1-53619-437-1. $230.00

Description: "Glycome: The Hidden Code in Biology" addresses one of the most fundamental questions in biology today. The book targets readers with little expertise as well as the experts in Glycoscience.

Sugars are electroneutral. However, linking sugars to sugars, or attaching sugars to proteins or lipids changes the structural and functional identities of the glycoconjugate, and enables to form cellular networks of 4Gs [i.e., glycoproteins (N-linked or O-linked), glycosphingolipids, proteoglycans and glycosaminoglycans (GAGs)]. These glycans (i) support growth, proliferation and differentiation of cells and tissues; (ii) protect cells from foreign invasions including bacteria, viruses, parasites as well as from changes in the extracellular environment; (iii) act as biomarkers and participate in transmembrane signaling. The glycans are not ubiquitous but they are tissue/species specific.

Structurally, the glycans are diverse, and form linear to highly branched structures. This diversity is present not only across the species but also within cells of the same species, i.e., the glycoforms. Nuclear magnetic resonance (NMR) and mass spectrometric (MS) studies (i.e., Glycomics) have evaluated and contributed significantly in delineating the structural diversity of glycans. Glycomics, in fact, has helped in overcoming many earlier technological barriers which were otherwise very laborious and time consuming. Plant lectins being carbohydrate binding proteins with a high degree of sugar specificity have been useful tools to characterize the carbohydrate structures they recognize.

The glycan structures complement their biosynthetic processes. Because of the highly compartmentalized nature of the process, the glycans move between compartments during their assembly. This is believed to be mediated by vesicular structures but the participation of exosomes cannot be ruled out.

A large number of genetic disorders [gangliosidosis, mucopolysaccharidoses, congenital disorders of glycosylation (CDG)] are due to abnormal glycan synthesis or degradation. Disproportionate expression of glycans is also found in diseases like cancer, neurological disorders, diabetes, metabolic syndromes, and infection. This raises questions about the regulatory principle(s) in glycan biosynthesis.

There is no template for glycan chain synthesis, elongation, processing or termination. The cells/tissues follow a highly conserved mechanism. The assumption is glycosylation uses donor and acceptor interactions as the driving force. Increased or decreased synthesis of glycans in response to the environmental change influence cell function, i.e., growth, survival or death favor of a “push-pull” hypothesis. In the absence of a genetic code for sugars, the assembly as well as the processing of glycan chains are controlled by the Glycome. Unlike the genome, the Glycome is hidden for the normal eye but its communication skills with the cellular microenvironment and genome for glycan synthesis and degradation are enormous.

Seventeen chapters in the book are dedicated to walk the readers through the diversities of the Glycome. The authors have used mammalian, microbial and plant systems to achieve the desired goal.

Recent Advances in Computer Aided Drug Designing
Dr. Ashutosh Mani, PhD (Assistant Professor, Department of Biotechnology, Motilal Nehru National Institute of Technology Allahabad, India) and Akhil Varshney, Ph.D (Assistant Professor, Ramanujan Fellow and Assistant Professor, Jamia Hamdard, Institute of Molecular Medicine, New Delhi, India)

In series: Biochemistry and Molecular Biology in the Post Genomic Era
Publication Date: 07/23/2021
390 pp.
Hardcover: 978-1-53619-739-6. $230.00
e-book: 978-1-53619-904-8. $230.00

We are extremely happy to introduce our new book, Recent Advances in Computer Aided Drug Designing. While interacting with many researchers in the field of biotechnology and allied sciences, we felt that there was need for a book that could easily bridge the gap between in silico methods applied in structural bioinformatics for drug designing and wet lab workers. Today, when computational skills in biology and biomedical research are in high demand, this book presents updated content for methods and tools applicable in modern computer-aided drug designing. Researchers are pouring knowledge into databases that are publicly available and laboratories across the globe are accessing this information for analysis and further investigation. There is a battery of data scientists involved in development and maintenance of online
databases. Alongside them, there is another class of programmers and scientists involved in development of software tools for analysis of this data. Modern tools based on machine learning are available to provide accuracy and efficiency with speedy analysis of biological and biomedical data. In many cases, analysis of readily available biological data helps to decide future directions for laboratory work. Indications obtained from such analytics save time and resources which could be very crucial in general. Publicly available protein three-dimensional structure and drug databank libraries have facilitated the drug discovery process. Millions of drugs can be screened in a few hours by using virtual screening tools. Molecular viewing tools can be used to visualize macromolecules and their interactions with drugs. Findings from such studies are being used to validate results directly in laboratories.

Efforts have been made to cover all areas relevant for computer-aided drug designing to allow this book to serve as a standard reference book and meet the requirements of graduate students and researchers working in drug design and structural bioinformatics. Some chapters are dedicated to basic concepts in computer-aided drug discovery while other chapters present applications of the available tools in the field. Contents from exemplary method-based chapters are easy to follow and will help new researchers in applying contemporary tools for their studies. The book will also stimulate programmers and data scientists interested in developing tools for structural bioinformatics applications to develop new and improved versions of software. Chapters presenting the basic concepts of methods involved in drug design will help new learners in the field to meet the challenges of designing novel therapeutics by using computational tools. Cross-disciplinary research is in trend nowadays and such investigations involving experts of their respective fields are highly promising and fruitful. Drug discovery requires experts from health sciences and medical sciences, molecular biologists, bioinformaticians, biotechnologists, biochemists, statisticians, biophysicists and clinicians. For a complete piece of translated product such as a drug, inputs from specialist researchers are needed. Modern rational drug discovery approaches are truly inter-disciplinary fields which require a systems biology approach for successful ventures. This book covers all steps of drug design, from drug target identification to intermediate steps to successful clinical trials, making it truly essential for modern researchers in the drug discovery and structural bioinformatics fields.

Advances in Molecular Dynamics Simulations Research

Steffen Köhler

In series: Chemistry Research and Applications

Publication Date: 06/21/2021

198 pp.

Softcover: 978-1-53619-466-1. $95.00

e-book: 978-1-53619-734-1. $95.00

This work presents three chapters, each of which detail a recent advancement in the field of molecular dynamics simulations research. Chapter One describes the molecular dynamics method to simulate the transport processes in nanofluids and the molecular dynamics simulation of transport processes in confined conditions and in nanochannels in particular. Chapter Two provides a comprehensive review on the investigations into the nanoscopic deformation mechanisms of silicon carbide (SiC) and potassium dihydrogen phosphate (KDP) crystals using molecular dynamics simulations under various mechanical loading conditions. Chapter Three reports the effects of pressures applied during rapid solidification of local structures formed in the glassy NiTi alloy based on molecular dynamics simulation results.

A Closer Look at Food Safety

Robert Maur

In series: Food Science and Technology

Publication Date: 07/14/2021

292 pp.

Hardcover: 978-1-53619-845-4. $230.00

e-book: 978-1-53619-884-3. $230.00

When certain disease-causing bacteria, viruses, or parasites contaminate food, they can cause foodborne illness. The food supply in the United States is among the safest in the world — but it can still be a source of infection. According to the Centers for Disease Control and Prevention (CDC), foodborne pathogens cause up to 48 million illnesses, 128,000 hospitalizations, and 3,000 deaths in the United States each year.
Antioxidant Properties and Health Benefits of Green Tea

Nishant Rai, PhD (Professor, Department of Biotechnology, Graphic Era (Deemed to be University), Dehradun, Uttarakhand, India) and Jigisha Anand, PhD (Assistant Professor, Department of Biotechnology, Graphic Era (Deemed to be University), Dehradun, Uttarakhand, India)

In series: Food and Beverage Consumption and Health
Publication Date: 01/27/2021
207 pp.
Hardcover: 978-1-53619-044-1. $160.00
e-book: 978-1-53619-122-6. $160.00

Derived from leaves of evergreen herb Camellia sinensis, green tea is known for its significant human health benefits. Once primarily consumed in Asia and North Africa, green tea is becoming increasingly available around the world with an increase in its average annual growth. There has been a tremendous change in the consumption pattern of green tea, a prime drive of which is the increasing knowledge about and marketing of its health benefits. The most notable health benefit of green tea is its powerful antioxidant potential, which helps prevent cellular damage from certain oxidation reactions in the body at the molecular level.

Green tea is attributed to health claims which include the prevention of skin cancer, lower blood pressure, the prevention of cardiovascular diseases, neurodegenerative and kidney disorders, diabetes, respiratory distress, the inhibition of clinical and opportunistic microbial infections, and many more. The rich presence of polyphenols in green tea is likely responsible for its multiple health benefits. In vitro and in vivo epidemiological evidence suggests the importance of green tea polyphenols in exerting antioxidant activities which confer medicinal and food value. Major polyphenols found in green tea include the catechins, such as epigallocatechin gallate, epigallocatechin, epicatechin 3-gallate, epicatechin, and catechin gallate. These catechins have shown promise in the promotion of cardiovascular health, the prevention of cancer, skin protection, the reduction of high cholesterol levels, diabetes, impaired immune function, diarrhoea, fatigue and infection. There is a highly significant relationship between phenolics, flavonoids and the antioxidant activity of green tea, while the amount of phenolic, flavonoids and antioxidants are the parameters depicting the quality of tea according to their biological properties.

This book is an informative forum highlighting research on the antioxidant activity of green tea pertaining to its health benefits. The book is organised into seven chapters that provide a comprehensive review of the antioxidant activity of green tea and its associated health benefits. The book outlines useful information and improves the fundamental knowledge regarding the processing of green tea, its chemical components, their role as antioxidants and usefulness as nutraceuticals.

Cajanus cajan: Cultivation, Uses and Nutrition

Donald S. Wilkes

In series: Food Science and Technology
Publication Date: 02/09/2021
164 pp.
Softcover: 978-1-53619-134-9. $95.00
e-book: 978-1-53619-223-0. $95.00

Pigeon pea (Cajanus cajan (L.), among legumes, has an important role in the diet of many people in the world. It is one of the oldest food crops. It is the sixth most important legume crop. Pigeon pea is rich in protein, carbohydrates, and dietary fiber, and a rich source of other bioactive components. Cytoplasmic male-sterility (CMS) refers to the condition in plants where they fail to produce functional pollen.

In Chapter 1, the authors briefly discuss cytoplasmic male sterility and its utilization in hybrid breeding in plants. Then they describe a historical overview of the discovery of male-sterility in pigeon pea. Next, a retrospective view on the major CMS systems developed and their use in commercial hybrid seed production in pigeon pea is presented. Finally, genomic approaches for stimulating pigeon pea hybrid breeding are briefly discussed.

In Chapter 2, the authors focus on the pharmacological and medicinal properties of pigeon pea. Next, the chemical composition of pigeon pea, its nutritional value, phytochemical components, health benefits and its usefulness in formulating functional foods is examined. In the final and fourth chapter, the cultivation, uses and other important nutritional information about this important legume is explored.
Fermented and Distilled Alcoholic Beverages: A Technological, Chemical and Sensory Overview. Distilled Beverages
Maurício Bonatto Machado de Castilhos (Department of Exact Sciences and Earth Department, Minas Gerais State University, Frutal, Minas Gerais, Brazil), Vanildo Luiz Del Bianchi (Food Engineering and Technology Department, São Paulo State University, São José do Rio Preto, São Paulo, Brazil) and Vitor Manfroi (Institut of Food Science and Technology, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil)

In series: Fermented Foods and Beverages in a Global Age
Publication Date: 01/21/2021
191 pp.
Softcover: 978-1-53619-026-7. $95.00
e-book: 978-1-53619-053-3. $95.00

Fermented and Distilled Alcoholic Beverages: A Technological, Chemical and Sensory Overview. Distilled Beverages presents relevant material regarding distilled alcoholic beverage technologies and their variations, including current information about their chemistry and sensory profiles. The book aims to offer evidence regarding the use of novel technologies in distilled alcoholic beverages and focuses on the importance of the relationship between chemical and sensory approaches. This information will be useful for distilled alcoholic beverage producers, scientists, professors, and as targeting material for food science, technology and engineering graduate and post-graduate students. This book includes six chapters on the following subjects: cachaça, cognac, pisco, rum, mezcal and tequila, and tiquira (spirit of manioc), and provides information concerning the use of novel technologies in the distilled alcoholic beverage field, comparing them with the classical technologies used worldwide. Useful data is provided regarding the effects of these novel technologies on chemical properties and sensory wine acceptance, as well as on descriptive profiles aimed at assessing the changes promoted in the chemical profile of distilled alcoholic beverages as a result of the improvement of their quality and sensory uniqueness.

Fermented and Distilled Alcoholic Beverages: A Technological, Chemical and Sensory Overview. Fermented Beverages
Maurício Bonatto Machado de Castilhos (Department of Exact Sciences and Earth Department, Minas Gerais State University, Frutal, Minas Gerais, Brazil), Vanildo Luiz Del Bianchi (Food Engineering and Technology Department, São Paulo State University, São José do Rio Preto, São Paulo, Brazil) and Vitor Manfroi (Institut of Food Science and Technology, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil)

In series: Fermented Foods and Beverages in a Global Age
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202 pp.
Softcover: 978-1-53618-984-1. $95.00
e-book: 978-1-53619-051-9. $95.00

Fermented and Distilled Alcoholic Beverages: A Technological, Chemical and Sensory Overview. Fermented Beverages presents relevant material regarding fermented alcoholic beverage technologies and their variations, including current information about their chemistry and sensory profiles. The book aims to provide crucial evidence regarding the use of novel technologies in fermented alcoholic beverages and discusses the relationship between chemical and sensory approaches, since both are closely related. This information will be useful for fermented alcoholic beverage producers, scientists and professors, and will be helpful as material for food science, technology and engineering graduate and post-graduate students. This book includes six chapters with the following subject matter: white wines, sparkling wines, cider, mead, beers and craft beers. The distinctiveness of this book lies in the fact that it provides information concerning the use of novel technologies in the fermented alcoholic beverage field, comparing those with classical technologies that have been used worldwide. The book provides useful data regarding the impact of these novel technologies on chemical properties, sensory acceptance and descriptive profiles, with the goal of assessing the changes promoted in the chemical profile of fermented alcoholic beverages as a result of the their quality improvement and sensory uniqueness.
Fermented and Distilled Alcoholic Beverages: A Technological, Chemical and Sensory Overview. Red Wines

Maurício Bonatto Machado de Castilhos (Department of Exact Sciences and Earth Department, Minas Gerais State University, Frutal, Minas Gerais, Brazil), Vanildo Luiz Del Bianchi (Food Engineering and Technology Department, São Paulo State University, São José do Rio Preto, São Paulo, Brazil) and Vitor Manfroi (Institut of Food Science and Technology, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil)

In series: Fermented Foods and Beverages in a Global Age
Publication Date: 01/21/2021
246 pp.
Softcover: 978-1-53618-985-8. $95.00
e-book: 978-1-53619-052-6. $95.00

Fermented and Distilled Alcoholic Beverages: A Technological, Chemical and Sensory Overview. Red Wines presents relevant material regarding red wine technologies and their variations, including current information about their chemistry and sensory profiles. The book provides crucial evidence regarding the use of novel technologies in red wines and discusses the relationship between chemical and sensory approaches, since both are closely related. This information will be useful for red wine producers, scientists and professors, and will be helpful as material for food science, technology and engineering graduate and post-graduate students. This book includes seven chapters with the following subject matter: red wines produced from American grapes (Vitis labrusca) (Brazil), Bordeaux Cabernet Sauvignon and Merlot (France), Tempranillo (Spain), Carmenère (Chile), Touriga Nacional (Portugal), Tannat (Uruguay), and Syrah (Brazil) grapes. The distinctiveness of this book lies in the fact that it provides information concerning the use of novel technologies in red wine production, comparing those with classical technologies used worldwide. The book provides useful data regarding the effect of these novel technologies on chemical properties, sensory wine acceptance and descriptive profiles, assessing the changes promoted in the wines’ chemical profile as a result of the their quality improvement and sensory uniqueness.

Meat Products: Chemistry, Consumption and Health Aspects

Marcela Paola Castro, PhD (Laboratorio de Microbiología de Alimentos, Departamento de Ciencias Básicas y Aplicadas, Universidad Nacional del Chaco Austral, Argentina; Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) de la República Argentina) and María Elisa Cayré, PhD (Laboratorio de Microbiología de Alimentos, Departamento de Ciencias Básicas y Aplicadas, Universidad Nacional del Chaco Austral, Argentina)

In series: Food and Beverage Consumption and Health
Publication Date: 01/05/2021
263 pp.
Hardcover: 978-1-53618-978-0. $195.00
e-book: 978-1-53619-020-5. $195.00

Meat and meat products have been consumed by humankind throughout time, and the rise of industrialization and mass production in the past century has made them more affordable and available. At the same time, meat and meat products have been blamed for causing cancer and degenerative diseases. Information regarding this has been often blatantly controversial, leading to misinterpretation, uncertainty, and fake news. Rethinking the role of meat in human nutrition is a present challenge for the food industry. To address this, we must look towards green and clean technologies that adhere to the fundamental principles of environmental care. This book includes comprehensive reviews of hot topics relating to meat products. The reader will find current information and scientific evidence about emerging technologies, modern trends and future perspectives on the subject, with emphasis placed on chemical and health aspects. The COVID-19 pandemic has proved that we cannot continue with business as usual. The inevitable consequences of “the old normal” (zoonotic disease, antimicrobial resistance, climate change and food insecurity) will not revert. As we move into the next decade and beyond, we need a more healthy, sustainable and fair food system. This book aims to contribute to build a better scenario for subsequent consumer generations. Today more than ever, food scientists are leading actors in the international scene.
Properties and Uses of Vegetable Oils
Dr. Yashvir Singh (Department of Mechanical Engineering, Graphic Era Deemed To Be University, Dehradun, Uttarakhant, India) and Dr. Nishant Kr. Singh (Department of Mechanical Engineering, Hindustan College of Science and Technology, Mathura, UP India)

In series: Food Science and Technology
Publication Date: 02/24/2021
306 pp.
Hardcover: 978-1-53619-207-0. $230.00
e-book: 978-1-53619-245-2. $230.00

Vegetable oils are a group of fats derived from seeds, nuts, cereal grains, and fruits. It is important to understand that not all vegetable oils are liquid oils at ambient temperatures. Vegetable oils have enormous potential as alternatives for mineral oil in a myriad of industrial applications. Although our knowledge of the genes and biochemical pathways leading to the formation of plant oils allows for the potential to engineer a diverse array of lipid products in seed oils, this goal remains a challenge. This book identifies the prospects of vegetable oils for different applications that facilitate readers from academia, industry, and research laboratories to enhance their knowledge of utilizing vegetable oils in different industrial sectors.

Super and Nutraceutical Foods: Composition and Technology
Sandra Teresita Martín-del-Campo (Tecnologico de Monterrey, Escuela de Ingeniería y Ciencias, Querétaro, Oro, Mexico), Jessica del Pilar Ramírez-Anaya (Departamento de Ciencias Computacionales e Innovación Tecnológica, CUSUR-Universidad de Guadalajara, Ciudad Guzmán, México) and Anaberta Cardador-Martínez (Tecnologico de Monterrey, Escuela de Ingeniería y Ciencias, Querétaro México)

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413 pp.
Hardcover: 978-1-53619-082-3. $230.00
e-book: 978-1-53619-281-0. $230.00

Superfoods have been used for human consumption for centuries. These foods provide an important amount of essential nutrients and energy. Nowadays, the nutraceutical properties of superfoods have acquired importance due to their additional health benefits. Most superfoods are eaten in their fresh form in producing regions, but seasonality is an important limiting issue. Traditional processing technologies have been used to assure supply for the whole year, and innovative processing technologies have been developed to reach bigger markets.

In this book, the authors provide information about nutritional aspects of the described foods. Additionally, the different functional properties of each food, such as antioxidant, anticancer, hypoglycemic, and cardioprotective activities are discussed. It includes information about their principal bioactive compounds, biological activities, the effects of processing these compounds, nutritional values, and sensorial properties and shelf life. The first section is focused on the properties of selected fruits, some eaten fresh, others only after a first transformation. The second section is focused on a selection of foods having been transformed before human consumption, such as cereals, pseudocereals, and legumes. Finally, the third section includes a set of products from animal and diverse origins.

General Chemistry

A Comprehensive Guide to Formaldehyde
Natasja A. Bach

In series: Chemistry Research and Applications
Publication Date: 04/05/2021
133 pp.
Softcover: 978-1-53619-465-4. $82.00
e-book: 978-1-53619-507-1. $82.00

This monograph comprises four chapters concerning formaldehyde, a colorless, flammable, strong-smelling chemical and an essential component in many manufacturing industries. Chapter 1 explicates the synthesis of dianaminodiphenyl sulphone bisbenzoxazine by three step process and the synthesis of bisphenol-S bisbenzoxazine by solvent method. Chapter 2 remarks on the substantial growth trajectory of formaldehyde, examining the
potential health-related effects associated with its rise in popularity and discussing how nanotechnological advancement may play a future role in mitigating the chemical’s harmful impact. Chapter 3 discusses the growth and development of doped nanostructure materials by using hydrothermal method in alkaline phase, concluding that the prepared doped nanomaterial could be implemented in a broad scale for efficient electro-chemical sensor applications for environmental and healthcare fields. Chapter 4 describes the production of reinforcing rubber products, specifically tires, using rubber compounded with methylene acceptor and methylene donor.

**Advances in Chemistry Research. Volume 67**

*James C. Taylor*

In series: *Advances in Chemistry Research*  
Publication Date: 03/04/2021  
245 pp.  
Hardcover: 978-1-53619-338-1. $250.00  
e-book: 978-1-53619-375-6. $250.00

In the first chapter of this compilation, the author reviews the sorption properties of magnetite with respect to hexavalent chromium ions and the possibility of its use as a sorbent for removing these toxic ions from contaminated aqueous solutions. In the second chapter, the authors summarize the importance of oxadiazole in medicinal chemistry for the management of various diseases. The third chapter discusses the developing technology of carbon capture and storage, a technique to reduce the impact of greenhouse gases, and how ionic liquids can be leveraged in this context. Following this, the authors describe how methanol to gasoline processes, specifically those using zeolites and zeolite-based catalysts, provide a viable alternative route for gasoline production. The final chapter proposes a revision of the standard model of photosynthesis based on new understanding generated through gravitational mass spectroscopy.

**Advances in Chemistry Research. Volume 68**

*James C. Taylor*

In series: *Advances in Chemistry Research*  
Publication Date: 08/03/2021  
202 pp.  
Hardcover: 978-1-53619-935-2. $250.00  
e-book: 978-1-53619-944-4. $250.00

This edited volume contains six chapters, each detailing a recent advancement in chemistry research. Chapter One reviews the role of capillary electrophoresis in the characterization and determination of polyphenols and phenolic acids in food and beverages. Chapter Two discusses representative examples on the design and synthetic strategies used to obtain AIEgens with specific receptor units for the sensitive and selective detection of various metal ions, along with their sensing mechanism, sensing performance and applications. Chapter Three discusses the recent development of furfural and hydroxymethylfurfural synthesis and their conversion into various useful chemicals. Chapter Four reviews the importance of organic acids and the relevance of sustainable production. Chapter Five examines the effects of replacing water molecules with sodium-chloride in a typical protein in aqueous solution under exposure to microwaves. Chapter Six describes the oxidative decarboxylation of α-arylacetic acids to one-carbon dehomologated aldehydes using K2S2O8-ultraviolet radiations (UV-C at 254nm) system in aqueous solution.

**An In-Depth Guide to Oil-in-Water Emulsions**

*Carlos D. Bravo-Diaz (Full Professor, Chemistry Department, Universidad de Vigo, Spain)*

In series: *Chemistry Research and Applications*  
Publication Date: 06/02/2021  
253 pp.  
Hardcover: 978-1-53619-701-3. $195.00  
e-book: 978-1-53619-729-7. $195.00

When oil is dispersed in the form of droplets in water in the presence of a suitable surfactant, oil-in-water (O/W) emulsions are formed. They have unique chemical properties covering a wide range of applications from environmental technologies to foodstuffs. In this book, authors discuss the preparation of O/W emulsions and their implications in environmental and food problems, covering hot topics including the composition and spill behavior of diluted bitumens, the use of O/W emulsions as platforms for the synthesis of waterborne particles, new methods to separate oil from water in oily
wastewater, emerging technologies for the preparation of O/W emulsions, control of the oxidative status of lipids in oil by employing antioxidants to minimize lipid oxidation, parameters affecting O/W microbial stability and environmental issues and evaluation of interfacial barriers created by emulsifiers.

**Inorganic Chemistry**

**Iron Oxide Nanoparticles and their Applications**  
*Patricia Villegas*

In series: *Chemistry Research and Applications*  
Publication Date: 08/11/2021  
350 pp.  
Hardcover: 978-1-68507-006-9. $230.00  
e-book: 978-1-68507-027-4. $230.00

Iron oxide nanoparticles demonstrate a number of unique properties, including superparamagnetism, biocompatibility, and non-toxicity, which make them an ideal candidate for a variety of applications, as described in this book. Chapter One deals with the recent advances in various synthetic procedures of iron oxide-based nanocomposites, their characterization methods, and their potential applications in energy storage devices, supercapacitors, fuel cells, and more. Chapter Two summarizes current applications of immobilized enzymes based on iron oxide magnetic nanoparticles and discusses future growth prospects. Chapter Three reviews the properties and applications of enzymes in exploiting tyrosinase, glucose oxidase, and other enzymes for sensing a broad range of biomedical species. Chapter Four discusses magnetic magnetite and maghemite iron oxide nanoparticles from a variety of perspectives. Chapter Five describes how nano iron oxides could be used to remove pollutants from the environment. Chapter Six provides a comprehensive review of the catalytic applications of iron oxide nanoparticles in organic synthesis, high temperature reactions, gas-phase processes, wastewater treatment and supercritical upgradation of heavy petroleum oils. Chapter Seven details the photocatalytic degradation of a class of toxic, aromatic pollutants, namely, phenols and substituted phenols using different types of photocatalysts in the nano size range for effective removal these compounds from water bodies. Lastly, Chapter Eight elucidates various magnetic nanomaterials-based adsorbents used in adsorption techniques for wastewater treatment.

**Organic Chemistry**

**Branched-Chain Amino Acids: Metabolism, Benefits and Role in Disease**  
*Micahel T. Kidd (Professor and Holder of Adisseo Endowed Professorship in Global Sustainable Poultry Nutrition, Center of Excellence for Poultry Science, University of Arkansas, Fayetteville, AR, USA)*

In series: *Chemistry Research and Applications*  
Publication Date: 01/13/2021  
344 pp.  
Hardcover: 978-1-53618-833-2. $230.00  
e-book: 978-1-53619-066-3. $230.00

The branched-chain amino acids are unique in chemical structure, metabolism, and that they are essential in the diet of both humans and monogastric food animals. Whether you are a health professional looking to increase your knowledge of amino acid nutrition on disease, health, and aging, or an agriculture scientist looking to broaden your knowledge of factors influencing amino acid requirements, this text is a must. This book represents three diverse sections encompassing eleven chapters in total. Section one, being the largest, consist of six chapters addressing the role of branched-chain amino acids in domestic animal and human health. Endocrine and antioxidant systems affected by branched-chain amino acid status are presented, as well as biochemical and molecular mechanisms behind their responses. Moreover, the pros and cons of branched-chain amino acid therapy and balance in sports nutrition, catabolic injury recovery, disease, and successful aging are presented. The second and third sections of this text are similarly unique, in that they contain five chapters addressing diet needs, digestion, intestinal metabolism, absorption, and subsequent whole-body metabolism at the biochemical and molecular level. Further, two different meta-analyses have been composed using independent branched-chain amino acid data for assessment of food animal needs, in addition to providing insights for controlling metabolic homeostasis via diet formulation. Lastly, and specific for food animal production, the most limiting branched-chain amino acids in swine and poultry diets (e.g., valine and isoleucine) are poised to gain popularity and further price competitiveness in their crystalline L-amino acid forms, and thus, have tremendous environmental implications in terms of planetary nitrogen and water cycling.
In nature, green polymers (natural polymers) in plants and animals always coexist with water. The characteristic features of polymers organized in nature are difficult to understand without water. Specific features of green polymers are characterised via interaction with water molecules which strongly interact with the hydrophilic group of polymers. Molecular motion of the main chain of polysaccharides, whether extracted from wood, fungi, seaweed, or bacteria, is considerably enhanced in the presence of water. Not only in crystalline polysaccharides but also amorphous lignin, the effect of water on molecular motion is clearly observed by various experimental techniques. When the molecular motion of green polymers is investigated in the presence of water, molecular rearrangement occurs by the introduction of water into the system, and the higher-order structure is rearranged during molecular movement by heating conditions. Phase transition behaviour of water molecules is also affected in the presence of hydrophilic polymers, such as polysaccharides. Molecular enhancement of water molecules and hydrophilic polymers cooperate with each other and phase transition behaviour of the above system also corresponds to the above motion. Even the first-order phase transition of water is affected in the presence of polysaccharides. When glass transition behaviour of the natural polymer-water system is investigated, it is important to take into consideration the fact that the structural change of both components has necessarily taken place.

In this book, the molecular relaxation of green polymers, especially the thermodynamic concept of green polymers and the bound water, will be described in Chapter 2. Various techniques to measure the glass transition of green polymers in dry and wet conditions are explained in Chapter 3. Special attention is paid to sample handling for controlling water content. Glass transition behaviour of various polysaccharides and model compounds is described in Chapter 4. An explanation of lignin and its synthetic model polymers is also given in Chapter 5.

What to Know about Lignin

Maria González Alriols (University of the Basque Country, UPV/EHU, Chemical and Environmental Engineering Department, Spain), Dr. Jalel Labidi (University of the Basque Country, UPV/EHU, Chemical and Environmental Engineering Department, Spain) and M. Özgür Seydibeyoğlu (Izmir Katip Celebi University, Materials Science and Engineering, Izmir, Turkey)

In series: Polymer Science and Technology
Publication Date: 02/24/2021
340 pp.
Hardcover: 978-1-53619-152-3. $230.00
e-book: 978-1-53619-222-3. $230.00

This book presents recent developments about lignin documented with world renown researchers. The book is divided into 3 parts:

a. Lignin Extraction/Characterization
b. Lignin Modification
c. Lignin Applications

Lignin chemistry is still a mysterious area with various lignin types from various plants in the world providing us new opportunities to discover new materials. With the world extensive knowledge on surface chemistry, there are various methods to modify lignin structure. There are also many applications in polymeric resins, polymer composites, fertilizers and enhanced oil recovery. The book covers all the important developments about this highly important material group “Lignin”.

Special Topics

Metal-Organic Frameworks (MOFs): Chemistry, Applications and Performance
Thorben van den Burg
In series: Chemistry Research and Applications
Publication Date: 04/27/2021
182 pp.
Softcover: 978-1-53619-526-2. $95.00
e-book: 978-1-53619-585-9. $95.00
This monograph comprises six chapters, each dealing with a different aspect of metal-organic frameworks. Chapter 1 discusses recent advances based on the synthesis of multi-emissive MOF as a ratiometric sensor and their application with the mechanism of the sensing process in detail. Chapter 2 focuses on the recent advances in improving the electrochemical energy storage applications of MOFs by exploiting the combined benefits of the components constituting composites of transition metal-based compounds. Chapter 3 proposes cyclodextrin-containing metal organic frameworks (CD-MOFs) on the basis of γ-cyclodextrin as carriers for leflunomide and its pharmacologically active metabolite teriflunomide. Chapter 4 discusses the origin of the MOF, their development, the different MOF prototypes and their potential, the medical advances they made and the ones in clinical use. Chapter 5 discusses the interface and mechanism of MOF for efficient photoelectrocatalysis. Finally, Chapter 6 discusses the recent development of the chemical synthesis and protocols for incorporating single metal sites with different organic units formation and properties and its prospective applications and utilization.

Spectrum of Isothiocyanate Chemistry and its Applications
Surinder Kumar Mehta (Professor, Department of Chemistry & Centre of Advanced Studies in Chemistry, Panjab University, Chandigarh, India) and Shweta Sharma (Chairperson, Institute of Forensic Science and Criminology, Panjab University, Chandigarh, India)
In series: Chemistry Research and Applications
Publication Date: 01/05/2021
374 pp.
Hardcover: 978-1-53616-478-7. $230.00
e-book: 978-1-53619-005-2. $230.00
This book is a compilation of invaluable contributions in the field of isothiocyanate chemistry. It clearly presents multidisciplinary chapters which focus on the various applications of isothiocyanates in the fields of health, fitness, and environmental sciences. Isothiocyanates are a class of agents that can simultaneously deliver diagnostic and therapeutic functions, enabling the detection and treatment of diseases in a single procedure, and play an efficient role in fighting against the global problem of pollution.

COMPUTER SCIENCE AND INTERNET

Artificial Intelligence
Artificial Intelligence in the Financial Services Industry
Jacob A. Mathiesen
In series: Computer Science, Technology and Applications
Publication Date: 08/11/2021
333 pp.
Hardcover: 978-1-53619-962-8. $230.00
e-book: 978-1-68507-047-2. $230.00
Today, the financial services sector is facing a period of rapid disruption and innovation, and artificial intelligence (AI) is at the heart of these changes. Artificial intelligence can be used to gather enormous amounts of data, detect abnormalities, and solve complex problems. Financial institutions are already experimenting extensively with AI strategies
to enhance and streamline financial institutions, BSA and AML compliance, CRA requirements, fraud detection, and real estate valuations, all while reducing cost levels. This book looks at how artificial intelligence is affecting the financial services industry.

Computer Science

A Closer Look at Big Data Analytics

Dr. R. Anandan (Professor, Department of Computer Science and Engineering, Vels Institute of Science, Technology and Advanced Studies, Chennai, Tamilnadu, India)

In series: Computer Science, Technology and Applications
Publication Date: 03/24/2021
366 pp.
Hardcover: 978-1-53619-333-6. $230.00
e-book: 978-1-53619-426-5. $230.00

Big Data Analytics is a field that dissects, efficiently extricates data from, or in any case manages informational indexes that are excessively huge or complex to be managed by customary information preparing application programming. Information with numerous cases (lines) offers more noteworthy factual force, while information with higher multifaceted nature may prompt a higher bogus disclosure rate. Enormous information challenges incorporate catching information, information stockpiling, information investigation, search, sharing, move, representation, and questioning, refreshing, data security and data source. Large information was initially connected with three key ideas: volume, variety and velocity. Consequently, huge information regularly incorporates information with sizes that surpass the limit of conventional programming to measure inside a satisfactory time and worth.

Current utilization of the term enormous information will in general allude to the utilization of predictive analytics, user behavior analytics, or certain other progressed information investigation techniques that concentrate an incentive from information, and sometimes to a specific size of informational index. There is little uncertainty that the amounts of information now accessible are undoubtedly enormous, however that is not the most important quality of this new information biological system. Investigation of informational indexes can discover new relationships to spot business patterns or models. Researchers, business persons, clinical specialists, promoting and governments consistently meet challenges with huge informational collections in territories including Internet look, fintech, metropolitan informatics, and business informatics. Researchers experience constraints in e-Science work, including meteorology, genomics, connectomics, complex material science reproductions, science and ecological exploration.

The main objective of this book is to write about issues, challenges, opportunities, and solutions in novel research projects about big data in various domains. The topics of interest include, but are not limited to: efficient storage, management and sharing large scale of data; novel approaches for analyzing data using big data technologies; implementation of high performance and/or scalable and/or real-time computation algorithms for analyzing big data; usage of various data sources like historical data, social networking media, machine data and crowd-sourcing data; using machine learning, visual analytics, data mining, spatio-temporal data analysis and statistical inference in different domains (with large scale datasets); Legal and ethical issues and solutions for using, sharing and publishing large datasets; and the results of data analytics, security and privacy issues.

Anomaly Detection: Techniques and Applications

Dr. Saira Banu (Professor, Department of Computer Science and Engineering, Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, India), Dr. Shriram Raghunathan (Program Chair, Gaming, VIT, Bhopal, India), Dr. Dinesh Mavaluru (Assistant Professor, Department of Information Technology, College of Computing and Informatics, Saudi Electronic University, Saudi Arabia) and Dr. A. Syed Mustafa (Professor and Head, Department of Information Science and Engineering, HKBK College of Engineering, Bangalore, Affiliated to Visvesvaraya Technological University, India)

In series: Computer Science, Technology and Applications
Publication Date: 03/11/2021
177 pp.
Softcover: 978-1-53619-264-3. $95.00
e-book: 978-1-53619-355-8. $95.00
When information in the data warehouse is processed, it follows a definite pattern. An unexpected deviation in the data pattern from the usual behavior is called an anomaly. The anomaly in the data is also referred to as noise, outlier, spammer, deviations, novelties and exceptions. Identification of the rare items, events, observations, patterns which raise suspicion by differing significantly from the majority of data is called anomaly detection.

With progress in the technologies and the widespread use of data for the purpose for business the increase in the spams faced by the individuals and the companies are increasing day by day. This noisy data has boomed as a major problem in various areas such as Internet of Things, web service, Machine Learning, Artificial Intelligence, Deep learning, Image Processing, Cloud Computing, Audio processing, Video Processing, VoIP, Data Science, Wireless Sensor etc. Identifying the anomaly data and filtering them before processing is a major challenge for the data analyst. This anomaly is unavoidable in all areas of research. This book covers the techniques and algorithms for detecting the deviated data. This book will mainly target researchers and higher graduate learners in computer science and data science.

Horizons in Computer Science Research. Volume 20
Thomas S. Clary

This compilation opens with a review of the applications of several anomaly-based methods under the computational intelligence umbrella for the detection of DDoS attacks. Following this, a study is carried out to reveal the effects of a device developed to enable visually-impaired people to read any document in the Braille alphabet.

The performance of the Artificial Bee Colony (ABC) algorithm on CEC2010 benchmark problems is also studied, with the goal of increasing the performance of the algorithm changes presented in large-scale optimization problems. Later, the opportunities and limitations of present waste management techniques are highlighted, and some future research proposals are discussed.

The authors provide an overview of the field of motion capture focusing on methods, systems, and applications. More information about the motion processing and motion reconstruction technologies applied in the most prevalent optical and inertial systems is presented.

In closing, a partially-manual method for using images to measure body poses is presented and discussed.

Machine Learning Algorithms Using Python Programming
Gopal Sakarkar, PhD (Department of Artificial Intelligence, G H Raisoni College of Engineering, Nagpur, India), Gaurav Patil (Department of Artificial Intelligence, G H Raisoni College of Engineering, Nagpur, India) and Prateek Dutta (Department of Artificial Intelligence, G H Raisoni College of Engineering, Nagpur, India)

The machine learning field is concerned with the question of how to create computer programs that automatically improve information. In recent years, many successful electronic learning applications have been made, from data mining systems that learn to detect fraudulent credit card transactions, filtering programs that learn user readings, to private cars that learn to drive on public highways. At the same time, there have been significant developments in the concepts and algorithms that form the basis for this field. Machine learning is programming computers to optimize a performance criterion using example data or past experience.

The goal of this textbook is to present the key concepts of Machine Learning which includes Python concepts and Interpreter, Foundation of Machine Learning, Data Pre-processing, Supervised Machine Learning, Unsupervised Machine Learning, Reinforcement Learning, Kernel Machine, Design and analysis of Machine Learning experiment and Data visualization. The theoretical concepts along with coding implementation are covered. This book aims to pursue a middle ground between a theoretical textbook and one that focuses on applications. The book concentrates on the important ideas in machine learning.
Information Technologies

Top 10 Challenges of Big Data Analytics
Maria José Sousa, PhD (Assistant Professor, School of Sociology and Public Policy Instituto Universitário de Lisboa, Business Research Unit, Lisboa, Portugal) and Manuel Au-Yong Oliveira, PhD (Assistant Professor, Aveiro University, Portugal)

In series: Research Methodology and Data Analysis
Publication Date: 02/05/2021
206 pp.
Hardcover: 978-1-53619-133-2. $160.00

The application of big data analytics in all fields of research is a critical driver for the competitiveness of all countries in the modern world. Currently, governments and industry generate large amounts of data driven by record keeping, compliance, regulations, data privacy, and dynamic requirements, and thus there is a need to create better mechanisms to analyse data, and hence support organizational development, as well as providing aid to policymakers’ decision-making processes. In this context, there are emerging disruptive opportunities because of Big Data: new business models, and vertical industry segments will emerge through shared relationships with all the stakeholders, and big data analytics is a major asset to support these dynamic relationships. This book was developed with the objective of analysing some of those challenges while at the same time providing a perspective of the potential of big data analytics, and the importance that analytics have for managers and for policymakers, to help define new strategies and new public policies, respectively. The book is focused on different sectors of activity (i.e. the Health sector, Public Administration, the Education sector, among others), and on different economic dimensions (i.e. Entrepreneurship, and Innovation) and links big data analytics to different fields of research, such as artificial intelligence and other emergent technologies; which are challenging organisations, governments, and societies, with the need to face the new imperative of being prepared for the very uncertain and tremendously complex future – in which big data analytics will play a very decisive and active role.

Special Topics

Computing Ethics
Abdelrahman Karrar (Associate Professor, Information Systems Department, College of Computer Science & Engineering, Taibah University, Kingdom of Saudi Arabia) and Kamal Dahbur Professor, Information Systems Department, College of Computer Science & Engineering, Taibah University, Kingdom of Saudi Arabia

In series: Ethical Issues in the 21st Century
Publication Date: 03/11/2021
149 pp.
Softcover: 978-1-53619-378-7. $95.00
e-book: 978-1-53619-401-2. $95.00

Ethics is an important basis for controlling and regulating human behavior in all areas of life, including but not limited to dealing with other people at work. This book covers ethical issues related to the field of information technology and computing, and discusses some of the ethical issues from the perspective of the Arabic and Islamic cultures. The book concentrates on understanding the legal, ethical, and societal issues related to the field of information technology and computing without indulging into the implications of these issues on other fields, such as music or painting copyrights. The book is well suited for undergraduate and graduate students in colleges and universities in the Middle East and Islamic world. The book also provides an excellent foundation in ethical, legal and cultural decision-making for current and future professionals, practitioners and managers in the field of computer science and information technology.

The book covers many fundamental and contemporary topics, including:
• Ethical theories, philosophy, responsibility and code of ethics
• History of computing ethics and ethics for the computing professions
• Professional ethics in Islam
• Negative uses of computers and the Internet
• Privacy, anonymity and position of Islam on privacy
• Ethical issues related to software piracy and intellectual property
• Supporting and opposing Islamic views on intellectual copyright
• Ethical Issues related to globalization
Congestion Control: Design, Applications and Protocols
Quang Ngoc Nguyen (Asst. Professor, Department of Communications and Computer Engineering Faculty of Science and Engineering, Waseda University, Tokyo, Japan)

In series: Computer Science, Technology and Applications
Publication Date: 03/04/2021
293 pp.
Hardcover: 978-1-53619-149-3. $195.00
e-book: 978-1-53619-282-7. $195.00

Nowadays, network connectivity and the Internet have been an indispensable part of our daily lives via various services/applications supporting all of the industry areas ranged from trade and business, administration to entertainment, transportation, education, and healthcare. Typically, the concepts and introductions of terms, such as the Internet of Things (IoT), cloud or edge/fog computing, and content-oriented network services, have been investigated as emerging topics toward the realization of the Internet of Everything (IoX) in the future.

Toward this end, developing an efficient congestion control mechanism is regarded as a key to an efficient and robust network design since the network availability and stability can directly affect the network performance, in terms of interoperability and robustness, especially in the case of an explosive increase in the network traffic volume. In particular, when a network link becomes corrupted or overload, congestion may occur due to packet drops. As a result, the overall network performance, including network throughput, latency, and response time will be degraded.

The book is not intended to provide a comprehensive description of various congestion control techniques. Rather, with the assumptions that the readers have some general knowledge of networking fundamentals, the main goal of this book is to bring together distinguished perspectives of congestion control in different network platforms and technologies, ranged from TCP/IP, MPTCP (Multipath TCP) in heterogeneous networks, wireless networks to information-centric networks as future networks, and even supercomputing. The book then aims to give a new insight into this challenging and important topic of congestion control to overcome network performance degradation when congestion occurs from both theory/principles and practical viewpoints. Hence, we hope that this book provides a broader picture of the Congestion control concept in the context of communication networks toward efficient network design.

Internet of Things and Businesses in a Disruptive Economy
Ravindra Sharma (Swami Rama Himalayan University, Jolly Grant, Dehradun, India), Rakesh Saini, PhD (School of Computing, DIT University, Dehradun, India), Chandra Prakash (School of Computing, DIT University, India) and Vinod Prasad, PhD (College of Applied Sciences, Ministry of Higher Education, Oman)

In series: Computer Science, Technology and Applications
Publication Date: 01/13/2021
372 pp.
Hardcover: 978-1-53618-958-2. $230.00

The Internet of Things (IoT) opens the door for new business opportunities and helps companies benefit from new revenue streams developed by advanced business models and services. IoT-driven innovations build strong business cases, reduce marketing times and increase returns on investments. IoT has the potential to transform the way consumers and businesses approach the world by leveraging the scope of IoT beyond connectivity.

Economies are constantly “falling out” in every industry, but to be truly disruptive, an economy must entirely transform a product or solution that was so complicated historically that only a few affluent people who carry certain skills had access to it. A disruptive economy is often a much simpler, low-grade solution that’s more affordable and accessible to a large percentage of the population, thus opening it to an entirely fresh market. This often upturns established industries and overthrows existing market leaders.

Internet of Things and Businesses in a Disruptive Economy provides insight on how the newly emerging IoT will provide unprecedented opportunities to permeate technology and automation into everything we do, while at the same time providing a huge playing field for businesses to develop state-of-the-art business models to capture market shares.

This book covers business domains like human resource management, health care, agriculture, smart cities projects, smart manufacturing, smart education, cloud computing, and IoT securities issues.

Readers will gain a broad understanding of IoT wherever IoT is applicable, as well as the role IoT plays in transforming business processes and ensuring sustainable growth in the disruptive economic environment. Readers will be able to use IoT
to tackle real-world problems ranging from those in the manufacturing sector, human resource management, health care, agriculture, surveillances systems, cloud computing and smart cities and various other domains of business.

Mission Oriented Effectiveness Evaluation and Optimization of Complex Systems
Dr. Deping Zhang (Associate Professor of the College of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics, China) and Dr. Xuefeng Yan (Professor and Vice Chair of the College of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics, China)
In series: Computer Science, Technology and Applications
Publication Date: 05/05/2021
339 pp.
Hardcover: 978-1-53619-380-0. $230.00
e-book: 978-1-53619-535-4. $230.00
With the development and wide application of new information technology, the trend of informationization, intelligence and integration for complex systems is becoming increasingly obvious. Various complex systems promote and restrict each other to form an organic system with a feature of system emergence. The goal of these complex systems is to accomplish complex tasks in very complicated and uncertain environments and get better results than people expect. System effectiveness is always used to measure the design quality and capacity of complex systems. It represents the comprehensive capability of a complex system to perform specific tasks under specific conditions. To guide the optimization design process, improve design quality, reduce the design lifecycle and ultimately enhance the overall capabilities of complex systems, it is necessary to find a scientific method to evaluate and optimize the system effectiveness of the complex system.

At present, there are many methods to evaluate system effectiveness, but most of the evaluation objects are mainly single equipment or a subsystem. Complex systems have various typical characteristics of large scale, complex relationships, diverse tasks, and typical uncertainties. It is difficult to achieve comprehensive evaluation and it is not effective to use the existing simple methods directly. Because the existing research on comprehensive evaluation of system effectiveness struggles to meet the emergence requirements of complex systems, it is necessary to research and form a comprehensive evaluation and optimization method of system effectiveness for the complex system.

The basic theories and applications of effectiveness evaluation and optimization technology are introduced in this book. The book contains nine chapters, the main contents of which are as follows: Introduction; Construction of Effectiveness Evaluation Index System; Mathematical Modeling and Analysis Technology of Effectiveness Index; Analysis Technology of Classical Effectiveness Evaluation; Mission Oriented Effectiveness Evaluation Technology; Operational Effectiveness Sensitivity Analysis Technology; Analysis Technology of System Effectiveness Contribution; Mission oriented Modeling; and Evaluation and Optimization of Complex Systems.

The main content of this book includes: the entire analyzing process of system effectiveness and complex system performance; the construction, selection and modeling of the index system; the evaluation of system effectiveness; and the analysis of sensitivity and contribution, among other topics. Each chapter has a close logical relationship, which can help the readers understand the field more easily. This book has strong practicality. Based on the basic theories of various methods, we provide many concrete cases. Readers can quickly apply them to the practice of effectiveness evaluation following the case studies. The authors’ research and applications provide not only theoretical knowledge, but practical knowledge as well. The latest technological developments are also considered. This book mainly discusses the performance evaluation of typical complex systems, focusing on new theories and methods in this field. We believe this can help the development and application of effectiveness evaluation of complex systems.

This book can be used as reference material or as a textbook for high grade students and graduated students in computer simulation and system modeling and simulation, control science and engineering. It also has important reference value for researchers and engineers in professional fields such as ship engineering, aircraft guidance and control, and aircraft design.

Oracle SQL for Secure Relational Databases
Dr. Richard Earp (Professor Emeritus, Computer Science, University of West Florida, Pensacola, FL, USA) and Sikha Bagui (Professor, Computer Science, University of West Florida, Pensacola, FL, USA)
In series: Computer Science, Technology and Applications
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e-book: 978-1-53619-480-7. $95.00
Oracle SQL for Secure Relational Databases Dr. Richard Earp (Professor Emeritus, Computer Science, University of West Florida, Pensacola, FL, USA) and Sikha Bagui (Professor, Computer Science, University of West Florida, Pensacola, FL, USA) In series: Computer Science, Technology and Applications Publication Date: 03/26/2021 175 pp. Softcover: 978-1-53619-436-4. $95.00 e-book: 978-1-53619-480-7. $95.00
A typical Oracle database has multiple users working simultaneously. Data is shared amongst the users, and this of course leads to security concerns. This book comes in from the angle of developing and maintaining a secure Oracle database with multiple users. The book shows how data can be shared in an orderly fashion and what a good secure database is. In this book, we assume that you are acquainted with basic Oracle SQL and fundamentals of relational database.

The Fundamentals of Search Algorithms

Robert A. Bohm

In series: Computer Science, Technology and Applications

Publication Date: 02/15/2021
101 pp.
Softcover: 978-1-53619-007-6. $82.00
e-book: 978-1-53619-246-9. $82.00

Heuristic local search algorithms are used to find “good” solutions to the NP-hard combinatorial optimization problems that cannot be solved using analytical methods. Chapter one discusses the characterization and computation of heuristic local search algorithm for the Traveling Salesman Problem (TSP) from the perspective of dynamical systems.

The purpose of chapter 2 is to show the practical application of CBIR technology in the security and protection of personal data, access to classified documents and objects, identification of illegal attacks that are part of the social life of the present and future of mankind.

Continuous search space problems are difficult problems to solve because the number of solutions is infinite. Moreover, the search space gets more complex as we add constraints to the problem. In this context, chapter 3 aims to show the usage of the differential evolution algorithm for solving continuous search space problems using unconstrained functions and a constrained real-world problem.

Earth Sciences

Atmospheric Sciences

Walking the Science’s Narrow Path: Zavisa Janjić

Tijana Janjić (Associate Professor, Institute of Meteorology, Ludwig-Maximilians-Universität München, Munich, Germany), Dragutin T. Mihailović (Professor in Meteorology and Environmental Fluid Mechanics, Faculty of Agriculture, Faculty of Science, Department of Physics, University of Novi Sad, Serbia) and Slobodan Nickovic (Research Advisor, Republic Hydrometeorological Service of Serbia, Belgrade, Serbia)

In series: Earth Sciences in the 21st Century

Publication Date: 02/09/2021
181 pp.
Softcover: 978-1-53618-899-8. $95.00
e-book: 978-1-53619-054-0. $95.00

Zaviša Janjić may mostly be remembered for his pioneering contributions that allowed for the advancement of weather forecasting, which we witnessed over the last 40 years. In the scientific community, he is valued for his remarkable knowledge and intellect that formed the basis of his legacy of innovation, rigor and achievement in atmospheric science. His accomplishments were honored with numerous prestigious awards, and his ingenuity, brightness, kindness and humor kindled respect and dedication in his many colleagues and students. Upon Zaviša Janjić’s passing, collaborators and students endeavored to describe his person and his work by assembling the details of his journey on the narrow path to true success in science—a path that is reserved for a select few.

As a young student, Zaviša started work on his first limited area numerical weather prediction model, which became operational at the Federal Hydrometeorological Institute of the former Yugoslavia in 1978. Janjić was able to solve several difficult scientific questions during the model design and development phase, which helped lay the foundation for his models. Starting in the mid-to-late eighties, Professor Janjić worked on parameterizations of numerous physical processes. This work developed over the longest portion of his career, lasting more than 20 years. It included the development ofEta, Weather Research and Forecasting Nonhydrostatic Mesoscale Model (WRF-NMM) and Non-hydrostatic Meso-scale Model on B grid (NMMB), which were National Centers for Environmental Prediction (NCEP) weather prediction models.
Readers of this book will also enjoy a reprint of an interview with Professor Janjić; a professional biography with Professor Janjić’s specific contributions and references to scientific papers; commemorative letters from several directors of major meteorological centers describing how they saw Professor Janjić’s work in atmospheric science; and photos and documents from Janjić’s life and work.

Interlacing his life story with a working biography, writers and editors of this book hope to inspire the coming generation of scientists, as well as provide a timely tribute to Professor Janjić’s contribution to atmospheric science.

Geography

The Arctic: A Drifting Future
Sergey S. Zhiltsov (Doctor of Political Science, Professor and Head of the Department of Political Science and Political Philosophy, Diplomatic Academy of the Ministry of Foreign Ministry of the Russian Federation, Moscow, Russia) and Igor S. Zonn (Doctor of Geographical Sciences, General Director of the Engineering Research and Production Center for Land Reclamation, Water Management and Ecology, Moscow, Russia)

In series: Arctic Region and Antarctica Issues and Research
Publication Date: 06/11/2021
364 pp.
Hardcover: 978-1-53619-593-4, $230.00
e-book: 978-1-53619-771-6, $230.00

Over recent decades, the Arctic has been the focus of attention of many countries around the world. The region is not yet fully explored, but is believed to have plentiful natural mineral resources. This is particularly true for hydrocarbons, which are estimated to account for a quarter of the world’s reserves. Natural and climatic transformations, caused by global warming and the accelerated melting of Arctic ice, have led to the extension of the navigation season of the Northern Sea Route. Interest in Arctic oil and gas fields is growing due to the depletion of traditional onshore hydrocarbon deposits, rising prices and increased consumption.

Despite the challenging conditions of hydrocarbon production in the Arctic, rapid development is expected in this region as main oil fields in Russia deplete. This has intensified the negotiation process and defined the international legal regime in the Arctic.

This book explores the future of the Arctic, including geographical changes resulting from climate change, the region’s deposit of hydrocarbon resources, the Arctic’s international legal status, the state of scientific research in the Arctic, and more.

Geology

A Focus on Mining
Henri Walker

In series: Geology and Mineralogy Research Developments
Publication Date: 01/27/2021
400 pp.
Hardcover: 978-1-53619-037-3, $230.00
e-book: 978-1-53619-164-6, $230.00

The processes and requirements to mine on federal lands vary by mineral category, surface/subsurface management agencies, and estate ownership. Chapter 1 offers an introduction to the framework created by federal statutes applicable to mining on federal lands. It also highlights some topics in the mining sector that may be relevant to the issue of mining on federal lands.
Recent Developments in Geomorphology Research
Ronald M. Reale
In series: Earth Sciences in the 21st Century
Publication Date: 04/05/2021
90 pp.
Softcover: 978-1-53619-445-6, $82.00
e-book: 978-1-53619-506-4, $82.00

Geomorphology is defined as the study of the physical features of the surface of the earth and their relation to its geological structures. Geomorphology is useful not only for understanding the surface evolution of Earth, but of other solid planetary bodies as well. This monograph comprises three chapters, each detailing a specific recent development in geomorphology research. Chapter 1 describes the geomorphology of the Campo de Calatrava Volcanic Field in Central Spain, focusing on its volcanoes and the interference that any volcanic activity has produced in other forms of modeling and quaternary deposits. Chapter 2 analyzes the triggering of snow avalanches in the middle mountains of the Asturian Central Massif and their morphogenetic role in the dynamics and modeling of its slopes, a phenomenon that is impacted by the changing global climate. Chapter 3 analyzes the former fluvial erosion on Mars, adopting a model called SIMWE (SIMulated Water Erosion) to recreate the geomorphological features observed on the planet today in an effort to understand its ancient climatic conditions.

Hydrology
Lake Water: Properties and Uses (Case Studies of Hydrochemistry and Hydrobiology of Lakes in Northwest Russia)
Oleg S. Pokrovsky (Research Director at the CNRS, Geoscience and Environment, CNRS, Toulouse, France), Dr. Yulia Bespalaya (Director of the Institute of Biogeography and Genetic Resources, N. Laverov Federal Center for Integrated Arctic Research, Russian Academy of Sciences, Arkhangelsk, Russia), Dr. Liudmila S. Shirokova (Associate Professor, University of Toulouse, Toulouse, France) and Taisia Y. Vorobyeva (N. Laverov Federal Center for Integrated Arctic Research of Russian Academy of Sciences Federal Agency for Scientific Organizations, Arkhangelsk, Russia)
In series: Climate Change and its Causes, Effects and Prediction
Publication Date: 03/09/2021
390 pp.
Hardcover: 978-1-53619-275-9, $230.00
e-book: 978-1-53619-304-6, $230.00

Lake ecosystems are known to be valid sentinels for current climate changes and anthropogenic pressure because they provide indicators of these impacts either directly or indirectly through the influence of climate and human activity on their catchments. Among these indicators, to name just a few, are water temperature, dissolved organic carbon, nutrients and metals, phyto- and zooplankton composition as well as population and biodiversity of crustacea, mollusks and fish. The advantages of using lakes as tracers of climatic changes and anthropogenic impacts on aquatic ecosystems are multiple. Lake ecosystems are well constrained, confined and are studied in a sustained fashion; lakes respond directly to climate change and local and global pollution via incorporating the effects of these impacts occurring within the catchment; lakes integrate responses over time, and thus allow to avoid the random or unique single-time effects. Finally lakes of various sizes are distributed worldwide and, as such, can act as sentinels across various climatic conditions while exhibiting different degree of vulnerability to external pressure depending on their size and specific location capturing different aspects of climate change (e.g., changing precipitation regime, heat waves, permafrost thaw, invasion of new species, local and global (dispersed) pollution).

However, the majority of published studies on lakes in the boreal and subarctic zone deal with Western and Northern Europe and Northern America, with quite limited information on lakes in the NW Russia. This book is intended to partially filling this gap by presenting 13 chapters describing the hydrology, hydrochemistry and hydrobiology of various lakes located in the NW European Russia, from the Finland border in the west to the Ural Mountains in the East. The thirteen chapters of the book, written by the experts in the field of biogeochemistry, limnology and zoology cover full limnetic ecosystems, from lake physical characteristics to lake water chemistry, microbiology, phytoplankton and zooplankton population, Crustacea, mollusks and fish. A multidisciplinary approach across wide geographical zones, comprising both small and large lakes of the Russian Subarctic, presented in this book, will be interesting for a large community of scholars, students, and researchers from academic and private organizations.
Geo-Information Technology in Earth Resources Monitoring and Management
Dr. Varun Narayan Mishra (Assistant Professor, Centre for Climate Change and Water Research, Suresh Gyan Vihar University, Jaipur, India), Dr. Praveen Kumar Rai (Associate Professor, Department of Geography, K.M.C. Language University, Lucknow, India) and Dr. Prafull Singh (Associate Professor, Department of Geology, School of Earth, Biological and Environmental Science, Central University of South Bihar, Gaya, India)

Publication Date: 06/25/2021
411 pp.
Hardcover: 978-1-53619-669-6. $230.00

Earth resources are the precious assets that provide living space for human beings. In the last few decades, the pressure on earth resources has increased due to anthropogenic activities and rapid industrialization. The sustainable management of earth resources requires reliable, accurate, and timely information at different observational scales. Geo-information technology is an efficient tool for acquiring information required for environmental protection, earth resources monitoring, and addressing the issues associated with sustainable development and management. It offers an influential and capable tool for mapping, monitoring, modeling, and management of earth resources. Many researchers have reported their findings and operational applications of direct relevance to the management of earth resources with the launch of imaging satellites in the 1970s. However, few studies have been reported to understand the core science and research basics, as there are larger issues of capacity building to use geo-information technology in sustainable development and management of earth resources. There is also a fundamental gap between the theoretical concepts and the operational use of these advanced tools. This could be resolved by providing a broad range of applications of this technology to the scientific and research community in the field of geospatial technologies and allied subjects.

This book, entitled “Geo-Information Technology in Earth Resources Monitoring and Management,” deals with the challenges for sustainable management and development of earth resources with a focus on India and other countries around the world. The chapters are written by prominent academicians, researchers, and experts in the field of geo-information technology and related subjects. This book is a collection of chapters providing a multi-disciplinary overview for academicians, researchers, scientists, administrators, policymakers, social scientists, and professionals involved in the various aspects of earth resources development, planning, and management. The aim of this book is to replenish the gap in the available literature on the subject by bringing together the concepts, theories, and experiences of specialists and professionals in this field.
Air Pollution and Industrial Hygiene

Air Pollution: Effects and Dangers

Jorge Esteban Colman Lerner (Assistant Researcher of National Scientific and Technical Research Council of Argentina (CONICET, Argentina); Associate Professor at the Arturo Jauretche National University (UNAJ, Buenos Aires, Argentina) and Teaching Assistant at the National University of La Plata (UNLP), Buenos Aires, Argentina)

In series: Air, Water and Soil Pollution Science and Technology
Publication Date: 04/21/2021
391 pp.
Hardcover: 978-1-53619-544-6. $230.00

Air pollution from anthropogenic sources has been and continues to be considered a serious environmental problem affecting public health. Its seriousness lies in the fact that it raises the level of pollutants in places where their impact on human health is most likely. Therefore, air pollution is a major threat to public health worldwide. According to the World Health Organization (WHO) more than two million premature deaths per year are attributable to the effects of outdoor and indoor air pollution. More than half of this burden of disease is borne by populations in developing countries.

Epidemiological studies in several countries have shown that chronic exposure to traffic-related pollutants and chemicals and petrochemicals, such as particulate matter (PM), metals and polycyclic aromatic hydrocarbons (PAHs) associated with PM, volatile organic compounds (VOCs) and inorganic gases (SO2, NOx, O3) produce adverse effects on development and affect lung function; along with an increase in respiratory diseases, often expressed in terms of diagnosed asthma or chronic obstructive pulmonary disease, and cardiovascular effects and increased mortality.

For all this, it is important to characterize and quantify air pollution and to recognize and assess the associated health effects, and different tools can be used individually or together. These tools are presented in this book, initially in introductory form (Chapters 1 to 3) and then in applied form in different case studies (Chapters 4 to 10) for the assessment of air pollution and associated risk.

Ambient Combustion Ultrafine Particles and Health

Doug Brugge, PhD (Professor and Chair, Department of Public Health Sciences, University of Connecticut, Farmington, CT USA) and Christina H. Fuller, ScD (Associate Professor, Department of Population Health Sciences, Georgia State University, Atlanta, GA USA)

In series: Environmental Research Advances
Publication Date: 02/17/2021
436 pp.
Hardcover: 978-1-53618-831-8. $180.00
e-book: 978-1-53619-002-1. $180.00

This edited and peer reviewed volume contains a collection of articles from many disciplines that address the emerging issue of ambient ultrafine particles derived from combustion sources and their health effects. The authors are published experts with respect to ultrafine particles. They write about diverse aspects of the problem including epidemiology, environmental engineering, toxicology, policy, architecture and medicine. Each chapter provides a thoroughly referenced review of the respective subject matter. Written for researchers and scientists, this work is an excellent introduction for those early in their research into ultrafine particles as well as those that are well-versed and seeking to expand into new approaches to ultrafine particles. Chapters may be read singly or in combination with other chapters, depending on the reader’s interest. As a whole, the book is a broad reference source about combustion ultrafine particles and health.
The consumption of oil and gas increases annually. In 2019 the share of oil was 33.1% and that of gas – 24.2% in the entire world energy consumption. During the first period of the COVID-19 coronavirus pandemic, oil markets crashed and oil prices were governed by the number of world infection cases; the more people were infected, the less the oil prices were. However, after April 2020 the usual peculiarities started to restore. It is forecasted that, at least until 2040, the share of hydrocarbons in world energy consumption will remain stable, if not increase. Energy security and energy policy of any developed country represents a key issue for sustainable development. Thus, countries with a lack of hydrocarbon resources search for ensured sources of oil and gas. From this point of view, the vulnerable situation is characteristic for the EU, the energy security of which is entirely determined by Russian gas supply. However, the Ukraine-Russia “gas wars” in 2006 and 2009 have demonstrated that energy supply schedules to Europe should be diversified. From this point of view, neither the Nord Stream Pipeline nor the Southern Gas Corridor will solve the problem, mainly due to the resource deficit in Azerbaijan.

In-depth analysis of Iran’s economy and political structure demonstrates that: (i) the country’s welfare is entirely determined by oil exports; (ii) having the second world rank in gas reserves, Iran is exporting only an insignificant amount of gas; (iii) all attempts of President Rouhani to introduce free market relations in the country and to create hope for a better future failed due to U.S. sanctions; (iv) the latter resulted in just the opposite effect they aimed to achieve: they were unable to reduce oil exports from Iran to zero but, on the contrary, created the shadow oil exports totally controlled by the Revolutionary Guard Corp; (v) the sole possibility to provoke democratic development in Iran and to cancel financing of terrorist organizations via diminishing the role of ecclesiastic leaders is the involvement of the country in international energy transit projects governed by the rule of law. The energy transit projects are unfeasible without the involvement of Georgia, which will become the Eurasian energy hub. This book describes these projects in detail. Implementation of these projects will (i) diminish the role of Russia in the EU energy market; (ii) ensure stability in the South Caucasus region, and (iii) provoke democratic reforms in Iran and this way sustainably increase world stability and security.

Ecology

Critical Research Techniques in Animal and Habitat Ecology: Examples from India

Dr. Kaushalendra Kumar Jha, PhD (Professor, Tropical Forest Ecosystem and Environment Management Unit, Technical Forestry Faculty Area, Indian Institute of Forest Management, Bhopal, India) and Dr. Michael O’Neal Campbell, PhD (Lecturer, Simon Fraser University, British Columbia, Canada)

In series: Conservation Biology and Biodiversity

Publication Date: 07/30/2021

339 pp.

Hardcover: 978-1-53619-720-4. $230.00
e-book: 978-1-53619-943-7. $230.00

This book covers selected topics on research methods in modern ecology, through the lens of 8 chapters, focusing on animal ecology, landcover assessment and habitat change, human perspectives and management, and research techniques, with examples taken from the Indian subcontinent. This area has emerged as one of the pivotal zones where cutting edge applications may be tested. Topics examined include the development and management of computer software techniques and the syntheses of these into pre-existing research methods, chemical analyses, including studies of animal dietary and foraging patterns, landcover, habitat and plant ecological change and even human/animal relations, and genetic studies. Remote sensing and geographical information systems are considered as cutting-edge research methods, at small, medium and large-scale levels, including more accurate positioning systems, more sensitive tracking systems, the removal of obstacles to clearer observation and species identification, such as darkness and poor lighting, dense vegetation and coarse image resolution and more comparative studies across different local contexts and global ecosystems.
Science and Technology

The topics cover geoinformatics applications to forest management in India, the paradigm shifts in this area, and the promotion and integration of sustainable forest management (SFM) and geoinformatics within the National Working Plan Code. Another case study is of Geoinformatics, Climate Change, Habitat Dynamics and a Case of Vultures in Central India, focusing on vulture ecology and related climatic variables, assessed with geoinformatics, Species Distribution Models (SDMs) and Global Circulation Models (GCMs). Other topics concern the use of tracking technologies including drones, the use of thermal and infrared drones in the study of large mammalian carnivores, the role of remote sensing and GIS in the assessment of natural resource development, clustering around the central concept of change detection, and the monitoring of agricultural development using socio-cultural parameters. This book presents these issues as some factors among the vast number of current ecological issues.

Critical Research Techniques in Animal and Habitat Ecology: International Examples

Dr. Michael O’Neal Campbell, PhD (Lecturer, Simon Fraser University, British Columbia, Canada) and Dr. Kaushalendra Kumar Jha, PhD (Professor, Tropical Forest Ecosystem and Environment Management Unit, Technical Forestry Faculty Area, Indian Institute of Forest Management, Bhopal, India)

In series: Animal Science, Issues and Research
Publication Date: 07/14/2021
388 pp.
Hardcover: 978-1-53619-846-1. $230.00
e-book: 978-1-53619-859-1. $230.00

This book covers selected topics on research methods in modern ecology, through the lens of 12 different chapters, focusing on animal ecology, landcover assessment and habitat change, human perspectives and management, and research techniques. Topics emphasize the development of enhanced computer software techniques and the syntheses of these into pre-existing research methods, chemical analyses, including studies of animal dietary and foraging patterns, landcover, habitat and plant ecological change and even human/animal relations, and genetic studies. Remote sensing and geographical information systems are considered as cutting-edge research methods, at small, medium and large-scale levels, including more accurate positioning systems, more sensitive tracking systems, the removal of obstacles to clearer observation and species identification, such as darkness and poor lighting, dense vegetation and coarse image resolution and more comparative studies across different local contexts and global ecosystems. The topics cover vulture ecology, the factors for the decline and management of Asian vultures, the use of tracking technologies including drones, in the study of urban vulture ecology, the use of thermal and infrared drones in the study of large mammalian carnivores, the role of remote sensing and GIS in the assessment of natural resource development, clustering around the central concept of change detection, the monitoring of agricultural development using socio-cultural parameters, the impacts of chemical pollution on raptors, the chemistry of vulture foraging, habitat dynamics for storks in Malaysia, Indian ecotourism in tiger habitats, and human-wildlife conflicts in Brazil. Other topics concern research on Bio-environmental Monitoring and Assessment using eDNA and Genome-based environmental monitoring, and the dynamics social perceptions of natural landscapes in Europe, and international examples of the Landscape Ecology of Urban Avian Scavengers. This book argues that these issues represent some cutting factors among the vast number of current ecological issues.

Forests and Forest Management

Modeling Forest Landscape Dynamics

Dr. Bharath Settur (Energy and Wetlands Research Group (EWRG), CES, Centre for Ecological Sciences, Indian Institute of Science, Bangalore, Karnataka, India),

Dr. K.S. Rajan (Head of Institute, Lab for Spatial Informatics, International Institute of Information Technology, Gachibowli, Hyderabad, Telangana, India) and Dr. T. V. Ramachandra (Energy & Wetlands Research Group, CES, Indian Institute of Science, Bangalore, Karnataka, India)

In series: Environmental Science, Engineering and Technology
Publication Date: 05/24/2021
249 pp.
Hardcover: 978-1-53619-594-1. $195.00
e-book: 978-1-53619-651-1. $195.00
The landscape is a mosaic of ecosystem elements, which changes in size, shape, spatial arrangement, and quality of the patches/elements due to complex, multi-scalar processes which influence the ecosystem's biotic components. The changes in the abiotic and biotic assets of a landscape are referred to as landscape dynamics. Changes in the structure of the landscape will have implications on ecosystem functions and processes. Landscape dynamics driven by land use land cover (LULC) changes due to anthropogenic activities are affecting ecology, biodiversity, hydrological regime, and hence people’s livelihood. There has been increasing apprehensions about environmental degradation, depletion of natural resources due to uncontrolled anthropogenic activities, and their consequences on long-term sustainability of socio-economic systems around the world. This necessitates an understanding of landscape dynamics and the visualization of likely changes for evolving appropriate strategies for prudent management of natural resources. This publication provides insights to LULC dynamics of forest ecosystems, which will help in the prudent management of ecosystems.

Tropical Dry Deciduous Forests: Emerging Features and Ecological Perspectives
RK Chaturvedi, PhD (Assistant Professor, Center for Integrative Conservation, Xishunagbanna Tropical Botanical Garden (XTBG), Chinese Academy of Sciences, Yunnan, China), Rishikesh Singh, PhD (Senior Research Fellow, Integrative Ecology Laboratory (IEL), Institute of Environment and Sustainable Development (IESD), Banaras Hindu University (BHU), Varanasi, India) and Rahul Bhadouria, PhD (Dr. DS Kothari Post-Doctoral Researcher, Natural Resource Management Laboratory, Department of Botany, University of Delhi, New Delhi, India)

In series: Environmental Research Advances
Publication Date: 05/05/2021

477 pp.
Hardcover: 978-1-53619-543-9. $270.00
e-book: 978-1-53619-581-1. $270.00

Tropical dry forests (TDFs) constitute one of the most dominant forests, accounting for approximately 45% of all tropical forests. These forests are distributed over an extensive geographical range, spanning large areas of Africa, Latin America, and the Asia Pacific. TDFs occur in severe and extremely variable climate characterized by low annual rainfall and 5-6 months of the dry period within the annual cycle, and nutrient-poor soil. Due to extreme drought conditions, TDFs exhibit deciduousness and various other adaptive features (viz., fire resistance, desiccation tolerance, herbivore defence, high root:shoot ratio, longer seed viability) to establish in the severe environmental conditions, which makes these forests exceptionally critical. These forests are one of the most productive with high biodiversity, but unfortunately, due to persistent anthropogenic pressures in terms of burning, mining, indiscriminate forest cutting, lopping, and increased extraction of non-wood forest products, these forest communities have become one of the most endangered ecosystems. Disturbances in TDFs have resulted in fragmentation and ecosystem conversion, and therefore, these forests exhibit changes in their biomass and productivity. Anthropogenic pressure is rapidly becoming a growing concern globally due to its negative impacts on the structure and composition of the vegetation. In addition, due to their higher net primary productivity, these forests have a considerable effect on the global carbon cycle. Uncontrolled harvesting for gaining temporal benefits is a major cause of forest destruction and deforestation which may lead to major loss. Deforestation and clearing of forests have resulted in soil erosion, soil degradation and loss of biodiversity, socio-economic damages to food components, water and health, as well as the loss of people's cultural ethnicity.

In order to assess the conservation status of TDFs, information is required on its distribution pattern, climate, structural and functional traits of the vegetation, phenology, strategies against drought, nutrient deficiency, and disturbances. This book discusses various issues, obstacles and opportunities for protection, regeneration and management of TDFs worldwide, as well as information gaps in the areas referred to above, which may be of critical significance in adapting and mitigating responses to the current climate change scenario. The book is intended to help in collection of detailed knowledge and to address the concerns from environmental scientists, forestry experts, planners, policymakers and the general public. Starting with a description of plant composition of worldwide TDFs, the book evaluates plant diversity, biomass dynamics, carbon storage, late history and current status of anthropogenic disturbances, distribution pattern of lichen communities, relevance of tree crown architecture, effects of forestry management practices, degradation and traditional land-use practices, impact of changing environment on carbon dynamics, estimating ecosystem services using a geospatial approach, productivity and carbon accumulation, habitat heterogeneity and its impact on organic matter, nutrient pool and nitrogen mineralization, phosphorus and litter decomposability traits. For re-development of TDFs, the book describes improved low-input tree establishment methods, impact of drought and plant mechanisms to mitigate drought stress, importance of serotiny related to delayed seed dispersal, and foraging efficiency of fine roots in relation to carbon dynamics in a changing environment.
Environmental Conservation

Protected Areas: Management, Benefits and Social Impacts

James A. Scott

In series: Environmental Science, Engineering and Technology

Publication Date: 03/17/2021

390 pp.

Hardcover: 978-1-53619-276-6. $230.00


This book consists of several chapters dealing with the issue of environmental preservation of protected areas from a variety of perspectives. Chapter 1 deals with public management policies in Morocco, which in recent years have shifted from focusing on mass tourism to a more sustainable alternative by investing in protected areas, and the various roadblocks the country has faced in its attempt to do so. Chapter 2 focuses on Lar National Park, a protected area located northeast of Tehran, and how best to manage and preserve the area’s wildlife in consideration of the needs of native people. Chapter 3 analyzes environmental conservation laws in Nepal in connection with the rights of local people to access resources inside protected areas and proposes policies that would ensure a sustainable coexistence between humans and wildlife. Chapter 4 describes the impact that globalization has had on the introduction of invasive plant species in protected areas and the various ecosystem services these species can provide. Chapter 5 discusses how human society threatens protected areas in Argentina, and how environmental justice studies can contribute to improving the management effectiveness of protected areas considering their relationships with local communities. Chapter 6 details how protected areas can improve human well-being across several dimensions, and Chapter 7 explains how arsenic contamination in fishing resources impacts Brazilian ecology and culture. Finally, Chapters 8 and 9 consider threats to marine protected areas in Brazil and the impacts and challenges of ecotourism in protected areas, respectively.

Who Will Save Amazonia? World Heritage or Full Destruction

Marcílio de Freitas (Professor, Department of Physics at the Federal University of Amazonas, Amazonas State, Brazil) and Marilene Corrêa da Silva Freitas, PhD (Professor, Department of Social Sciences at the Federal University of Amazonas, Amazonas State, Brazil)

In series: Environmental Remediation Technologies, Regulations and Safety

Publication Date: 07/14/2021

296 pp.

Hardcover: 978-1-53619-893-5. $230.00


The authors warn governments, societies and humanity about the future of Amazonia. It is dying. Who will save Amazonia? The world is at war with COVID-19, climate change and social inequality. This book shows that Amazonia is a key entity in the victory of humanity against these three “plagues” of modernity. A worldwide mobilization is needed to stop its cultural and ecological destruction. Its full submission to the market and to predatory privatization contribute to this process that has global impact. Many diseases and pandemics could spread throughout the world as a result of continued destruction of this incredibly biodiverse region. It has about 163 indigenous peoples, over 2000 rivers and 400 billion trees. It is important for world food security, climate change mitigation and bioindustry. This study puts the need for its transformation into the world heritage. Links, controversies and challenges about Amazonia’s sustainable development and nature, territory, culture, environmental justice, economics, work, bioeconomy, COVID-19, climate change and environmental protection are debated in the perspective aimed at improving quality of life of their native populations. Its relations with Christian foundations are also shown. Its importance for humanity is analyzed from the perspective of sustainability. The book presents denunciations on the destructive interventions made by the Brazilian government on its peoples and biomes. This tragedy has been aggravated by the dispersion of COVID-19 in the region. This book shows that Brazilian Amazonia’s future is an announced world tragedy. Who will save Amazonia? According to Marcílio and Marilene, the responsibility of its sustainable protection is on us all.
Global Warming and Climate Change

Climate Change: Energy Transition, the Caribbean and Military Readiness
Carolina Parsons
In series: Climate Change and its Causes, Effects and Prediction
Publication Date: 03/09/2021
356 pp.
Hardcover: 978-1-53619-311-2, $230.00
e-book: 978-1-53619-363-3, $230.00
Managing the vast energy resources, addressing the health and environmental impacts of energy production, and understanding the role of public lands in mitigating climate change are just a few of the critical issues discussed in this book.

Climate Change: Environmental and Economic Effects
Fukui Ayaka
In series: Climate Change and its Causes, Effects and Prediction
Publication Date: 02/24/2021
366 pp.
Hardcover: 978-1-53619-239-1, $230.00
e-book: 978-1-53619-254-4, $230.00
Climate change and extreme weather events present risks to our communities and communities around the world. Experts have warned that climate change would lead to more intense storms, extended droughts, longer wildfire seasons that burn hotter and cover larger areas, greater seasonal temperature extremes, melting of glaciers and ice sheets, and rising sea level. This book discusses ways to help communities better adapt to these changes.

Climate Change: Extreme Weather, Risks and Costs
Nicolas Delgado
In series: Climate Change and its Causes, Effects and Prediction
Publication Date: 01/27/2021
345 pp.
Hardcover: 978-1-53619-113-4, $230.00
e-book: 978-1-53619-171-4, $230.00
Chapter 1 examines the state of the science related to extreme weather events. It will provide an opportunity to examine the role of climate change and other weather and climate factors in causing and exacerbating extreme weather events, to discuss economic and other societal impacts of extreme weather, to explore the state of forecasting and prediction of extreme weather with a focus on how to communicate uncertainty, and to identify gaps in the science.
Chapter 2 reports on the kinds of climate risk information standards and tools that communities need to reduce the risks and costs of climate change, including more extreme floods and wildfires.

Environmental Contamination and Climate Change: Effect on Plants and Remedial Strategies
Vandana Gautam, PhD (Assistant Professor, College of Horticulture and Forestry, Neri-Hamirpur- (Dr. Y.S.P. University of Horticulture and Forestry, Solan) Himachal Pradesh, India), Dhriti Kapoor, PhD (Assistant Professor, Department of Botany, School of Bioengineering and Biosciences, Lovely Professional University, Phagwara, Punjab, India). Renu Bhardwaj, PhD, M.Phil (Director Research, Professor, Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar-Punjab, India)
In series: Climate Change and its Causes, Effects and Prediction
Publication Date: 06/02/2021
202 pp.
Environmental contamination and climate change-induced abiotic stresses, such as high or low temperature, water logging or drought, high salinity, pesticides, heavy metals, and radiation like ultra-violet are detrimental to plant growth and development, leading to great loss in crop yield worldwide. It is getting essential to provide crops with multi-stress adaptation to alleviate the burden of environmental stresses and to fulfill the inevitability of population growth, as various abiotic stresses generally evolve simultaneously in the fields. To combat these environmental stresses, plants develop certain defense responses against abiotic stresses, including some biochemical and molecular aspects like reactive species scavengers, molecular chaperones, compatible solutes, plant growth regulators and antioxidative defense system inside cells. In response to stress, they are orchestrated by a composite regulatory complex involving signaling molecules like stress hormones, reactive oxygen species, polyamines, phytochromes, and calcium, as well as stress proteins. In this book, we aim at presenting the effects of different abiotic stresses on plants and an overview of various defensive systems and the regulatory network, along with their practical potential via some biotechnological tools like genetic engineering and/or exogenous applications, because understanding the abiotic stress response mechanisms in plants will help to improve the growth rate and productivity of crops.

The book has 6 chapters which deal with the effect of different abiotic stresses in plants caused by environmental contamination and climate change and the remedial strategies. We believe that this book comprises a wealth of knowledge to botanists, agriculturists, students and researchers of colleges and universities.

Managing Climate Change

Rex S. Soto

In series: Climate Change and its Causes, Effects and Prediction
Publication Date: 04/15/2021
320 pp.
Hardcover: 978-1-53619-496-8. $230.00
e-book: 978-1-53619-560-6. $230.00

The United Nations Intergovernmental Panel on Climate Change (IPCC) estimates that human activities have caused approximately 1.0 °C of global warming above pre-industrial levels, and are likely to cause a 1.5 °C increase between 2030 and 2052 if warming continues at the current rate. Impacts from global warming are already apparent. Unless we act to quickly reverse course, these trends will persist for centuries and will continue to cause further long-term changes to the environment, such as sea level rise, changing precipitation patterns, more acidic oceans, and increasing frequency and intensity of extreme weather events as reported in Chapter 1. Chapter 2 provides information on USDA efforts to identify and address potential vulnerabilities of U.S. agriculture, forestry, and food systems to projected climate change.

Natural Disasters

Remote Sensing and Geographical Information Systems:
Environment Risk Prediction and Safety
Rustam B. Rustamov, PhD (Senior Advisor, EILINK Research and Development Center of Khazar University, Baku, Azerbaijan)

In series: Natural Disaster Research, Prediction and Mitigation
Publication Date: 07/23/2021
246 pp.
Hardcover: 978-1-53619-726-6. $195.00
e-book: 978-1-53619-857-7. $195.00

The success of natural disaster study depends on updated, accurate, and exact information. This information should be collected and arranged logically to enable appropriate authorities of all levels, such as state officials and urban planners, to address crises before, during, and after the event. Modern technologies, including remote sensing methods and geographic information systems, enable the collection of information that satisfies the requirements of natural disaster studies. Computer systems provide for the collecting, saving, retrieving, processing, and analyzing of data, and can produce visual outputs such as tables and graphs.

Such systems also give authorities access to information like routes to damaged areas, health care stations, police, firefighters, auxiliary forces, possible landing spots for helicopters and airplanes, places for reserving food and rescue devices, and urban infrastructure as well as addresses, phone numbers, and email addresses of residents or communication facilities. Remote sensing and geographic information system development can integrate all this information by organizing it into layers and creating maps in both digital and physical formats. Data represented by geographic information systems are linked to geographical coordinate systems, enabling ease of access. Such resources are critical for analyzing, comparing, and fully
understanding crises. The archival of previously processed information opens opportunities for decision makers to solve problems more effectively. These are the main concepts explored in this book.

**Flooding**

The National Flood Insurance Program: Background, Issues and Reauthorization

*Scott I. Newman*

In series: *Natural Disaster Research, Prediction and Mitigation*

Publication Date: 02/17/2021

426 pp.

Hardcover: 978-1-53619-115-8, $230.00

e-book: 978-1-53619-172-1, $230.00

The National Flood Insurance Program (NFIP) was established by the National Flood Insurance Act of 1968 and was most recently reauthorized to September 30, 2020, through a series of short-term reauthorizations. The general purpose of the NFIP is both to offer primary flood insurance to properties with significant flood risk, and to reduce flood risk through the adoption of floodplain management standards. This book provides information on key components of the NFIP.

**Special Topics**

Advances in Environmental Research. Volume 80

*Justin A. Daniels*

In series: *Environmental Research Advances*

Publication Date: 03/24/2021

248 pp.

Hardcover: 978-1-53619-434-0, $250.00

e-book: 978-1-53619-470-8, $250.00

This compilation comprises seven chapters each detailing a recent advancement in environmental research. Chapter One reviews the efficacy of alfalfa for the cleanup of soils polluted by petroleum hydrocarbons and other contaminants. Chapter Two discusses the growth rate of red algae in unusual environments such as the ecosystems of Takalar Regency and Mamuju Regency. Chapter Three provides an update on the current state of technology in connection with oil spill remote sensing via such techniques as infrared cameras and satellite-borne radar. Similarly, Chapter Four describes the environmental impacts of oil spills and describes the various ways in which technology can mitigate this problem. The fifth chapter describes how fly ash can be leveraged as an environmentally friendly, low-cost alternative to Portland cement for use in oil and gas wells. The sixth chapter studies traditional rainwater harvesting in Croatia and discusses whether this practice has value within the context of modern water supply solutions and environmental concerns. Lastly, Chapter Seven provides some anecdotes concerning the development of the world’s first high resolution inductively coupled plasma mass spectrometer.

Advances in Environmental Research. Volume 81

*Justin A. Daniels*

In series: *Advances in Environmental Research*

Publication Date: 07/22/2021

234 pp.

Hardcover: 978-1-53619-840-9, $250.00

e-book: 978-1-53619-865-2, $250.00

This monograph contains seven chapters that each detail a recent advancement in environmental research. Chapter One summarizes the reactivity, mechanism and toxicity assessment of pesticides and pharmaceuticals by chlorine dioxide. Chapter Two presents a review of liquid fertilizer generation technologies. Chapter Three analyzes the consequences of digital transformation technologies on the environmental sustainability of Brazilian agribusiness. Chapter Four presents results on mineralogical, chemical, and physiochemical characterization of coal briquette ash. Chapter Five describes the potential of ecological sanitation as an innovative, environmentally sound technology for minimizing waste and providing renewable energy. Chapter Six presents up-to-date
information on commonly used pesticides and their possible immunotoxic effects. Finally, Chapter Seven provides information about toxic heavy metals, their toxicity mechanism, and their effects on the environment.

Advances in Environmental Research. Volume 82
Justin A. Daniels

This edited volume presents various advancements in the field of environmental research. Chapter One scrutinizes the inherent value of mangrove forests from the perspectives of ethnoscience, ethnobotany, phytotechnology, and ecological aspects. Chapter Two highlights the latest research about abscisic acid biosynthesis, abscisic acid signaling pathways, and their implications in plant development and response to environmental stresses. Chapter Three assesses the policies on methane emissions of several countries, including the U.S., China, and Russia. Chapter Four describes various methods of extracting precious metals from electronic waste in detail. Chapter Five summarizes the research achievements of recent years in connection with the use of electrochemical technology for removal of volatile organic compounds. Finally, Chapter Six reviews microalgae-based processes and their relationship to carbon footprints.

Comprehensive Thematic Abbreviation Dictionary on Toxicology and Environmental Science and Health
Shahriar Abbassi (General Practitioner and Registered Physician in Addiction Treatment Communication with Group of Infection Disease, Faculty of Medicine, University of Tehran, Iran)

This book is a specific Dictionary of Abbreviations & Acronyms provided in 4 main chapters and more than 250 sections, which are arranged according to the subject and in alphabetical order, of course, and Includes the following:

1. Part One : General Consideration
2. Part Two : Detailed Classification
3. Part Three : Environmental Dictionary
4. Part Four : Geographical Consideration

The main subject of the book is the thematic arrangement and classification of abbreviations in the field of toxicology and environmental sciences. This is the first book in terms of subject matter, categorization, comprehensiveness, variety, and breadth of content. It also includes Abbreviations and Acronyms commonly used in other European Languages/Countries (French, German, Spanish, Italian, Scottish, Russian) and some other regions like Canada, Australia, New Zealand, India, South Africa, Ireland, Japan, China, and United States and United Kingdom.

Environment, Climate Change and Green Entrepreneurship: A Journey Towards Sustainable Development
Faraha Nawaz (Associate Professor, Department of Public Administration, University of Rajshahi, Bangladesh)

Climate change refers to a substantial change in temperature, precipitation, or wind lasting for a long period of time, usually several years. The consequences of climate change are an increase in global air and ocean temperature on average, widespread melting of snow and rising global average sea level. The Bay of Bengal’s ‘funnel shape’ combined with its connection with the rivers of Bangladesh creates a constant hazardous situation for five coastal areas of the country. The high frequency of natural disasters also hinders the country’s ability to achieve its desired rates of economic growth. Climate Change issues have traditionally broken into two basic categories: climate change mitigation and climate change adaptation. Climate change...
mitigation includes human interventions to reduce drivers of climate systems and climate change adaptation includes managing natural and human systems in response to variations in the climate and their effects. Efforts to mitigate climate change have focused on reducing greenhouse gas emissions (GHG) into the atmosphere which is a complex journey towards sustainable development. Mitigation strategies include adopting renewable energy sources such as solar, wind, hydro, biofuels, and the sustainable use of land and forests. This book argues green entrepreneurship is one of the most effective strategies for greenhouse gas emissions reduction. This book discusses the linkages between climate change mitigation and green entrepreneurship, describing the challenges and possibilities of adopting green entrepreneurship in Bangladesh.

**Interdisciplinary Applications of the Life Cycle Assessment Tool**
Eduardo Jacob-Lopes, PhD (Associate Professor, Department of Food Technology and Science, Bioprocess Intensification Group, Federal University of Santa Maria, UFSM, Santa Maria, RS, Brazil), Leila Queiroz Zepka, PhD. (Associate Professor, Department of Food Technology and Science, Bioprocess Intensification Group, Federal University of Santa Maria, UFSM, Santa Maria, RS, Brazil) and Mariane Costa Deprá, PhD. (Researcher, Department of Food Technology and Science, Bioprocess Intensification Group, Federal University of Santa Maria, UFSM, Santa Maria, RS, Brazil)

In series: Environmental Science, Engineering and Technology
Publication Date: 06/02/2021
195 pp.
Hardcover: 978-1-53619-686-3. $160.00
e-book: 978-1-53619-690-0. $160.00

This book presents an overview of interdisciplinarity linked to the application of the life cycle analysis tool. Also, through this environmental approach, it is possible to direct the practical transition of the development of production systems. Therefore, the dissemination of studies involving this tool is essential to understand the criteria and indicators of sustainability.

Divided into seven parts, the book provides the reader with a general contextualization of the life cycle assessment tool and its application guidelines. It also presents studies involving scenarios agronomic, agricultural, energy, and emerging, as well as chemical industrial processes in order to exemplify and disseminate its huge scope of application.

Finally, this book provides an expanded view for students, researchers, and professionals in the environmental field, who are interested in improving the sustainable performance of the most diverse agro-industrial segments.

**Invasive Plants: Ecological Impacts, Diversity and Management**
Gerald R. Kuhns

In series: Plant Science Research and Practices
Publication Date: 07/15/2021
193 pp.
Softcover: 978-1-53619-770-9. $95.00
e-book: 978-1-53619-876-8. $95.00

Invasive plants, which are plants that are introduced into a new environment and cause negative effects on the local habitat, pose a serious threat to environmental and ecological conservation. This book contains three chapters that discuss the problem of invasive plants and propose solutions for their management and control. Chapter One concerns the use of invasive plants as raw materials for the environmentally friendly development of paper and packaging products. Chapter Two details the results of a study that suggests that the invasive plant Parthenium hysterophorus can be controlled by the maintenance of effective suppressive plant communities. Chapter Three presents the results of a study concerning the spread of Parthenium hysterophorus within and around Arusha National Park in Tanzania.
Sustainable Natural Resource Management in the Himalayan Region: Livelihood and Climate Change

Roshan Man Bajracharya, Ph.D. (Department of Environmental Science and Engineering, Kathmandu University, Duhlkhel, Nepal), Bishal Kumar Sitaula, Ph.D. (Department of Environment and Development Studies (Noragric), Faculty of Landscape and Society, Norwegian University of Life Sciences, Aas, Norway), Smriti Gurung, Ph.D (Department of Environmental Science and Engineering, Kathmandu University, Duhlkhel, Nepal) and Nani Raut, Ph.D (Department of Environmental Science and Engineering, Kathmandu University, Duhlkhel, Nepal)

In series: Environmental Research Advances
Publication Date: 02/10/2021
334 pp.
Hardcover: 978-1-53618-962-9. $230.00
e-book: 978-1-53619-089-2. $230.00

The greater Himalayan region, stretching from Afghanistan in the west to Myanmar in the east, is home to about a quarter of a billion people who greatly depend on available natural resources for their survival and livelihoods. The ever-increasing population pressure and changing climate have grave implications for the sustenance of human health and habitation in the foreseeable future. The region is confronted with numerous challenges related to forest degradation, land productivity, disaster risk, water management, biodiversity loss, erratic climatic patterns, as well as socio-political capacity. The limits of arable land have essentially been reached, while the need for enhancing production to sustain human nutritive requirements and livelihoods continues to increase. Hence, the intensification of agriculture has become a necessity rather than a choice. Yet, producing greater numbers of crops and quantities of food, fiber and other materials on the same parcel of land runs the risk of degrading the soil fertility, productivity and overall quality. Therefore, means to achieve this without irreversibly damaging the soil and land resource base have become imperative. To this end, agro-forestry, agro-silvi-pastoral systems, and the adoption of a variety of regenerative crops, soil and water management and conservation practices offer the potential to deliver multiple benefits without sacrificing the very resource upon which the human population depends. The need for ecologically sound and sustainable management of natural resources in the Himalayan region, as well as the adaptation of local communities to the impacts of climate change and measures for its mitigation, cannot be over-emphasized. This book presents findings on approaches to sustainable land management and the intensification of agriculture and animal husbandry related to soil organic matter management and carbon sequestration for multiple benefits; and the agroforestry as a crop diversification strategy with livelihood and climate mitigation/adaptation benefits, along with other aspects of forest, biodiversity and water resources management. The book deals with technical, socio-economic, policy and biodiversity issues related to the sustainable use and management of natural resources, namely forests, soil/land, water, crops, animal husbandry and diversity of flora/fauna, as well as disaster risk and vulnerability of communities in the Himalayan region. There is a continuing need to study and research approaches for harmonizing human needs and lifestyles with natural ecosystems and processes so that both may co-exist in a mutually beneficial manner.

The Future of Phytoremediation

James C. Flores

In series: Environmental Remediation Technologies, Regulations and Safety
Publication Date: 05/14/2021
305 pp.
Hardcover: 978-1-53619-625-2. $230.00
e-book: 978-1-53619-645-0. $230.00

This book includes eight chapters about phytoremediation, which is the use of plants for the cost-effective, environmentally friendly rehabilitation of soil and groundwater contaminated by toxic metals and organic compounds. Chapter One describes which plant species are most effective for use in phytoremediation. Chapter Two details how changes in the quality of light impact plant health, which in turn impacts the efficacy of phytoremediation. Chapter Three presents data related to the anatomical characteristics, popular use, chemical composition, and forms of growth of Pistia stratiotes, a plant commonly used in phytoremediation. Chapter Four highlights the use of constructed wetlands in the treatment and recovery of dairy wastewater. Chapter Five provides the results of a study of different species of plants and their effects on the microbial activity of a limestone quarry. Chapter Six summarizes the properties of purple non sulfur bacteria and their use in plant growth enhancement and bioremediation. Chapter Seven examines which species of plant are most effective for removing lead and cadmium in agricultural areas. Finally, Chapter Eight provides a critical view about what should be done to boost research surrounding phytoremediation in order to generate more ecofriendly restoration processes to recover polluted lands.
Biological Nutrients’ Removal in the Anaerobic/Anoxic/Oxic Wastewater Treatment Process

Changyong Wu, Ph.D. (Chinese Research Academy of Environmental Sciences, Beijing, China)

In series: Waste and Waste Management
Publication Date: 03/17/2021
239 pp.
Hardcover: 978-1-53619-080-9. $195.00
e-book: 978-1-53619-140-0. $195.00

Anaerobic-anoxic-oxic (A2/O) is one of the most widely used processes in municipal wastewater treatment plants for simultaneous biological nitrogen and phosphorus removal. The A2/O process has many advantages, such as simple configuration and short hydraulic retention time (HRT), etc. In addition, it is easy to operate. Therefore, A2/O will be continuously chosen as the main option in all kinds of newly designed and built wastewater treatment plants. Though the A2/O process has been used widely, it has some inherent contradictions which are difficult to overcome. For example, the contradiction between substrate competition and SRT makes the high nitrogen and phosphorus removal unable to be achieved simultaneously. As a result, the removal efficiency of the system cannot be further improved. In the past 10 years in China, the wastewater quality very obviously changed with the improvement of living conditions. At present, municipal wastewater with a low C/N ratio is rather common in most countries in the world. The lack of a carbon source will make the inherent contradictions of the A2/O process becomes serious. Therefore, the conventional design parameters of the A2/O process are needed to adjust or the configuration of the A2/O process should change to fit the change of the wastewater quality. According to this, this book systematically describes how to improve the nitrogen and phosphorus removal efficiency of municipal wastewater with low C/N ratio, and effectively utilize the carbon resource in the influent of wastewater. This publication is useful for students, researchers and engineers whose major focus is municipal and the environment.

Recycled Aggregates: Materials and Uses

Gaurav Saini, Ph.D. (Associate Professor and Head of Department, Civil Engineering, Sharda University, Greater Noida, Uttar Pradesh, India)

In series: Materials Science and Technologies
Publication Date: 05/05/2021
352 pp.
Hardcover: 978-1-53619-485-2. $230.00
e-book: 978-1-53619-554-5. $230.00

With the rapid rise in our needs and requirements, the amount of waste generated by modern cities is also increasing at an unprecedented rate. This problem is global in nature and most countries around the world need appropriate waste management strategies. These measures include disposal and the 3Rs (reduce, reuse, and recycle). Each of these strategies has its own share of pros and cons. An increasing emphasis is being placed on the application of the 3Rs, especially from the environmental perspective.

Construction & demolition (C & D) waste is generated when new infrastructure is built and/or older structures are demolished or renovated. Hundreds of millions of tons of such waste are generated worldwide annually, making it one of the most significant waste generating activities in the world. One way to take care of a significant fraction of this waste is as recycled aggregates (RA), wherein the waste is crushed to the dimensions of coarse and fine aggregates and is used for various activities, most notably in manufacturing of concrete. Other uses may include landfilling, manufacturing of tiles, bricks, pavement blocks, etc. Recently, other types of wastes such as used PET bottles have also been studied as a source of recycled aggregates.

This book deals with the various socio-economic, technical, environmental, and policy issues related to the application of various types of recycled aggregates in different countries around the world. This is a continually evolving area of applied research which needs further emphasis not only from researchers, but planners and regulators as well.
The Entomological Guide to Rhipicephalus

Sachin Kumar, Ph.D, NPDF, (Senior Researcher, Indian Veterinary Research Institute, Izatnagar, Bareilly (U.P.), India), Raquel Cossio Bayugar, Ph.D (Senior Researcher, National Center for Disciplinary Research in Animal Health and Safety (CENID-SAI-INIFAP), Mexico), Anil Kumar Sharma, Ph.D (Senior Researcher, Indian Veterinary Research Institute, Izatnagar, Bareilly (U.P.), India), Estefhan Miranda Miranda, Ph.D (Senior Scientific Researcher, National Center for Disciplinary Research in Animal Health and Safety (CENID-SAI-INIFAP), Mexico) and Ashok Kumar Chaubey, Ph.D, FSPPS, FAIR (Professor, Ch. Charan Singh University, Meerut, Uttar Pradesh, India)

In series: Insects and Other Terrestrial Arthropods: Biology, Chemistry and Behavior

Publication Date: 07/22/2021
397 pp.
Hardcover: 978-1-53619-619-1. $230.00
e-book: 978-1-53619-635-1. $230.00

Ticks are among the most competent and versatile vectors of pathogens and are second to mosquitoes as vectors of a number of human pathogens. They are the most important vector of pathogens affecting cattle worldwide. Problems with tick-borne diseases were related to the introduction of improved breeds of cattle into tick-infested areas because of their greater productivity compared to well-adapted indigenous breeds. The global loss due to ticks and tick borne diseases (TTBDS) was estimated to be between $13.9 and $18.7 billion annually while in India the cost of controlling TTBDS has been estimated at $498.7 million/annum. Also, cattle infested with ticks and infected with tick-borne disease agents were moved into areas where these tick species had not previously existed. This book is written by an international collection of tick experts of prestigious organizations and covers in-depth information on different aspects of ticks i.e. biology, acaricide resistance, tick-borne diseases, tick management strategies etc. It is a valuable resource for students, academic researchers and professionals because it covers the whole range of ticks and tick-borne diseases. This handbook was assembled through the efforts of five editors and the book chapters' authors, each of whom contributed to different components of the handbook.

Bacteriology

Bacteriology: Structure, Reproduction, Plant Diseases and Management

P.C. Trivedi, Ph.D. (Vice Chancellor, Professor, Jai Narain Vyas University, Jodhpur, India) and Tripti Agarwal, Ph.D. (Assistant Professor, Shree Bhawani Niketan P.G. College, Jaipur, India)

In series: Bacteriology Research Developments

Publication Date: 08/17/2021
505 pp.
Hardcover: 978-1-53619-613-9. $310.00
e-book: 978-1-53619-678-8. $310.00

Plant diseases are a threat to agriculture and food production on a global scale. Significant yield losses have been recorded due to plant pathogens in most agriculture and horticulture crops. The effective management of these diseases is very difficult. As such, it is important to understand fundamental concepts of the management of plant diseases caused by bacteria.

Bacteriology is a subdivision of microbiology and involves the documentation, description, and identification of bacteria. This book covers recent updates on the morphology, classification, genetics, ecology, and biochemistry of bacteria as well as the basic molecular concepts of bacteriology. This book has a futuristic approach and will help scholars understand the symptoms, mechanisms, and effective management of diseases caused by bacterial pathogens.
This book is useful for students and researchers of plant sciences, botany, microbiology, pathology, agriculture science, veterinary science, medical science, and other allied areas.

The Encyclopedia of Bacteriology Research Developments (11 Volume Set)
*Tod Barton and Doyle Ortiz*
In series: *Bacteriology Research Developments*
Publication Date: 04/28/2021
3109 pp.
Hardcover: 978-1-53619-240-7, $1,750.00
e-book: 978-1-53619-316-9, $1,750.00
This encyclopedia is composed of 11 volumes, and a total of 161 chapters, and provides the latest research in bacteriology written by authors from all over the world.

Biochemistry

**Cysteine: Sources, Uses and Health Effects**
*Taran Saunders*
In series: *Biochemistry Research Trends*
Publication Date: 01/08/2021
117 pp.
Softcover: 978-1-53619-033-5, $82.00
e-book: 978-1-53619-141-7, $82.00
Cysteine is a naturally occurring, sulfur-containing amino acid with a thiol group and is found in most proteins. Cysteine is a common constituent in health-care products like protein powders, body-building shakers, and smoothies. In medicine, it is used for the treatment of diabetes, inflammation, angina, chronic bronchitis, cardiovascular disease, flu and osteoarthritis. Also, some studies suggest that it can enhance lung health in people with chronic obstructive pulmonary disease (COPD). The first chapter of this book focuses on the uses of cysteine in both industries and medicine and health. The second chapter is about the therapeutic uses of N-acetyl cysteine (NAC) for obsessive compulsive disorder. The third chapter describes the functionalization of MCM-41 and MCM-48 by TPA, encapsulation of cysteine into functionalized carriers and their characterization using various physicochemical techniques. The last chapter includes the most recent developments in designing the fluorescent and colorimetric sensors (optical sensors) for selective and sensitive detection of cysteine.

**Melatonin: Production, Functions and Benefits**
*Alejandro Romero Martínez, PhD (Associate Professor of Toxicology, Complutense University of Madrid, Spain), Francisco López Muñoz, PhD, MD (Professor of Pharmacology, Camilo José Cela University, Madrid, Spain) and Javier Egea, PhD (Senior Researcher National Health System “Miguel Servet II”, Instituto de Investigación Sanitaria del H.U. La Princesa, Madrid, Spain)*
In series: *Biochemistry Research Trends*
Publication Date: 01/05/2021
432 pp.
Hardcover: 978-1-53619-031-1, $230.00
e-book: 978-1-53619-065-6, $230.00
The exponential influx of scientific research on melatonin is associated with a greater orientation towards the study of the systemic effects of melatonin and their derivatives, as well as their clinical implications. Proof of this fact is summarized in the present compilation, where melatonin is presented as a remarkable agent to counteract most of the physiopathological events that trigger several disorders. The book also collects evidence about melatonin’s interactions with two high-affinity G protein-coupled receptors to provide new pharmacological targets for the treatment of cancer, neurological or endocrine conditions.
The present review also includes detailed coverage of molecules with improved safety profiles and melatonin receptor agonists (such as ramelteon, tasimelteon, and agomelatine), and the latest findings on the role of melatonin in protecting plants from abiotic stress, improving their resistance to adverse conditions, regulating several environmental stresses including heat stress, as well as the clinical use of melatonin in the treatment of fertility-related problems and reproductive health.

The multiplicity of actions of melatonin, including modulating immune responses and inflammation and maintaining mitochondrial integrity, make this indoleamine a valuable therapeutic agent in the treatment of neurodegeneration, polycystic ovary syndrome, brain ischemia and traumatic brain injury, fibromyalgia, optic neuritis and glaucoma, alone or in combination with other drugs.

Melatonin easily crosses the blood-brain and placental barriers. In this sense, this book provides a complete review suggesting that melatonin supplementation should be considered as a potential disease-preventing agent, with the aim of extending pregnancy duration to improve clinical outcomes and prevent fetal brain damage for pregnancy pathologies, such as preeclampsia, intrauterine growth restriction and preterm birth.

Within the last few decades, melatonin has emerged in clinical oncology as a naturally occurring bioactive molecule with substantial anticancer properties. In addition, this chronobiotic agent exerts oncostatic effects throughout all stages of tumor growth, from initial cell transformation to mitigation of malignant progression and metastasis. Its therapeutic applications in oral cancer, gastrointestinal pathologies and colorectal cancer are discussed, as well as its applications as an adjuvant for alleviating side-effects and improving the welfare of radio/chemotherapy-treated patients.

In the final chapter, the authors summarize the indications for the development of new galenic formulations of melatonin. Thus, different melatonin formulations, such as intranasal solutions, sprays, microspheres, gels and liposomes would allow for the maintenance of endogenous active concentrations for a long time, avoiding poor oral bioavailability.

**Biotechnology**

**Fundamentals of Medical Biotechnology**

Rajneesh Prajapat, Ph.D. (Senior Lecturer-Biotechnology, Department of Biology, Birla Balika Vidyapeeth, Pilani, Rajasthan, India), M. Kasturi, Ph.D. (Principal, Birla Balika Vidyapeeth, Pilani, Rajasthan, India), B. Manivannan, Ph.D. (Operations and R&D, Shandi Global Pte Ltd., Singapore) and Anita Mishra, M.Sc. (Dean Academics, HOD-Department of Biology, Birla Balika Vidyapeeth, Pilani, Rajasthan, India)

In series: Recent Trends in Biotechnology

Publication Date: 03/17/2021

238 pp.

Hardcover: 978-1-53619-328-2. $195.00

e-book: 978-1-53619-393-0. $195.00

Biotechnology, an allied subject of biology, is also associated with its neighboring subject areas, such as: biochemistry, biophysics, biostatistics, pharmacology, cell biology, molecular biology, clinical biology, genomics and proteomics and nanotechnology, which makes this subject an advanced area in medical and health sciences. The exponential growth of the above fields in the past three decades, particularly information technology and biomedical technology and their myriad applications in medicine and health sciences, makes the field of biotechnology a potential front runner. The sophistication in biological techniques and methods makes biotechnological studies more precise, interesting, measurable and reproducible.

Fundamentals of Medical Biotechnology is designed to cover all the areas of biotechnological advancement in cell biology, genetics, molecular biology, biochemistry, metabolism, microbiology, clinical pharmacology, immunology, biostatistics and bioinformatics. It helps students of biology, biotechnology, medical sciences and other health sciences to learn the advancement in the field of biomedicine and biotechnology.

The book also covers the basics of diagnostic techniques in clinical biochemistry, specific to the technologies addressed in various chapters in the book, at both theoretical and application levels. The book focuses on why these techniques are useful in a clinical context and considers their potential uses, limitations and the ethical considerations that surround their use. This book is based on the recent development in the research dynamics of medical biotechnology, biochemistry and the progress in these fields. It also provides current reference material for students entering the field of medical and bioinformatics, academicians as well as research scientists. The book is a useful source of knowledge for students at senior secondary level, undergraduate and postgraduates in biotechnology and allied subjects, and MBBS / BDS level students looking for an accessible introduction of the subject.
Aromatic Plants: The Technology, Human Welfare and Beyond
Dr. Amit Baran Sharangi (Department of Plantation, Spices, Medicinal and Aromatic Crops, Faculty of Horticulture, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India)

In series: Plant Science Research and Practices
Publication Date: 04/08/2021
376 pp.
Hardcover: 978-1-53619-322-0. $230.00
e-book: 978-1-53619-398-5. $230.00

The history of aroma and fragrance dates back through several ages and civilizations. The sagacity of smell plays a remarkable role for human beings to recognize food. Best fruits can be judged when they are ripe and fit for consumption emitting lovely smell or aroma. The same attribute from flowers attracts insects leading to cross-pollination. India has enjoyed a paramount place in the fabrication of quality perfumes and aromatics since the prehistoric era. The celebrated Chinese voyager Fa-Hien described India as the land of aromatic plants. Indian cities like Delhi, Agra, Kannauj, Lucknow, Jaunpur, Ghazipur, Aligarh, Bharatpur, Mysore, and Hyderabad emerged as centers of national and international trade in perfumery and other aromatic compounds, and were known for their quality across Asia, Europe and Africa. Aromatic plants precisely possess odorous volatile substances in root, wood, bark, stem, foliage, flower and fruit. The typical aroma is due to an assortment of composite chemical compounds. At present, information on the chemistry and properties of essential oils of only about 500 aromatic plants species is known in some detail out of a total of about 1500. Of these, about 50 species find use as commercial source of essential oils and aroma chemicals. It is realized now that perfumes are not the essentials of sumptuousness as they were in the past. It has given birth to new streams of medicinal therapy, aromatherapy, involving the use of essential oils and aromatics derived from plants to treat diseases. Essential oils are also reported to be better than antibiotics due to their safety and broad-spectrum activity. Natural essential oils are also potentially safe insecticides. The essential oil obtained from Acorus calamus having β-asarone as an active principle produces sterility among a variety of insects of either sex. It has, therefore, been found very useful and secure for the storage of food grains. However, there is still very inadequate research for the cultivation of aromatic crops and extraction of essential oils across the globe.

This book has been designed to highlight the associated issues of aromatic plants including the aspects of their classification, importance, uses and applications for human wellbeing, botany, agrotechniques, major bioactive constituents, post-harvest extraction, chemistry and biochemistry of aroma compounds along with an informative modern global research on these plants throughout the world. I hope this book will cater the scholastic services, reward diverse professionals and stakeholders, and serve as an informative handbook for theoretical as well as practical purposes.
Brassica juncea: Production, Cultivation and Uses
Dr. Dhriti Kapoor (Department of Botany, School of Bioengineering and Biosciences, Lovely Professional University, Phagwara (Punjab, India)) and Dr. Vandana Gautam (College of Horticulture and forestry (Dr. Y. S. Parmar University of Horticulture and Forestry, Nauli, Solan, H.P.), Neri Campus (Himachal Pradesh), India)
In series: Botanical Research and Practices
Publication Date: 03/04/2021
308 pp.
Hardcover: 978-1-53619-241-4. $230.00
e-book: 978-1-53619-289-6. $230.00

Brassica juncea is a salient oilseed crop and contributes highest in domestic edible oils. It belongs to Brassicaceae family ( Cruciferae). This annual herb is widely known for its adaptation to varying climatic conditions and manifest tolerance to diverse soil types. Most of Brassica species are diploid and amphidioploid. Brassica juncea (n=18) which is commonly known as Indian mustard. It is Asiatic in origin with prime centre of its diversity found in China from where it migrated to India via Afghanistan and other countries. Mustard is largely self-pollinated rabi season crop of temperate region, which relatively requires cool temperature for its growth and thrive well in irrigated and rainfed conditions. Seeds of mustard serve as a cheapest and healthiest source of oil in regular diet. Apart from its culinary purposes, it is also used in preparation of soaps, hair oils, lubricants, paints and as a condiment in pickles. Mustard oil extracted from this plant leads to the creation of by-product known as mustard cake, which is used as manure. This oil cake is used as cover crop for animal fodder due to its high protein and glucosinolate content. Brassica juncea plants are medicinally important source of phytochemical compounds of therapeutic significance. Brassica plants are studied for their bioactive potential and are reported to contain several other classes of alkaloids, tannins, saponins, anthocyanins, phytosterols, chlorophyll, glucosinolates, phytosteroids, terpenoids, glycosides, vitamin C, vitamin E, alphatic and aromatic amines. Due to presence of these compounds, the plant displays anti-bacterial, anti-malarial, anti-hyperglycemic, anti-aging, anti-proliferative, anti-ulcer, anti-hyperlipidemic, anti-genotoxic, neuroprotective, and antioxidant activities.

Brassica juncea has the potential to eliminate, detoxify or sequester heavy metals from polluted soil. Sequestrating ability of Brassica juncea pivots upon mobility of toxic substance, plant attribute and crop management aspects. The crop management aspects include above surface biomass of plants, intercropping, amendment of organic matter and incorporation of legumes for better phytoextraction via India mustard through boosting growth and soil metal dissipation. Brassica juncea are described as hyperaccumulator, as they are able to uptake high amount of heavy metals such as lead, copper, nickel from contaminated sites. The metal uptake by Brassica juncea is influenced by heavy metal availability in surroundings, rate of metal accumulation by roots, percentage of heavy metal fixed in the roots, rate of metal storing in xylem and transferring heavy metals to shoots and resistance of cells for heavy metals. Brassica juncea can effectively be cultivated and render soils contamination free. Assorted agronomic practices comprising irrigation, weed management, addition of fertilizers and chelators augments Brassica juncea potential. It exhibits noteworthy contribution in the world. Keeping these points in mind, various aspects like the botanical description, economic importance, cultivation practices, therapeutic potential and phytoremediation capacity of Brassica juncea has been described in this book. Apart from this, various breeding methods, genetic and molecular approaches have been well explained to improve the quality of this crop.

Elementary Botany
George Francis Atkinson
In series: Botanical Research and Practices
Publication Date: 04/08/2021
626 pp.
Hardcover: 978-1-53619-448-7. $310.00
e-book: 978-1-53619-518-7. $310.00

Part I, Physiology, deals with the life processes of plants, such as absorption, transpiration, conduction, photosynthesis, nutrition, assimilation, digestion, respiration, growth, and irritability.
Part II, Morphology and Life History of Representative Plants, includes a rather careful study of representative examples among the alge, fungi, liverworts, mosses, ferns and their allies, gymnosperms and angiosperms, with especial emphasis on the form of plant parts, and a comparison of them in the different groups, with a comparative study of development, reproduction, and fertilization, rounding out the work with a study of life histories and noting progression and retrogression of certain organs and phases in proceeding from the lower to the higher plants.
Part III, Plant Members in Relation to Environment, deals with the organization of the plant body as a whole in its relation to environment, the organization of plant tissues with a discussion of the principal tissues and a descriptive synopsis of the same.
Elementary Knowledge of Indian Medicinal Plants of Uttarakhand Himalaya

Mayaram Uniyal (Director, CCRAS, Ministry of AYUSH, Govt. of India), Deepak Kumar Semwal (Department of Phytochemistry, Uttarakhand Ayurved University, India), Ruchi Badoni Semwal (Assistant Professor at Govt. Postgraduate College, Rishikesh, India) and Ankit Kumar (Senior Research Fellow in the R&D Centre, Faculty of Biomedical Sciences, Uttarakhand Ayurved University, India)

In series: Plant Science Research and Practices
Publication Date: 01/20/2021
468 pp.
Hardcover: 978-1-53619-078-6. $270.00
e-book: 978-1-53619-126-4. $270.00

Elementary Knowledge of Indian Medicinal Plants of Uttarakhand Himalaya mainly focuses on the taxonomy and ethnomedicinal uses of plants, and the information provided can be used to identify plants while surveying medicinal plants in the region. This compilation will be helpful for researchers and students working in the field of plant science and other related fields. This textbook is divided into five chapters, and the first chapter reviews the historical aspects of India in terms of traditional knowledge. The second chapter provides a general introduction to the biodiversity of medicinal plants in Uttarakhand, a Himalayan state of India, as well as its geography, population, herbal sector status, temperature and altitudes. The third chapter reviews 600 flowering plants belonging to 108 families. Each plant is described using its Ayurvedic/Sanskrit name, vernacular/local name, botanical properties, distribution, medicinal properties, phytochemical constituents and pharmacological status. The fourth chapter discusses 14 gymnosperms belonging to four families, and the fifth chapter discusses 18 pteridophytes from two families. Photographs of selected plants are also included in a separate section.

Intelligence in Plants and Animals

Thomas G. Gentry

In series: Historical Manuscripts
Publication Date: 04/15/2021
371 pp.
Hardcover: 978-1-53619-476-0. $230.00

This natural world, so to speak, is the raw material of the spiritual. Therefore, before man can understand the spiritual, he must understand the natural. This book explores the theory that all animals and plants have a soul and will survive death.

Moringa oleifera: Properties, Applications and Health Effects

Daniel S. Figueroa

In series: Plant Science Research and Practices
Publication Date: 01/05/2021
402 pp.
Hardcover: 978-1-53618-890-5. $230.00
e-book: 978-1-53619-070-0. $230.00

Moringa oleifera is a widely cultivated and highly valuable tree belonging to the family Moringaceae, originating in India. This compilation explores its wide variety of uses, including in food, traditional herbal medicine, water purification and as an insecticide.
Ocimum basilicum: Taxonomy, Cultivation and Uses
Andres A. Walton
In series: Plant Science Research and Practices
Publication Date: 02/26/2021
139 pp.
Softcover: 978-1-53619-265-0. $95.00
e-book: 978-1-53619-306-0. $95.00

Ocimum basilicum L. is an aromatic herb commonly known as sweet basil or sweet tulsi. It is rich in secondary metabolites like phenols, alkaloids, terpenoids, aldehydes, flavonoids, steroids, glycosides, essential oils, saponins, and tannins. The presence of these compounds makes sweet basil one of the most commonly used plant in aromatherapy, perfume, cosmetics, and in foods. The utilization potential of the sweet basil in different industrial section increases its importance. The first chapter underlines secondary metabolites of sweet basil and their importance in different aspects. The second chapter considers the recent concepts of application organic manures in integration with inorganic fertilizers in different reviews and research studies that fulfills the nutritional needs in sweet basil and gives the best quality of it. The third chapter summarizes the potential uses, cultivation, and available germplasm of O. basilicum in Turkey. The fourth chapter reviews literature on antiviral activity of O. basilicum to find molecules capable of inhibiting the SARS-CoV-2 main protease. This could permit the use of this plant in the fight against COVID-19 and associated diseases. The last chapter is an examination of antisickling activity of Ocimum Basilicum and some of its compounds.

Origanum: Taxonomy, Cultivation and Uses
Roger Ingram
In series: Botanical Research and Practices
Publication Date: 02/15/2021
104 pp.
Softcover: 978-1-53619-236-0. $82.00
e-book: 978-1-53619-249-0. $82.00

Chapter 1 focuses on taxonomic, cultivation and the pharmacological and other uses of Origanum species. In Chapter 2, Origanum’s role in synthesising the metal nanoparticles such as titanium dioxide, palladium, silver, gold, palladium nanoparticles supported on magnetic graphene oxide has been discussed in detail. Hence, researchers are using Origanum as a precursor in plant-mediated synthesis. In the last chapter, the authors discuss Origanum, the Turkish spice, which has a history dated back to centuries. This herb has found wide applications due to the presence of primary and secondary metabolites.

Passiflora: Genetic, Grafting and Biotechnology Approaches
Alejandro Hurtado Salazar (Universidad de Caldas, Manizales, Caldas, Colombia), John Ocampo (Universidad Nacional de Colombia, Palmira, Valle del Cauca, Colombia), Nelson Ceballos-Aguirre (Universidad de Caldas, Manizales, Caldas, Colombia), Dora Janeth Garcia Jaramillo (Universidad de Caldas, Manizales, Caldas, Colombia), Walter Ricardo Lopez (Universidad Nacional de Colombia, Manizales, Caldas, Colombia)
In series: Botanical Research and Practices
Publication Date: 02/17/2021
206 pp.
Hardcover: 978-1-53619-108-0. $160.00
e-book: 978-1-53619-255-1. $160.00

The diseases are among the main factors responsible for the low productivity and losses in commercial passion fruit crops. Among the agents that cause pathologies, Fusarium oxysporium S, Fusarium solani Saec and Phytophora spp., deserve attention. The use of tolerant cultivars stands out as one of the most effective, economic and ecological measures in the control of the disease. In the case of passion fruit, this strategy is essential based on the high susceptibility of current cultivars. Fusarium spp normally compromises the efficiency of the root system, as well as the conductive vessels of the sage, reducing the longevity of the plant and limiting the use of the areas contaminated by the fungus. Tolerance to F. solani was found in Passiflora gibertti N.E. Brown, P. nitida Kunth, P. macrocarpa Mast, P. quadrangularis L., P. setacea L., P. alata Curtis and P. caerulea L., presenting grafting with the use of tolerant species a viable alternative to attenuate the problems caused by this fungi. Thus, with the use of tolerant wild species as rootstocks, it allows coexistence
with premature death of plants and provides the formation of healthier and uniform crops. However, there is little information on the effect of wild Passiflora species such as passion fruit rootstock.

Prosopis: Properties, Uses and Diversity
Ronan Batista, PhD (Associate Professor, Department of Organic Chemistry, Institute of Chemistry, Federal University of Bahia, Salvador, Bahia, Brazil)
In series: Plant Science Research and Practices
Publication Date: 05/24/2021
259 pp.
Hardcover: 978-1-53619-592-7. $195.00
e-book: 978-1-53619-636-8. $195.00
Prosopis is an intriguing genus of flowering plants found in subtropical and tropical regions of the Americas, Africa and Asia. Although some invasive Prosopis species cause economic and environmental damage, others offer a wide range of benefits, including the use of some Prosopis species for human and animal food which has provided valuable resources for some of the poorest communities. This seven chapter book is based around a discussion of experts’ points-of-views and aims at updating scientific advances on the Prosopis species around important themes such as ecosystems, pollution, public health, veterinary medicine, greenhouse effects, feed additives, neurotoxicity, cancer and allergies. Reading the chapters will help the reader become more aware of the growing relevance, importance and impact of Prosopis species worldwide and it certainly will surprise and instigate the reader to seek an even more awakened look at the most different possibilities for applying Prosopis species in new strategies and technologies for a better world.

Punica granatum: Cultivation, Properties and Health Benefits
Dr. Rupesh K. Gautam, PhD (Professor and Head, Department of Pharmacology, MM School of Pharmacy, Maharishi Markandeshwar University (NAAC Accrediated) Sadopur-Ambala, India) and Smriti Parashar (Assistant Professor, Department of Pharmacology, Vedic Institute of Pharmaceutical Education and Research, Sagar, (M.P.), India)
In series: Botanical Research and Practices
Publication Date: 07/22/2021
360 pp.
Hardcover: 978-1-53619-767-9. $230.00
Pomegranate (Punica granatum L.) is an ancient fruit estimated to be introduced to human cultures around the world about 4000 years ago. It is native to Central Asia, from Iran and Turkmenistan to northern India regions, and is widely cultivated in Mediterranean, tropical and subtropical regions. The highest-quality pomegranate is grown in arid zones because it is tolerant to drought conditions. It is well known to humans for its nutritional, curative, and ornamental values. About 75% of individuals from developed countries use pomegranate in traditional medicine.
Punica granatum: Cultivation, Properties and Health Benefits is an attempt to bring together important research work, literature, and scientific findings regarding Punica granatum L. This book aims to feature the medicinal importance of this plant and its journey from folk medicine to modern medicine.
This book compiles various medical studies of pomegranate for treatment of cancer, Alzheimer's disease, diabetes, cardiovascular disorders, bacterial infections, ischemia, male infertility, arthritis, obesity, and skin diseases. It is reported to have antioxidant, antimicrobial, anti-diabetic, anti-cancer, and anti-inflammatory properties. The use of pomegranate as a natural source of medicine has steadily increased around the world in recent years.

Recent Developments in Jatropha Research
Juan Francisco García-Martín, PhD (Associate Professor, Department of Chemical Engineering, University of Seville, Spain)
In series: Plant Science Research and Practices
Publication Date: 02/05/2021
322 pp.
Hardcover: 978-1-53619-132-5. $230.00
e-book: 978-1-53619-190-5. $230.00
The genus Jatropha comprises a range of species with a wide range of potential applications. For instance, J. dioica and J. curcas have important medicinal, pharmaceutical and food uses, as described throughout the book. Most of the chapters of this book are focused on this later species, which is considered as the most promising and the one with the most applications. J. curcas oil is used as substrate for biodiesel production and, due to its high tolerance and uptake of metals, this plant is also used in phytoremediation, to be specific for the remediation of degraded mining areas. This book presents an overview of both current and promising applications of the species of Jatropha to the agricultural, mining and biofuel industries and, to lesser extent, the pharmaceutical and food industries. The agronomic practices (genotypes, plant density, fertilization, pruning and harvest date) are described as well. The most recent developments are discussed and the future prospects for research in these fields are explored.

Recent Studies on Jatropha Research
José Basilio Heredia, Ph.D. (Research Professor (Research Group Leader), Centro de Investigación en Alimentación y Desarrollo, A.C., Culiacán, Sinaloa, México), Dr. Erick Paul Gutiérrez-Grijalva (Cátedras CONACYT (CONACYT Research Fellow), Cátedras CONACYT -Centro de Investigación en Alimentación y Desarrollo, A.C., Culiacán, Sinaloa, México), Miguel Angel Angulo-Excalante, Ph.D. (Research Professor Centro de Investigación en Alimentación y Desarrollo, AC. Culiacán Unit, Sinaloa, México) and Dr. Federico Soto-Landeros (Research Associate Centro de Investigación en Alimentación y Desarrollo, AC. Culiacán Unit, Sinaloa, México)

In series: Plant Science Research and Practices
Publication Date: 04/21/2021
267 pp.
Hardcover: 978-1-53619-494-4. $195.00
e-book: 978-1-53619-555-2. $195.00

Plants from the genus Jatropha belong to the Euphorbiaceae family, which accounts for nearly 175 species distributed mainly in America, Asia, and Africa. Jatropha species have been of interest in many research fields due to their multifaceted applications, mainly attributed to their chemical, nutritional, and phytochemical content. Some of the most studied species are J. curcas, J. isabelli, J. gossypiiifolila, J. integerrima, and J. platyphylla, which have been of interest as a sustainable crop and in biofuel and ethnopharmacological studies. To date, there are no precedents of a scientific compilation that comprehensively reviews recent information regarding Jatropha species. Only a few publications have been published on J. curcas, mainly focusing on its potential source of compounds to produce biofuels. This work aims to comprehensively review the available information from the web of Science, PubMed, and Scopus databases to assess all possible subjects regarding Jatropha studies. For instance, in this work, we will assess the agronomic, botanical, industrial applications, and biopharmacological potential of Jatropha crops and their phytochemical constituents.

Salicylic Acid Contribution in Plant Biology against a Changing Environment
Dr. Dhriti Kapoor (Department of Botany, School of Bioengineering and Biosciences, Lovely Professional University, Phagwara (Punjab), India), Dr. Vandana Gautam (College of Horticulture and Forestry (Dr. Y. S. Parmar University of Horticulture and Forestry, Nauni, Solan, H.P.), Neri Campus (Himachal Pradesh), India) and Prof. Renu Bhardwaj (Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India)

In series: Plant Science Research and Practices
Publication Date: 02/17/2021
225 pp.
Hardcover: 978-1-53619-153-0. $160.00
e-book: 978-1-53619-283-4. $160.00

Salicylic acid (SA) chemically known as 2-hydroxy benzoic acid, is a ubiquitous endogenous plant growth regulator of phenolic nature, synthesized by plants which acts as a vital endogenous signaling molecule in plant immune response. SA is recognized as a multifaceted element that have crucial roles in various plant physiological processes such as seed germination, seedling growth, photosynthetic activity, nutrient absorption and transport, respiration, nitrogen metabolism, thermogenesis, stomatal closure, flowering, expression of senescence-related genes, inducing antioxidant defense system and resistance to a broad spectrum of pathogens. SA mode of action varies with plant species, plant developmental phase, its mode of application, and its endogenous level in the plant. SA have high metabolic and physiological activity therefore,
involved in the activation of plant defense responses against biotic and abiotic stress factors and also involved in the transcriptional reprogramming and in controlling transcription and expression of several defense related genes. SA in minor quantities provide plant stress tolerance, but high amounts of SA triggers oxidative stress due to generation of plethora of ROS which ultimately lead to cell death. Under stress conditions, SA interplays with reactive oxygen species (ROS) as crucial signaling molecules for inducing genetically controlled defense-related mechanisms and expression of genes that cause defense against stress. Keeping these points in mind, various aspects like significance of SA for plants, its stress mitigation properties as well as cross-talk with other plant growth regulators have been mentioned.

The book has seven chapters which deal with the role of phytohormone salicylic acid in plants, its mechanism of synthesis, signaling & homeostasis in plants, its crosstalk with ROS in mitigation of stress and its interaction with other plant growth regulators.

We believe that this book comprises a wealth of knowledge to botanists, agriculturists, students and researchers of colleges and universities.
**Cell Biology**

**Human Mesenchymal Stem Cells**  
*Mitchell Khan*  
In *series: Stem Cells - Laboratory and Clinical Research*  
Publication Date: 02/09/2021  
134 pp.  
Softcover: 978-1-53619-155-4, $82.00  
e-book: 978-1-53619-224-7, $82.00  

In Chapter 1, the COVID-19 pandemic and the damage mechanisms on the cellular level which can be ameliorated with the cellular therapies is thoroughly evaluated. Previous and ongoing stem cell clinical trial data from diseases with similar symptoms is gathered. All this accumulated data and current clinical trial results indicate that the cellular therapies could be the most effective treatment option for COVID-19 patients to ameliorate the damaged tissues and save lives. In Chapter 2, the authors examine activated mesenchymal stem cells for stroke repair. Stem Cell treatment has shown recovery in animal models of stroke, indicating an improved regenerative and repair potential. Though stem cells are still being used in clinical trials, there is no evidence that they enhance recovery in ischemic stroke patients. Nevertheless, the multipotent mesenchymal stem has widely been explored for stroke recovery. An 'Activated MSC' as a therapeutic alternative to tackling ischemic stroke is proposed, thereby the activation of MSCs by cytokines, growth factors, hypoxia, pharmacological drugs, etc., could be a novel approach to improving stroke patients’ responses to receiving MSCs. In Chapter 3, the potential benefits of in vitro culture of therapeutic stem cells in the presence of HB along with the ketogenic diet, whereby higher physiological concentrations of ketone bodies can be achieved in vivo, as an adjuvant to stem cell transplantation is assessed.

**Na⁺/K⁺-ATPase: Discovery, Functions and Regulation**  
*Mohammed Awad Ali Khalid (Assistant Professor of Chemistry, University of Taif, Saudi Arabia; Department of Chemistry, Turabah University College, University of Taif, Taif, Saudi Arabia; Associate Professor of Chemistry, University of Khartoum, Sudan)*  
In *series: Cell Biology Research Progress*  
Publication Date: 01/08/2021  
161 pp.  
Softcover: 978-1-53618-968-1, $95.00  
e-book: 978-1-53619-050-2, $95.00  

Sodium–potassium adenosine triphosphatase (Na⁺/K⁺-ATPase) is an enzyme located in the plasma membrane of most eukaryotic cells, responsible for maintaining ion concentration gradients against their concentration scale using ATP hydrolysis as a source of energy. The enzyme is involved in many cellular activities, including maintaining cell volume, transporting nutrition, electrical potential, neurotransmission, and any dysfunction or modification of enzyme activity is directly linked to many diseases, such as epilepsy, cardiovascular disease and hypertension, diabetes and other metabolic disorders, digoxin toxicity, fetal abnormalities, neurological disorders, and pulmonary conditions.

In this book, the authors present current research on regulation strategies, Na⁺/K⁺-ATPase as a biomarker in diseased states, and the use of Na⁺/K⁺-ATPase in the physiological and ecological adaptations of insects. Other topics discussed in this compilation include the effects of hormonal and non-hormonal stimulation on Na⁺/K⁺-ATPase activity, the physiology and pathophysiology of Na⁺/K⁺-ATPase, Na⁺/K⁺-ATPase as a biomarker for energy metabolism and oxidative stress in diseased states, the neurotensin inhibitory effects of [3H]-Ouabain binding to striatal membranes and inversion by administration of clozapine, and Na⁺/K⁺-ATPase’s important functional roles in human body.

**Marine Biology**

**Encyclopedia of Marine Biology (12 Volume Set)**  
*Steffen Fischer and Jonas Abend*  
In *series: Marine and Freshwater Biology*  
Publication Date: 08/03/2021  
4539 pp.  
Hardcover: 978-1-53619-529-3, $1,950.00  
e-book: 978-1-53619-654-2, $1,950.00
Cnidarians are elegant and dazzling aquatic organisms, but despite their beauty they are known to be a threat in many coastal areas around the world. Several species of cnidaria living in tropical or sub-tropical areas are remarkably dangerous, but many Mediterranean species can also cause serious health problems. Really, cnidarians (sea anemones, corals, medusae) are considered among the most dangerous and venomous organisms, thanks to the occurrence in their tissues of batteries of intracellular capsules (nematocysts or cnidocysts) produced by the Golgi apparatus of specialized cells (nematocytes or cnidocytes) from which the phylum Cnidaria takes the name (from the Greek κνίδη = nettle). The consequences of human encounters with cnidarians vary widely, from simple skin irritation to serious anaphylactic manifestations in sensitive subjects.

During the last few decades, cnidarians have been perceived as increasingly dangerous due to recurrent jellyfish outbreaks which constitute a threat both for human health and economy and for the environmental equilibrium. In addition, the occurrence of alien species, whose spread is facilitated by human activities, environmental changes, global warming, or man-made modifications of the natural features of territories, pose new and serious challenges to environmental management. For all these reasons, cnidarians can be viewed as a problem.

Nevertheless, cnidarians are also viewed with particular interest due to their potential in the field of natural products. Scientists have realized the potential of natural resources hidden in aquatic environments for the development of new drugs or bioactive substances with wide potential use. At present, an enormous scientific literature is available about the value of cnidarian products as potential therapeutic agents, in human nutrition, or for other applications. As such, these organisms can also be reasonably considered a resource.

Taking into consideration these two main aspects, this book aims to collect the experiences and recent research data on cnidarians and review present knowledge on the subject.

**Microbiology**

**Microbes for a Sustainable Environment and Human Welfare: Advancements and Opportunities**

Ronaldo Anuf Alexander (Department of Biotechnology, Kamaraj College of Engineering and Technology, Virudhunagar, Tamilnadu, India) and Vishnu Sankar Sivasankarapillai (Department of Chemistry, NSS Hindu College, Changanacherry, Kerala, India)

In series: Microbiology Research Advances

Publication Date: 01/13/2021

501 pp.
Hardcover: 978-1-53619-664-1, $310.00
E-book: 978-1-53619-794-5, $310.00

One of the major challenges faced by the world today is developing innovative and cost-effective bio-based technologies for sustaining a greener Earth, and the interactions between living beings are gaining renewed interest and value. This book describes advancements and opportunities for creating a sustainable environment for the welfare of humans with the help of microbes. Microbial activities are unique; their approaches can reduce stress on the environment, agricultural ecosystem, and soil biodiversity sustainability. A multidisciplinary view of microbial sustainability is presented in this book. Through the ten chapters, readers will find descriptions of various aspects of microbial-mediated environmental services and modern methodologies, including microbial-based bioremediation, treatment of industrial outpours, biosynthesis of nanoparticles, clean hydrogen production, therapeutics, biofuel production, and pharmaceutical applications.
In terms of their physiology, metabolism and relevance as microbial models, microorganisms contribute to environmental, economic and industrial sustainability.

Special Topics

The World of Molecular Biology
Manuel F. Varela (Professor, Eastern New Mexico University, Science Department, Portales, New Mexico, USA), Ann F. Varela (Instructor, Eastern New Mexico University, Math and Science Department, Portales, New Mexico, USA) and Michael F. Shaughnessy (Eastern New Mexico University, School of Education, Portales, New Mexico, USA),

In series: Life Sciences Research and Development
Publication Date: 03/17/2021
331 pp.
Hardcover: 978-1-53619-232-2. $230.00
e-book: 978-1-53619-312-1. $230.00

The World of Molecular Biology is a book which examines and explores the discoveries as well as the lives of twenty-five stellar scientists who have all contributed in different ways to the field that we know today as “molecular biology”. The book covers a vast timeline from the last century to present day advances and concerns such as viral replication and transmission. The book examines the foundational structures of the field as well as how many scientists and basic scientific knowledge has contributed to our current understanding.

Beginning with DNA (as hereditary material) and evolving into recombinant DNA and replication and somatic DNA, the book covers the way in which scientists have examined and explored these realms and some of the resultant discoveries which have led to the Nobel Prize.

Nobel prize winners are not born, but they are made- they are made from years of education, years of familial nurturance, years of mentoring by other scientists (either formally or informally) and of course by luck, chance, fate and surreptitious encounters. Some of our scientists have spent years studying the fruit fly (drosophila), fly genetics, mutations, replications, and of course, genes, gene replication, split genes and “jumping genes”. For those seeking an overview of the field of molecular biology this text will provide an overview of the lives of those who have delved most deeply into these issues and those whose discoveries have resulted in the Nobel Prize.

The test is certainly relevant in today’s world as we encounter and challenge the dreaded ever evolving virus known as Covid-19 which seems intent on replicating, changing, evolving and challenging mankind and our scientific community.

Zoology

Advances in Animal Science and Zoology. Volume 17
Owen P. Jenkins

In series: Advances in Animal Science and Zoology
Publication Date: 07/22/2021
230 pp.
Hardcover: 978-1-53619-838-6. $250.00
e-book: 978-1-53619-862-1. $250.00

This monograph contains six chapters, each describing a recent advancement in animal science and zoology. Chapter One discusses recent developments in the knowledge of diapause in silkworm as well as the overall genomics of silkworm. Chapter Two reviews past studies and publications to provide a holistic understanding of the relationship between terrestrial mammals and mineral licks in the tropical rainforest of Malaysia.

Chapter Three describes the effects of prenatal undernutrition in animal production systems. Chapter Four explores the relationships among straw-colored fruit bats, particularly in connection with kin preference. Chapter Five deals with the functions of red blood cells in rainbow trout. Finally, Chapter Six details the history of the discovery of amphibian species in India.
Due to the phylogenetic relationship and close genetic and biological similarities with humans, non-human primates (NHP) are regularly used in biomedical and behavioural research. However, because of their highly developed cognitive abilities and social skills, the use of these animals in biomedical research is debated more and more. Although it is acknowledged that in specific research areas NHP are still essential, it is recognized that the use of these animals can only be done under strict conditions under the most optimal welfare aspects. Welfare aspects include housing conditions, non-invasive methods and application of the 3Rs policy. Although many refinement methods have been described in nationally and internationally accepted guidelines on animal laboratory practice, recognition of the guidelines is unfortunately not universal.

The present book covers a wide range of NHP models in preclinical research and welfare issues. The following chapters will cover: refinement of the use of NHP in biomedical research; NHP ethics and regulations in Europe; biological basis differences in the human and NHP; the major histocompatibility complex (MHC) immunology in NHP; stem cell biology in NHP; neuro and gliogenesis in an NHP ischemia stroke model; NHP models in autoimmune disease, organ transplantation and infectious disease research; viral diseases in NHP; NHP models in Parkinson’s disease, in neurodegenerative disorders research and in cardio-cerebrovascular disease research; islet transplantation; ophthalmic diseases research and neurophysiology in NHP; transgenic engineering in NHP; NHP models of cancers; NHP models in respiratory disease research; and aging research in NHP. This book encapsulates a large volume of knowledge scientists have achieved in the field of nonhuman primate models in preclinical research.

The editors have invited experts from the United States, Canada, and Europe to contribute 23 chapters in their respective fields of their expertise.
consists of a study of Andaman local buffaloes that may serve as the reference values in which alterations due to metabolic, nutrient deficiency, physiological and health status can be compared for diagnostic and therapeutic purposes. Lastly, Chapter Five focuses mainly on the impact of heat stress on buffalo’s behavior, physiology, metabolism, and acclimatization.

**MATHEMATICS AND STATISTICS**

**Applied Mathematics**

**Research in Mathematics at Cameron University**  
Ioannis K. Argyros (Professor, Department of Mathematical Sciences, Cameron University, Lawton, OK, USA), Samundra Regmi (Independent Researcher and Professional Mathematics Tutor, Learning Commons, University of North Texas at Dallas, Dallas, TX, USA), Janak Joshi (Assistant Professor, Department of Mathematical Sciences, Cameron University, Lawton, OK, USA) and Parshuram Budhathoki (Assistant Professor, Math Department, Broward College, Pembroke Pines, FL, USA)

In series: *Mathematics Research Developments*  
Publication Date: 04/08/2021  
421 pp.  
Hardcover: 978-1-53619-417-3. $230.00  
e-book: 978-1-53619-505-7. $230.00

Numerous problems from diverse disciplines can be converted using mathematical modeling to an equation defined on suitable abstract spaces usually involving the n-dimensional Euclidean space or Hilbert space or Banach Space or even more general spaces. The solution of these equations is sought in closed form. But this is possible only in special cases. That is why researchers and practitioners use iterative algorithms, which seem to be the only alternative. Due to the explosion of technology, faster and faster computers become available. This development simply means that new optimized algorithms should be developed to take advantage of these improvements. That is exactly where we come in with our book containing such algorithms with applications in problems from numerical analysis and economics but also from other areas such as biology, chemistry, physics, parallel computing, and engineering. The book is an outgrowth of scientific research conducted over two years. This book can be used by senior undergraduate students, graduate students, researchers, and practitioners in the aforementioned areas in the classroom or as reference material. Readers should know the fundamentals of numerical-functional analysis, economic theory, and Newtonian physics. Some knowledge of computers and contemporary programming shall be very helpful to readers.

**Data Analysis**

**Introduction and Comparison of Data Envelopment Analysis Software Packages**  
Alireza Alinezhad, PhD (Associate Professor, Department of Industrial Engineering, Islamic Azad University, Qazvin Branch, Iran), Seyyed Hamed Mirtaleb (Department of Industrial Engineering, Faculty of Industrial and Mechanical Engineering, Qazvin Branch, Islamic Azad University, Qazvin, Iran) and Javad Khalili (Department of Industrial Engineering, Faculty of Industrial and Mechanical Engineering, Qazvin Branch, Islamic Azad University, Qazvin, Iran)

In series: *Mathematics Research Developments*  
Publication Date: 02/24/2021  
306 pp.  
Hardcover: 978-1-53619-119-6. $230.00  
e-book: 978-1-53619-162-2. $230.00
This book presents and compares 11 software packages of Data Envelopment Analysis (DEA). Performance measurement is done by various methods, one of which is DEA. Because DEA models are able to meet practical requirements, they can be used to conduct extensive research in the fields of mathematics, management, economics, and engineering. Therefore, during recent decades, researchers have increasingly relied on this method. DEA evaluates the performance of Decision Making Units (DMUs) by using linear programming. Since linear programming should be solved for each DMU, performance measurement for a large number of DMUs is difficult and time-consuming. As such, various software packages have been developed to address these problems. Each piece of software is designed for a different purpose and has different features and applications. The main objectives of this book are to introduce each of these software packages and express their advantages and disadvantages.

**General Mathematics**

**An In-Depth Guide to Fixed-Point Theorems**

Rajinder Sharma, PhD (Faculty, University of Technology and Applied Sciences-Sohar (Formerly College of Applied Sciences-Sohar), Wilayat of Shinas in the Governorate of Batinah, Oman) and Vishal Gupta, PhD (Professor, Maharishi Markandeshwar (Deemed to be University), Mullana, India)

In series: Mathematics Research Developments
Publication Date: 07/06/2021
253 pp.
Hardcover: 978-1-53619-565-1. $195.00
e-book: 978-1-53619-730-3. $195.00

This book details fixed point theory, a gripping and wide-ranging field with applications in multifold areas of pure and applied mathematics. The content comprises both theoretical and practical applications. The evolution of the main theorems on the existence and uniqueness of fixed points of maps are presented. Applications covering topological properties, a nonlinear stochastic integral equation of the Hammerstein type, the existence and uniqueness of a common solution of the system of Urysohn integral equations, and the existence of a unique solution for linear equations system are included in this selection.

Since the included chapters range from broad elucidations to functional research papers, the book provides readers with a satisfying analysis of the subject as well as a more comprehensive look at some functional recent advances.

**Arithmetic Functions**

József Sándor (Professor, Department of Mathematics, Babeș-Bolyai University, Cluj, Romania) and Krassimir Todorov Atanassov (Professor, Corresponding Member of the Bulgarian Academy of Sciences, Department of Bioinformatics and Mathematical Modelling, Institute of Biophysics and Biomedical Engineering, Bulgarian Academy of Sciences, Sofia, Bulgaria)

In series: Mathematics Research Developments
Publication Date: 05/14/2021
241 pp.
Hardcover: 978-1-53619-475-3. $195.00
e-book: 978-1-53619-677-1. $195.00

This monograph is devoted to arithmetic functions, an area of number theory. Arithmetic functions are very important in many parts of theoretical and applied sciences, and many mathematicians have devoted great interest in this field. One of the interesting features of this book is the introduction and study of certain new arithmetic functions that have been considered by the authors separately or together, and their importance is shown in many connections with the classical arithmetic functions or in their applications to other problems.
Fixed Point Theory and its Applications to Real World Problems
Anita Tomar (Professor and Head, Government Degree College Thatyur, Tehri Garhwal (Uttarakhand) India) and M. C. Joshi (Professor and Head, Kumaun University Nainital, India)
In series: Mathematics Research Developments
Publication Date: 05/24/2021
412 pp.
Hardcover: 978-1-53619-336-7. $230.00
e-book: 978-1-53619-479-1. $230.00

Fixed-point theory initially emerged in the article demonstrating existence of solutions of differential equations, which appeared in the second quarter of the 18th century (Joseph Liouville, 1837). Later on, this technique was improved as a method of successive approximations (Charles Emile Picard, 1890) which was extracted and abstracted as a fixed-point theorem in the framework of complete normed space (Stefan Banach, 1922). It ensures presence as well as uniqueness of a fixed point, gives an approximate technique to really locate the fixed point and the a priori and a posteriori estimates for the rate of convergence. It is an essential device in the theory of metric spaces. Subsequently, it is stated that fixed-point theory is initiated by Stefan Banach. Fixed-point theorems give adequate conditions under which there exists a fixed point for a given function and enable us to ensure the existence of a solution of the original problem. In an extensive variety of scientific issues, beginning from different branches of mathematics, the existence of a solution is comparable to the existence of a fixed point for a suitable mapping.

The book “Fixed Point Theory & its Applications to Real World Problems” is an endeavour to present results in fixed point theory which are extensions, improvements and generalizations of classical and recent results in this area and touches on distinct research directions within the metric fixed-point theory. It provides new openings for further exploration and makes for an easily accessible source of knowledge. This book is apposite for young researchers who want to pursue their research in fixed-point theory and is the latest in the field, giving new techniques for the existence of a superior fixed point, a fixed point, a near fixed point, a fixed circle, a near fixed interval circle, a fixed disc, a near fixed interval disc, a coincidence point, a common fixed point, a coupled common fixed point, amiable fixed sets, strong coupled fixed points and so on, utilizing minimal conditions. It offers novel applications besides traditional applications which are applicable to real world problems. The book is self-contained and unified which will serve as a reference book to researchers who are in search of novel ideas. It will be a valued addition to the library.

Optimized Iterative Methods with Applications in Diverse Disciplines
Samundra Regmi (Independent Researcher and Professional Mathematics Tutor, Learning Commons, University of North Texas at Dallas, Dallas, TX, USA)
In series: Mathematics Research Developments
Publication Date: 04/21/2021
337 pp.
Hardcover: 978-1-53619-351-0. $230.00
e-book: 978-1-53619-508-8. $230.00

Numerous problems from diverse disciplines can be converted using mathematical modeling to an equation defined on suitable abstract spaces usually involving the n-dimensional Euclidean space, Hilbert space, Banach Space or even more general spaces. The solution of these equations is sought in closed form. But this is possible only in special cases. That is why researchers and practitioners use iterative algorithms, which seem to be the only alternative.

Due to the explosion of technology, faster and faster computers become available. This development simply means that new optimized algorithms should be developed to take advantage of these improvements. That is exactly where we come in with our book containing such algorithms with applications in problems from numerical analysis and economics but also from other areas such as biology, chemistry, physics, parallel computing, and engineering. The book is an outgrowth of scientific research conducted over two years. This book can be used by senior undergraduate students, graduate students, researchers, and practitioners in the aforementioned areas in the classroom or as reference material. Readers should know the fundamentals of numerical-functional analysis, economic theory, and Newtonian physics. Some knowledge of computers and contemporary programming shall be very helpful to readers.
Geometry and Topology

Hilbert Spaces and Its Applications

Michael Argyros (Department of Computing and Technology, Cameron University, Lawton, Oklahoma, USA), Ioannis K. Argyros (Department of Mathematical Sciences, Cameron University, Lawton, Oklahoma, USA) and Samundra Regmi (Department of Mathematical Sciences, Cameron University, Lawton, Oklahoma, USA)

In series: Mathematics Research Developments
Publication Date: 02/05/2021
244 pp.
Hardcover: 978-1-53618-983-4, $195.00
e-book: 978-1-53619-124-0, $195.00

This book contains numerous selected contemporary topics, primarily in Hilbert space, although related extended material in Banach spaces and Riemannian manifolds is also included.

A plethora of concrete problems from diverse disciplines are explored, such as: applied mathematics; mathematical biology; chemistry; economics; physics; scientific computing, and engineering. The solutions of such equations can only be found in closed form in special cases; this forces researchers and practitioners to focus on the development of iterative methods to generate a sequence converging to the solutions, provided that some convergence criteria depending on the initial data are satisfied. Due to the exponential development of technology, new iterative methods should be found to improve existing computers and create faster and more efficient ones.

We have no doubt that this book will contribute significantly to the enrichment of knowledge and problem solving in the field of Hilbert spaces and related topics.

Mathematical Analysis

Decision-Making with Neutrosophic Set: Theory and Applications in Knowledge Management

Dr. Harish Garg (Professor, School of Mathematics, Thapar Institute of Engineering & Technology, Deemed University, Patiala, Punjab, India)

In series: Computational Mathematics and Analysis
Publication Date: 05/05/2021
389 pp.
Hardcover: 978-1-53619-419-7, $230.00
e-book: 978-1-53619-522-4, $230.00

This book introduces readers to the concept of the neutrosophic set which can deal with dynamic and complex decision-making problems. With the complexity of the socio-economic environment, today's decision-making is one of the most notable ventures, whose mission is to decide the best alternative under numerous known or unknown criteria. This book provides a large amount of theoretical and practical information about the latest research in the field, allowing readers to gain an extensive understanding of both the fundamentals and applications of neutrosophic sets to solve different kinds of decision-making problems and mathematical programming such as medical diagnosis, pattern recognition, construction problems, technology selection etc.

Integral and Functional Analysis (Updated Edition)

Dr. Jie Xiao, PhD (University Research Professor, Memorial University, Newfoundland, Canada)

In series: Mathematics Research Developments
Publication Date: 05/05/2021
398 pp.
Hardcover: 978-1-53619-280-3, $230.00
e-book: 978-1-53619-617-7, $230.00

This textbook is based on three closely related courses: 1) Integration and Metric Spaces; 2) Lebesgue Integration; 3) Functional Analysis. Although the contents have been used for joint undergraduate and graduate courses, this textbook is designed primarily for senior undergraduate students. The prerequisites of this textbook are deliberately modest, and it
is assumed that the students have some familiarity with calculus and linear algebra plus the basic (direct, indirect) proof methods.

### Number Theory

**The Riemann Hypothesis and the Distribution of Prime Numbers**

*Naji Arwashan, PhD, PE (Senior Specialist of Computer-Aided Engineering with the Automotive Industry; Former Adjunct Professor with the University of Michigan-Dearborn, Troy, MI, USA)*

In series: *Mathematics Research Developments*

Publication Date: 04/15/2021

219 pp.

Hardcover: 978-1-53619-422-7. $160.00
e-book: 978-1-53619-482-1. $160.00

This book is an introductory and comprehensive presentation of the Riemann Hypothesis, one of the most important open questions in math today. It is introductory because it is written in an accessible and detailed format that makes it easy to read and understand. And it is comprehensive because it explains and proves all the mathematical ideas surrounding and leading to the formulation of the hypothesis.

Chapter 1 begins by defining the zeta function and exploring some of its properties when the argument is a real number. It proceeds to identify the series’ domain of convergence and proves Euler’s product formula. Chapter 2 introduces complex numbers and the complex analytic tools necessary to understand the zeta function in complex plane. Chapter 3 extends the domain of the zeta function for the first time by introducing the eta function. Presenting proofs by Sondow, it is shown that zeta can be defined for any complex number whose real part is positive. Next, the functional equation of the zeta function is derived in Chapter 4. This provides a method to extend the definition of zeta to the entirety of the complex plane. Chapter 5 is where the Riemann Hypothesis is properly introduced for the first time. It relates the zeros of the zeta and eta functions which leads to a simple formulation of the hypothesis. Chapters 6 and 7 connect the topics of zeta’s zeros and the distribution of prime numbers. Chapter 6 introduces Riemann explicit formula and explains the use of Mobius transform to rewrite the prime counting function in terms of the Riemann prime counting one and it provides a detailed numerical example on how to use the Riemann’s formula. Chapter 7 derives the von Mangoldt formula via the residue theorem and elucidates some of its important properties. Certain necessary mathematical tools, such as Fourier analysis and theta and gamma functional equations, are included in the appendices to make the chapters more concise and focused.

### Probability and Mathematical Statistics

**Characterizations of Recently Introduced Continuous Distributions III**

*G.G. Hamedani (Professor and Editor, JSTA, Department of Mathematics, Statistics and Computer Science, Marquette University, Milwaukee, Wisconsin, USA)*

In series: *Mathematics Research Developments*

Publication Date: 05/05/2021

474 pp.

Hardcover: 978-1-53619-297-1. $270.00
e-book: 978-1-53619-472-2. $270.00

This monograph is, as far as the author has gathered, the third one of its kind which presents various characterizations of many important continuous distributions. It consists of two chapters. The first chapter lists cumulative distributions and probability density functions of six hundred and sixty seven newly proposed univariate continuous distributions. Chapter Two consists of four sections. Section 2.1 provides characterizations of the majority of the distributions mentioned in Chapter One, based on the ratio of two truncated moments. Section 2.2 takes up the characterizations of some of these distributions in terms of their hazard functions. Section 2.3 deals with the characterizations some of these distributions based on their reverse hazard functions. Characterizations of some of these distributions based on the conditional expectations of certain functions of the random variable are presented in Section 2.4. As pointed out in our previous Monographs (I & II), a good number of proposed distributions in this volume have already been introduced in the literature.
Probability Theory: A Logic of Science
Valery B. Nevzorov (Professor of Statistics, Department of Mathematics and Mechanics, St. Petersburg State University, St. Petersburg, Russia), Mohammad Ahsanullah (Professor Emeritus, Rider University, Lawrenceville, NJ, USA) and Sergey Annanjevskiy (Associate Professor, Department of Mathematics and Mechanics, St. Petersburg State University, St. Petersburg, Russia)
In series: Applied Statistical Science
Publication Date: 04/21/2021
249 pp.
Hardcover: 978-1-53619-173-8. $195.00
This book is written for people who are interested to know the basics of probability theory. The basic knowledge of high school math will be enough to know the probability theory covered in the book. It covers basic theories of probability, statistical distributions, order statistics and record values. The use of characterization methods are described to identify various probability distributions. The book will be useful for undergraduate, graduate students and applied statisticians.

PHYSICS AND ASTRONOMY

Astronomy and Astrophysics

An Introduction to Molecular Clouds
Sachin Kaothekar (Associate Professor, Department of Engineering Physics, Mahakal Institute of Technology & Management, Ujjain, Madhya Pradesh, India)
In series: Advances in Astronomy and Astrophysics
Publication Date: 03/11/2021
120 pp.
Softcover: 978-1-53619-178-3. $82.00
e-book: 978-1-53619-353-4. $82.00
An Introduction to Molecular Clouds describes the formation of molecular clouds and the innovative features of molecular clouds with different physical parameters. In this book, Jean-gravitational instability is discussed with different physical parameters, which is the major cause of the formation of molecular clouds in the interstellar medium (ISM), and the way molecular clouds are formed in the astrophysical plasma environment is described. The authors aim to determine the basic conditions responsible for the formation of heavenly bodies in the universe. The book deals with radiative instability in a variety of conditions incorporating different physical parameters such as viscosity, rotation, permeability, porosity, thermal conductivity, Hall current, Finite ion Larmor radius corrections, finite electrical resistivity, radiative heat-loss functions and finite electron inertia, both in gaseous plasma and quantum plasma environments.

Atomic and Molecular Physics

A Closer Look at Neutrons in Nuclear and Radiological Engineering
V. P. Singh, PhD (Department of Physics, Karnatak University, Dharwad, India), H.R. Vega-Carrillo, PhD (Electric Engineering Academic Unit, University Autonomous of Zacatecas, Zacatecas, Zac., Mexico; Nuclear Studies Academic Unit, University Autonomous of Zacatecas, Zacatecas, Zac., Mexico) and Kulwinder Singh Mann, PhD (Assistant Professor, Department of Physics, D.A.V. College Bathinda, Punjab, India)
The neutron is an unstable nucleon outside the atomic nucleus; its mass is approximately 0.0014 times higher than the proton's mass and it plays an essential role in the atomic nucleus's stability. The neutron does not have an electric charge and interacts with matter causing numerous reactions. The above properties make the neutron essential in several areas. In nuclear power production, for instance, the neutron combined with the moderator plays a critical role. This book is a collection of works related to the neutron and its applications. Each chapter of this book's content is self-contained and is derived from the experience and research carried out by the authors. The book describes each aspect of neutrons ranging from their essential characteristics to their applications. Chapters of this book concern topics including the description of neutron characteristics, the challenge of neutron dosimetry, the ambient dose equivalent due to cosmic neutrons, the use of neutrons as an analytical tool through neutron activation analysis, the absorbed dose response of natural minerals which also have thermoluminescent features, and the use of neutrons in medicine to treat cancer and rheumatoid arthritis. The book also discusses topics such as neutron attenuation by super-alloys, neutron production in radiotherapy with electrons, the use of neutrons to detect explosives, and cloud computing technology for neutron dosimetry and spectrometry. This book would be handy for scientists, engineers, researchers, students, and practitioners in neutron studies and applications.
Radiation

**Gamma Irradiation: Properties, Effects and Development of New Materials**

*Jaime Brock*

In series: *Nuclear Materials and Disaster Research*

Publication Date: 08/10/2021

150 pp.

Softcover: 978-1-53619-980-2. $95.00
e-book: 978-1-68507-032-8. $95.00

Gamma radiation is a penetrating form of electromagnetic radiation arising from the radioactive decay of atomic nuclei. This type of radiation imparts the highest photon energy, and while it can damage the human body, it also provides several practical applications. Chapter One describes the application of gamma radiation for the sterilization process in medical devices, the food industry, and nuclear power plants, as well as its behavior, properties, and other applications. Chapter Two deals with the effects induced by gamma radiation, new research focused on the changes caused by gamma radiation, and the contributions of dosimetry to the understanding of gamma radiation. Chapter Three describes the use of radiation for inducing mutations in modern plant breeding. Chapter Four analyzes the effects of gamma irradiation on different carbon-based nanomaterials. Lastly, Chapter Five addresses the importance of using polylactic acid and gamma radiation for producing novel polymer composites, which enhance their sustainability and environmental aspects.

Special Topics

**A Comprehensive Guide to Lamb Waves**

*Nitesh Prakash Yelve, Ph.D. (Department of Mechanical Engineering, Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai, Maharashtra State, India)*

In series: *Physics Research and Technology*

Publication Date: 03/26/2021

169 pp.

Softcover: 978-1-53619-418-0. $95.00
e-book: 978-1-53619-477-7. $95.00

This book presents the fundamental concept of Lamb wave propagation and its application for damage detection in metals and composites. The editor has taken utmost care to include a range of applications of Lamb waves, in the linear and nonlinear domains, in this book. Various damage location algorithms making use of linear characteristics of Lamb waves and a few case studies making use of nonlinear characteristics Lamb waves for damage detection are presented in a simple-to-understand way. Readers will find detailed descriptions for experiments, simulation, and signal processing. The last chapter that focuses on the evaluation of fatigue-induced material nonlinearity would help readers to understand the complex applications of Lamb waves. The forthcoming books in this series would include state-of-the-art applications of guided waves for damage detection, material characterization, and estimation of the remnant useful life of engineering structures.

**Cryogenic Receivers**

*Dr. Sergiy Putselyk*

In series: *Physics Research and Technology*

Publication Date: 06/11/2021

190 pp.

Hardcover: 978-1-53619-717-4. $160.00
e-book: 978-1-53619-777-8. $160.00

Radar and communication systems play an important role in civil and military applications. They are always under development and new versions continually come to the market. Though the basic operation principles have stayed nearly the same over the last 100 years, new technology has allowed for advancements in the development of components, and new systems find specific applications. Superconducting materials are widely used, for example in motors, magnets, cavities, and transformers, and are sometimes also used for typical components of radar and communication systems, like antennas, filters, and logical elements. Superconducting components significantly change
the operation of whole systems, and thorough understanding of operational principles is of paramount importance for correct design.

In this book, the recent developments of cryogenic receivers over the last 20 years are outlined. Special attention is given to the very specialized technologies, like Rapid Single Flux Quantum (RSFQ) logics, or electrically small active antennas based on SQUID/bi-SQUID/SQIF operational principles. The classical applications, like superconducting filters or cryogenically cooled Low Noise Amplifiers (LNA), are considered in detail. Though the book is considered as a review on recent developments of cryogenic receivers to facilitate an understanding of operational principles, many examples with estimations are given. The reliability of cryogenic receivers strongly depends on the mechanical and cryogenic designs, and many practical examples and solutions are also presented. Future trends or possible research areas are considered as well. This book will be helpful for graduate students as well as engineers working with cryogenic, radar and communication systems.

Phosphors for Display, Forensic and Biomedical Application

Vikas Dubey (Asst. Dean Research and Development, Department of Physics, Bhilai Institute of Technology Raipur, Kendri, India), Marta Michalska-Domańska (Institute of Optoelectronics, Military University of Technology, Warsaw, Poland), Neha Dubey (Department of Physics, Govt. V.Y.T.P.G. Auto. College Durg, Chhatisgarh, India) and Jagjeet Kaur Saluja (Department of Physics, Govt. V.Y.T. PG. Autonomous College, Durg, India)

In series: Physics Research and Technology
Publication Date: 02/05/2021
327 pp.
Hardcover: 978-1-53618-937-7. $230.00
e-book: 978-1-53619-156-1. $230.00

The demand for phosphors with advanced performance capabilities is increasing due to recent technical developments in the display, lighting, and fluorescence labeling sectors. Rare-earth doped phosphors have been the focus of the research community, owing to their widespread applications in display devices, temperature sensors, solar cells, etc. This book reviews the broad aspects of organic and inorganic materials-based phosphors, and will be beneficial to undergraduate, graduate, and postgraduate students. It provides an up-to-date account of the advancement of various techniques for the synthesis of phosphors and their applications. Experimental and theoretical approaches related to the rare-earth-doped luminescent materials are explored.

Reality and the Paradigm of Relations

Thomas Nordström (Associate Professor, Entrepreneurship and Organizational Innovation Processes, Blekinge Institute of Technology, Sweden; CEO, Research and Development Institutes, Sweden)

In series: Physics Research and Technology
Publication Date: 06/28/2021
373 pp.
Online Book: 978-1-53619-860-7. $0.00

We are familiar with the existing views of the world of today, e.g. the theory of quantum, the theory of relativity, the table of elements, the standard model, different ideologies and religions.

The world is challenged by severe problems within societies as well as within science, e.g. nuclear weapons, population growth, refugee flows, climate change, starvation and diseases within societies; how to unite the theory of relativity and the theory of quantum physics, the too complex standard model, the too static table of elements and the too simplistic theory of evolution within science.

Guided by an alternative definition of the numbers 0 and 1 – differently than those made by Gottlob Frege and Bertrand Russell – the foundation of arithmetic breaks down and collapses. So, the need to create a new logic occurred and it is called the logic of relations. Applying this new logic to phenomena such as gravitation and energy and theories of relativity and quantum new perspectives arise. Even the foundation of chemistry, medicine, biology and politics break down and get new perspectives. Concepts and phenomena such as random, determination, DNA, black holes, ATP synthase, equilibrium and cancer also get new explanations.

It is very dramatic!

Inspired by persons such as Aristotle, Spinoza, Newton, Darwin, Einstein and Wittgenstein, the author has formulated a possible new paradigm and new worldview. Based on one single postulate a principle and a theory have been built understanding reality from a new perspective.

So, what has the author done?
One fundamental postulate - Nothing exists in isolation, i.e., everything exists in relations – guides the expedition in reality together with the formula $X = aRb$.

One derivation is this equation, which unites relativity and quantum:

$$X = a^b (\Psi(x, t) = p_1 - n) b$$

It is a captivating journey.

In this volume new answers to old questions are presented, e.g. how the role of transformers replaces black holes, ATP synthase, the photoelectric effect and one equation that unites relativity and quantum.

At this point in time there is a need to create the next fundamental paradigm for the sciences of logic, physics, chemistry, medicine, biology and politics.

A change in perspective is severe and can lead to confusion, anxiety and existential crises. Trusting Soren Kierkegaard’s view of anxiety might be a clue: “An adventure that every human being has to live through, learning to be anxious so as not to be ruined either by never having been in anxiety or by sinking into it. Whoever has learned to be anxious in the right way has learned the ultimate.”

After dealing with objects and theories for different aspects of reality the author has learned to be anxious in the right way and after a long, tough and painstaking process over many years the author created Reality and the Paradigm of Relations. Whether you’re ready for a new perspective on the world or not, this book will provoke your brain into re-examining everything you think you know about reality.

### The Fundamentals of Polarized Light

**Alan Terry**

In series: *Physics Research and Technology*

Publication Date: 01/27/2021

211 pp.

Hardcover: 978-1-53618-977-3. $160.00
e-book: 978-1-53619-090-8. $160.00

This compilation opens with a discussion of the limitations of the current enamel birefringence interpretation and its potential applications in various fields, such as: caries research, forensic dentistry, anthropology, paleontology, and evolutionary biology.

The authors demonstrate a novel concept for the reproduction of the “movement without frame-by-frame display technique” developed by the Lumiere brothers in 1895 in their cinematograph motion picture system.

The current evidence base surrounding the use of both monochromatic and polychromatic polarized photobiomodulation is reviewed, specifically related to wound healing and musculoskeletal conditions.

Following this, to induce molecular orientations such as the symmetry operation of crystals, the authors study circularly or linearly polarized UV light irradiation in hybrid materials.

New chiral Schiff base metal Ni(II) and Zn(II) complexes containing an azobenzene moiety in ligands are synthesized, in which substituents (H, Cl) at the ortho position of azobenzene are introduced for wavelength-selective molecular orientation by light irradiation.

In closing, the authors design new metal complexes with a rigid Y-shaped structure with a photoisomerization moiety aligned by polarized UV light and expected to cause the Weigert effect.

### The Origin of Gravity From the First Principles

**Dr. Volodymyr Krasnoholovets, PhD** (Department of Theoretical Physics, Institute of Physics, National Academy of Sciences, Kyiv, Ukraine)

In series: *Physics Research and Technology*

Publication Date: 06/25/2021

352 pp.

Hardcover: 978-1-53619-566-8. $230.00
e-book: 978-1-53619-691-7. $230.00

This book presents a collection of chapters in which researchers who have worked in the field of gravity for years reveal their visions of the origin of gravity. Some approaches are based on field equations and ideas of general relativity, but others suggest their own procedures. Among the visions we see the further development of principles of general relativity, which unify gravity with fluctuations of matter or a background of super-strong interacting gravitons, as well as visions that ignore complicated interactions of gravity with other fields altogether. There is also a new approach in which space-particle dualityism is presented. In addition, there is the approach that suggests starting directly with the smallest granularity of space, defined by the Planck scale. These lines of study involve constructions and methods emerging from quantum mechanical formalism and even suggestions for new courses of action, such as subquantum kinetics and submicroscopic mechanics. These approaches all try to explain the concepts of particle, mass, and their interactions. These are new trends both in the theory of gravitation and in the theory of elementary particles, and hence fundamental physics in general.
Understanding Quarks

Benjamin Houde

In series: Physics Research and Technology
Publication Date: 06/28/2021
152 pp.
Softcover: 978-1-53619-528-6. $82.00
e-book: 978-1-53619-676-4. $82.00

This book includes four chapters about quarks, which are a type of elementary particle and a fundamental constituent of matter. Chapter One is devoted to spectroscopy study of long-range quark-lepton strong interaction in solids as well as the origin of the mass of elementary particles. Chapter Two studies the production of top-quark pairs with a Higgs boson. Chapter Three begins with a brief historical outline of the development of the events that led to our understanding of quarks and analyzes the three families of quarks. Chapter Four discusses strange quark matter and strange quark stars as candidates for dark matter based on the Bodmer-Terazawa-Witten hypothesis.

Thermal Physics and Statistical Mechanics

A Closer Look at Convective Heat Transfer

Liang-Bi Wang (Professor, Director of Key Laboratory of Ministry of Education of China for Railway Vehicle Thermal Engineering, Lanzhou Jiaotong University, China)

In series: Physics Research and Technology
Publication Date: 03/04/2021
353 pp.
Hardcover: 978-1-53619-041-0. $230.00
e-book: 978-1-53619-244-5. $230.00

Convective heat transfer plays a role in many branches of science and engineering, as well as in aspects of daily life. Due to its importance, it deserves to be given a closer look. This book shows some real complexities of convective heat transfer in more rigorous ways, with most aspects described by partial differential equations. Defined by Fourier’s law, heat flux is transported by convection. Thus, the transport of heat flux can be described using the convective transport equation of the heat flux, which may provide more information. The significance of this description is that the velocity gradient’s contribution to the transport of heat flux is stated implicitly and may be connected to the mechanical dissipation. A description of the transport of the momentum flux is provided in this book, focusing on both the mechanical energy prepared by production from the main flow and the mechanical energy dissipated by vorticity. Based on the convective transport equations of heat flux and momentum flux, a correlation between the contribution to the transport of heat flux and mechanical energy production and dissipation is established. Additional topics discussed herein include the transport characteristics of heat flux, the impact of velocity and its gradients on the transport of heat flux in a channel flow, a tube flow, a channel flow with vortex generators and a twisted elliptical tube flow. As secondary flow and vorticity are commonly used for the enhancement of convective heat transfer, the roles of secondary flow and vorticity in the convective transport of heat flux are discussed.

The intensity of convective heat transfer is only defined by the surface which heat is transferred through; it is not defined in the fluid region. Combustion science, oceanography, meteorology, and geoscience pay much attention to local convective heat transfer intensity. This book verifies the rationality of local convective heat transfer intensity.

Advances in Thermodynamics Research

Joseph A. Cobb

In series: Physics Research and Technology
Publication Date: 07/27/2021
163 pp.
Softcover: 978-1-53619-856-0. $95.00
e-book: 978-1-53619-875-1. $95.00

This book consists of three chapters that each describe recent advancements in the field of thermodynamics, which is a branch of physics that deals with heat, work, and temperature. Chapter One provides a calculated confirmation of the theoretical positions of the concept
of non-equilibrium and its mathematical apparatus using examples of determining the loss of non-equilibrium of adiabatic and isolated systems. Chapter Two focuses on the thermodynamic behavior of hydrophobic non-electrolyte tetramethylurea (TMU) and well-established hydrophilic non-electrolyte urea (U) in three solvents forming a three-dimensional H-bond network on a supramolecular level viz. water, ethylene glycol (EG) and formamide (FA). Chapter Three introduces the concept of generalized entropy and discusses some of its properties.

**Understanding Heat Conduction**

*William Kelley*

In series: *Physics Research and Technology*

Publication Date: 01/29/2021

180 pp.

Softcover: 978-1-53619-182-0. $95.00

e-book: 978-1-53619-202-5. $95.00

The first chapter of this book proposes an analytical Fourier series solution to the equation for heat transfer by conduction in a spherical shell with an internal stone consisting of insulating material as a model for the kinetic of temperature in stone fruits both as a general solution and a mass average value. The chapter also considers an internal heat source linearly reliant on temperature. The second chapter focuses on the sensitivity of the numerical modeling technique for conjugate heat transfer involving high speed compressible flow over a cylinder. The last chapter presents an overview of the fundamental solution (FS) based finite element method (FEM) and its application in heat conduction problems. First, basic formulations of FS-FEM are presented, such as the nonconforming intra-element field, auxiliary conforming frame field, modified variational principle, and stiffness equation. Then, the FS-FE formulation for heat conduction problems in cellular solids with circular holes, functionally graded materials, and natural-hemp-fiber-filled cement composites are described.

**Civil Engineering**

*Advanced Techniques for the Design of Zero Energy Buildings*

*Sassan Mohasseb (CEO of Snteam GmbH, Meilen, Zurich, Switzerland; Emeritus Professor, Engineer Stanford, USA) and Niloufar Ghazanfari (Head of Energy Department, Snteam GmbH, Meilen, Zurich, Switzerland)*

In series: *Civil Engineering and Architecture*

Publication Date: 07/22/2021

192 pp.

Hardcover: 978-1-53619-629-0. $160.00

e-book: 978-1-53619-822-5. $160.00

The overall aim of the first chapter is to improve the knowledge about the simulation of thermal indoor climate for buildings in different climate conditions and its application for computer-based simulations. The work is done in order to simplify the use of CFD as a powerful tool in order to model the temperature distribution within the building envelope in two real cases in Switzerland, and promote a comfortable indoor environment with a maximum reduction of energy consumption.

High energy materials like cement, glass, brick and steel are typically used in building construction. However, it is possible to reduce the environmental impact of any structure through the use of alternative, low-energy materials such as Silica aerogels (aerogel-based plasters), Expanded Polystyrene (EPS), Polyurethane foams (PU), and Mineral wool (Stone or Glass). Increased interest has focused on the development of advanced sustainable construction materials (Nano thermal insulation materials, aerogels, etc.) with adequate mechanical properties and durability performance. The most convenient way to get the most out of their investment in a building is to use energy modeling software. The second chapter will be primarily concerned with the choice of materials, then the suitability of insulation exterior facades.

Geothermal is the most energy efficient and environmentally friendly method of heating and cooling buildings. The design of borehole thermal energy, as a common type of geothermal energy, is presented in Chapter Three. The calculation is based on heat transfer principles, including a case study of a BHE for a one-story house with all the properties related to analyze the BHE, e.g., to calculate the changes in the temperature of the circulating fluid. Economic analysis of implementing renewable energy technologies in buildings is especially important for a transition away from the greenhouse emitting energies since a great majority of the current capital stock and infrastructure of today's
Economic systems are adjusted based on fossil-fuel energies. Chapter Four presents a diverse collection of examples with economic analysis of costs and paybacks covering warm vs cold, social complexes vs private houses, and new vs historical buildings. Solar energy has various uses besides more energy production and it can be incorporated in applications with cooling, heating and desalination processes. The main objectives of Chapter Five are to assess the degree of energy reduction using solar energy in buildings and to establish the requirements for energy-efficient design of buildings in cold/hot regions. Payback period analysis that evaluates the cost savings resulting from energy efficiency improvements is also addressed.

**Electrical Engineering**

**Philosophy of Power System Protection and Security Computer Aided Design and Analysis**

_Samir Ibrahim Abood (Department of Electrical and Computer Engineering, Prairie View A&M University, Houston, Texas, USA) and Muna Hamid Fayyadh (American InterContinental University-Houston, Texas, USA)_

In series: *Electrical Engineering Developments*
Publication Date: 03/24/2021
437 pp.
Hardcover: 978-1-53619-099-1, $270.00
e-book: 978-1-53619-253-7, $270.00

Philosophy of power system Protection and Security, Computer-Aided design and analysis:
is a textbook that provides an excellent focus on the advanced topics of power system protection and gives exciting analysis methods and covers the important applications in the power systems relaying. Each chapter opens with a historical profile or career talk, followed by an introduction that states the chapter objectives, links the chapter to the previous ones, and then introduces each chapter. All principles are presented in a lucid, logical, step-by-step approach. The authors avoid wordiness and detail overload that could hide concepts and impede understanding as much as possible. In each chapter, the authors present some of the solved examples and applications using a computer program.

Toward the end of each chapter, the authors discuss some application aspects of the chapter's concepts using a computer program.

In recognition of requirements by the Accreditation Board for Engineering and Technology (ABET) on integrating computer tools, the use of MATLAB® is encouraged in a student-friendly manner. MATLAB® is introduced and applied gradually throughout the book.

Practice problems immediately follow each illustrative example. Students can follow the example step by step to solve the practice problems without flipping pages or looking at the book's answers. These practice problems test students' comprehension and reinforce key concepts before moving on to the next section.

The book is intended as a textbook for a senior-level undergraduate student in electrical and computer engineering departments and appropriate for Graduate Students, Industry Professionals, Researchers, and Academics.

The book has more than ten categories and millions of power readers. It can use in more than 400 electrical engineering departments at the top of universities worldwide.

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- Electronics engineers.
- Technical power system engineers
- Protection engineers
- Design engineers.
- Distribution engineers.

The book gives rich information for the industrial engineer and electric control engineer because it contains more details about power network protection and security.

The reader will able to modeling, designing, and implement different parts of the power system relaying after he/she finishes reading this book.

The book's strengths

- The book using for various academic and industrial levels.
The book is giving rich and essential information about power systems and provide the fundamental study for the next book (power system protection and control).

- The book including a lot of solved examples and problems in each chapter.
- The results were obtained from the MATLAB program for different topics.
- Power system protection and control will include in the next part of the book.

After finish reading the book, the reader will be able to manage and control the power system parameters, and it will help him in power station work and control centers.

The book will assist the researchers in their field of power system track.

The student will improve coordination between power demand and generation and use of modern information technology and program.

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**Energy**

**A Strategic Evaluation of Energy Security in the Eastern Mediterranean**

Michail Chalaris, MA, PhD (Department of Chemistry, International Hellenic University, and Hellenic Fire Academy, and School of Fire Officers, and Military Nursing Academy (SAN), Kavala, Greece)

In series: Energy Policies, Politics and Prices

Publication Date: 03/04/2021

149 pp.

Softcover: 978-1-53619-273-5. $95.00
e-book: 978-1-53619-346-6. $95.00

This book is an approach, in the wider theoretical considerations on scientific research and study, of issues relating to energy resources and energy security and, at the same time, it is a case study on Eastern Mediterranean energy security. The Mediterranean has been known since ancient times as a large semi-enclosed sea, surrounded by more than two states as it lies between three continents: Europe, Asia and Africa. However, developments in the 21st century have necessitated viewing it conceptually as a distinct “new” region with specific characteristics. Comprised by Cyprus, Egypt, Greece, Israel, Lebanon, Libya, Syria, Turkey, Italy the region is assuming increased significance in world affairs. More specifically, the region of the Eastern Mediterranean is currently of vital importance for the EU, due to several prospects and challenges, such as migration flows, energy, security and sustainability of the region. The individual objectives are the recognition of energy actions and resources, forms of energy, energy security and in general, all actions at the energy level mentioned in the specific area. Research this study will focus on the qualitative method to the subject.

The structure of the present study was developed as follows: The Preface provides a general presentation of the topic. The first chapter presents an overview of eastern Mediterranean and energy issues. The second chapter reports on energy resources and it focuses on energy security and its basic principles. The third chapter is about energy and security. The fourth Chapter offers discussion on European Union’s energy policy development and on the EU interests, strategy and policy regarding the Eastern Mediterranean region. The fifth chapter presents the changes in the East Mediterranean energy map and data on geopolitical chessboard. The last chapter presents the conclusions. A useful tool in completing this study was the understanding of the delicate ethnocultural and religious synthesis of the region, the current challenges and underlying controversies, considering the interlinked nature of interests and the importance of cross-border affiliations. All the findings of the study demonstrate certain dimensions of a reality, which are expected to be dynamic, creating risk but also future opportunities. The main finding of the study points out not only the strong correlation between energy, power, economics and politics but also the increased dependence of the latter two on the former, thus creating a hotbed of tensions, rivalries, and conflicts every time the existing relationship between economy and energy are destabilized. The shifting to energy sources, which are safe and eco-friendly, is a one-way process, the only means of survival and safe development for humanity.

Generating energy based on economic, safe, cost-efficient and renewable criteria is the current ecological and technological challenge if, firstly, the vast interests in the energy sector are dealt with successfully.

Finally, this book will be of key interest to scholars and students, for researchers in the fields of Energy Economics, Policy, and Security, Energy Law, Business, Regulation and Policy, Geopolitics, who aim to have a better understanding of the current trends or research in the relevant fields, for professionals in EU politics and foreign policy, energy policy and security, and more broadly to security studies, European politics and international relations and newcomers in the profession of energy security, and for policymakers who intend to apply the collective knowledge included into this volume into policy and decision-making.
Energy Conversion Systems: An Overview
Saurabh Mani Tripathi, PhD (Department of Electrical Engineering, Kamla Nehru Institute of Technology, Sultanpur, India) and Sanjeevikumar Padmanaban, PhD (Department of Energy Technology, Aalborg University, Esbjerg, Denmark)
In series: Energy Science, Engineering and Technology
Publication Date: 02/10/2021
372 pp.
Hardcover: 978-1-53619-131-8. $230.00
e-book: 978-1-53619-200-1. $230.00
This edited book is intended to serve as a resource for engineers, scientists and specialists engaged in becoming familiarized with green energy conversion for a clean atmosphere with an adaption of ‘more-renewable’ for power generation. The book is comprised of nine original chapters dealing with state-of-the-design exercises on power conversion/storage technologies. It highlights the critical features of energy technology for green engineering for the future. This edited volume is an extensive collection of state-of-the-art studies on the subject.

Environmental Engineering

Solar Water Heating: Fundamentals and Applications
Professor Khalil Kassmi (Mohamed First University, Faculty of Science, Department of Physics, Oujda, Morocco)
In series: Water Resource Planning, Development and Management
Publication Date: 03/17/2021
323 pp.
Hardcover: 978-1-53619-320-6. $230.00
e-book: 978-1-53619-356-5. $230.00
This book proposes the development of solar water heating applications. The theme is topical since it is linked not only to its economic advantages, but above all to considerations relating to environmental protection. Indeed, the operation of water heating systems, industrial or domestic, by this solar energy, is characterized by the absence of polluting discharges (fumes containing CO2 and Nox), radioactive dangers and bulky waste (nuclear center). Overall, this book deals with the description of solar energy sources (thermal and photovoltaic), the structures of innovative water heating systems by these energy sources, the thermal and electrical modeling of water heating and the estimation of the yields of the different proposed systems. The proposed knowledge makes it possible to discover the field of renewable energy and to have knowledge of the applications of innovative solar heating systems currently marketed or under development in research laboratories. Also, it allows young researchers, doctoral students, academics and engineers to innovate in the field of solar energy and to develop efficient and hybrid solar water heating systems (thermal and photovoltaic energies). The experimental results, numerical simulations and economic studies proposed will be used by design offices to size and propose the appropriate installations for industrial and domestic applications.

Industrial Technology

Service Robots: Advances in Research and Applications
Dr. Isak Karabegović (Full Professor, Department of Robotics, University of Bihać, Bihać, Bosnia and Herzegovina; Academy of Sciences and Arts of Bosnia and Herzegovina, Sarajevo, Bosnia and Herzegovina) and Dr. Lejla Banjanović-Mehmedović (Associate Professor, Department of Control Systems, Automation and Robotics, Faculty of Electrical Engineering, University of Tuzla, Tuzla, Bosnia and Herzegovina)
In series: Robotics Research and Technology
Publication Date: 06/02/2021
377 pp.
Hardcover: 978-1-53619-573-6. $230.00
e-book: 978-1-53619-643-6. $230.00
This book covers many issues of the design and applications of service robots from classification to new areas like collaborative service robots and advances in artificial intelligence. The presentations and given examples of the service robots application in public relations and education, medical, agriculture, logistics, inspection and maintenance, production processes as well as in other branches of industry and human environment offers enjoyable reading for the novice as well as the advanced reader interested in service robotics.

**Materials Science**

**Advances in Materials Science Research. Volume 44**  
*Maryann C. Wythers*  
In series: *Advances in Materials Science Research*  
Publication Date: 01/13/2021  
221 pp.  
Hardcover: 978-1-53619-028-1. $250.00  
e-book: 978-1-53619-092-2. $250.00  

Advances in Materials Science Research. Volume 44 provides an overview of the emerging field of phosphorescent nanomaterials, including synthesis protocols and characterization issues. The authors discuss the synthesis methods and characterization of synthesized compounds by X-ray powder diffraction analysis, Fourier-transform infrared spectroscopy and scanning electron microscopy. The carefully designed techniques for engineering process-induced strain to enhance carrier mobility or transform the band-gap from indirect to direct nano-devices are described.

A compilation of investigations related to the formation of cerium coatings on an AZ91D Mg alloy are examined in an effort to improve its corrosion resistance in simulated body fluid. Following this, an article reports on an insightful portable microfluidic experimental setup for the fast and ultraselective detection of Hg2+ ions in a picomolar range using a cantilever-based piezoresistive sensor. The concluding study explores the behavior of the order parameter and the magnetization of antiferromagnetic solids subjected to mutually parallel staggered and magnetic fields.

**Scheelite and Zircon: Brightness, Colour and NIR Reflectance in Ceramics**  
*Guillermo Monrós (Professor, University Jaume I of Castelló, Spain)*  
In series: *Materials Science and Technologies*  
Publication Date: 05/05/2021  
325 pp.  
Hardcover: 978-1-53619-332-9. $230.00  
e-book: 978-1-53619-502-6. $230.00  

The subject of this book is the analysis of the performance in ceramics of scheelite (CaWO4) and zircon (ZrSiO4). The aesthetics of glazed ceramics and paints depends to a large extent on the so-called opacifiers that give them brightness and pigments that give them color. At present, zircon ZrSiO4 is the main opacifier of industrial ceramic glazes and the base of a widely-used pigment palette (cyan of vanadium in zircon, magenta of hematite in zircon and yellow of praseodymium in zircon). Likewise, scheelite CaWO4 can be used as a good opacifier by addition to glazes and is the basis of another family of inorganic pigments. These pigments are analyzed from the perspective of their cooling capacity of buildings and urban environments, associated with their high reflectance of solar NIR radiation (700-2500 nm), as well as a certain photocatalytic capacity over organic substrates and NOx; therefore, surfaces with these pigments show a certain air purification capacity producing cleaner and cooler environments, allowing a saving in the use of air conditioning and a moderation of the so-called urban heat island effect. In short, the brightness, color and NIR reflectance for cool surfaces in paints and ceramics using scheelite and zircon chemistry are discussed.
Versatile Solicitations of Materials Science in Diverse Science Fields

Mridula Tripathi, PhD (Associate Professor, Department of Chemistry, CMP Degree College, Prayagraj, India), Arti Srivastava, PhD (Assistant Professor, Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur, India) and Kalpana Awasthi, PhD (Assistant Professor, Department of Physics, K.N. Govt. P.G. College, Gyanpur, Bhadohi, India)

In series: Materials Science and Technologies
Publication Date: 07/22/2021
328 pp.
Hardcover: 978-1-53619-763-1. $230.00
e-book: 978-1-53619-798-3. $230.00

Materials science influences all aspects of society, including the current challenges of environmental issues and of sustainable energy. It also impacts our daily life, because it studies common materials like nanomaterials, composites, hybrid materials, glass, and plastic. Materials science tries to improve these materials in ways such as adding scratch resistance to glass. This science also commonly studies composite materials.

This book was motivated by the desire to broaden knowledge and use this knowledge to develop new materials for the utility of mankind. There are innumerable tools currently available that focus on specific knowledge that can largely serve the scientific community. However, this book also explores social issues and outlines applications of different materials. Additionally, this book presents research-based practices related to the usage of advanced materials and covers the application of nanomaterials in solar energy and medicine.

The didactic approach of this book is perfectly suited to science and engineering students, as well as to biologists, physicists, or chemists who are not specialized in materials but who, nevertheless, wish to learn about this discipline. This work will also be appreciated by specialists in a particular aspect of materials science wishing to have a global view on the subject and to position their activity in a wider context.

Nanotechnology

Microbial Synthesis of Nanomaterials

Sudhir S. Shende, PhD (Nanobiotechnology Laboratory, Department of Biotechnology, Sant Gadge Baba Amravati University, Maharashtra, India; Academy of Biology and Biotechnology behalf D.I. Ivanovskyi, Southern Federal University, Rostov-on-Don, Russia), Vishnu D. Rajput, PhD (Academy of Biology and Biotechnology behalf D.I. Ivanovskyi, Southern Federal University, Rostov-on-Don, Russia), Andrey V. Gorovtsov, PhD (Department of Microbiology, Academy of Biology and Biotechnology behalf D.I. Ivanovskyi, Southern Federal University, Rostov-on-Don, Russia), Tatiana M. Minkina, PhD (Head, Department of Soil Science and Land Resources Estimation, Academy of Biology and Biotechnology behalf D.I. Ivanovskyi, Southern Federal University, Russia) and Svetlana N. Sushkova, PhD (Head of Research Laboratory “Ecological Soil Monitoring”, Vice-Director of Academy of Biology and Biotechnology, Southern Federal University, Rostov-on-Don)

In series: Nanotechnology Science and Technology
Publication Date: 07/30/2021
373 pp.
Hardcover: 978-1-53619-896-6. $230.00
e-book: 978-1-53619-926-0. $230.00

The present book Microbial Synthesis of Nanomaterials is written mainly for the public's acquaintance with the synthesis and characterisation of different types of nanomaterials (NMs) and their sustainable applications in various fields. The nano-era began the late 1990s, after which the production of NMs increased rapidly and is expected to reach 1.663 million tons by the end of 2021. Recent findings have shown that NMs play a vital role in various fields like agriculture, food industries, environment, medicine and pharmaceutical, electronics, and so on.
Microorganisms play a key role in the formation and transformation of nanoscale minerals in the environment. These natural processes can be harnessed for the green synthesis of nanomaterials for a diverse array of commercial, industrial and environmental applications, presenting a sustainable alternative to more traditional physiochemical synthesis routes. This new book consists of 15 chapters which provide comprehensive knowledge about the synthesis of NMs and offer a critical overview of the current understanding of nanoparticle synthesis using microbes, covering NMs’ synthesis, characterisation and applications, and providing discussion on future prospects.

The editors believe that this book will be helpful to researchers, the scientific community, academicians, business farmers and policy makers. The editors thankfully acknowledge the financial support of the Russian Foundation for Basic Research, project no. 19-05-50097 and of the Ministry of Science and Higher Education of the Russian Federation within the framework of the state task in the field of scientific activity (no. 0852-2020-0029).

Polymers

Fiber-Reinforced Polymer: Processes and Applications
Catalin Iulian Pruncu (Research Fellow, University of Strathclyde and Imperial College London, UK), Selim Gürgen, PhD (Associate Professor, Head of Mechatronics Program, Eskişehir Osmangazi University, Eskişehir, Turkey) and Md Enamul Hoque (Department of Biomedical Engineering, Military Institute of Science and Technology (MIST), Mirpur Cantonment, Dhaka, Bangladesh)

In series: Polymer Science and Technology
Publication Date: 02/10/2021
454 pp.
Hardcover: 978-1-53619-049-6. $270.00
e-book: 978-1-53619-121-9. $270.00

Fiber-reinforced polymers play an important role in the progress of materials science. Fiber-Reinforced Polymer: Processes and Applications presents the science of fiber-reinforced polymer composites from the manufacturing stage to its applications. Apart from the fabrication of the composites, its machinability properties are also discussed. This book considers both natural and synthetic fibers in polymer composites, as well as their utility for different sectors such as automotive, aviation and biomedical engineering. In addition to the overview of fiber-reinforced polymers, engineering properties of these materials are discussed. The book also discusses the impact of environmental aspects such as moisture uptake on the properties of fiber-reinforced polymer composites. Since nano-engineering is a hot topic in the field of composites, the benefits of nano-fibers are discussed, as well as their fabrication methods, properties and applications. Moreover, fiber selections in polymer matrices are discussed by considering the interactions between fibers and matrices, as well as taking their applications into account.

Mechanical Engineering

Computational Fluid Dynamics: Advances in Research and Applications
James S. Hutchinson

In series: Mechanical Engineering Theory and Applications
Publication Date: 06/21/2021
174 pp.
Softcover: 978-1-53619-756-3. $95.00
e-book: 978-1-53619-800-3. $95.00

This monograph consists of four chapters, each of which present new research in the field of computational fluid dynamics (CFD). Chapter One describes volume of fluid and moving mesh approaches to modeling phase change in a system with particles or droplets in a CFD environment. Chapter Two describes a novel CFD-based design of potential industrial reactors for flash ironmaking. Chapter Three presents a study wherein CFD was used to simulate a hollow fiber membrane contactor for the absorption of carbon dioxide from the air by mono-ethanol amine. Chapter Four describes the use of graphical processor units (GPUs) for the simulation of high-speed and high-temperature flows in CFD.
Handbook of Welding: Processes, Control and Simulation
António Manuel de Bastos Pereira, PhD (Associate Professor, TEMA—Centre for Mechanical Technology and Automation, Department of Mechanical Engineering, University of Aveiro, Campo Universitário de Santiago, Aveiro, Portugal) and Francisco José Gomes da Silva, PhD (Associate Professor, ISEP – School of Engineering, Polytechnic of Porto, Department of Mechanical Engineering, Porto, Portugal)

In series: Mechanical Engineering Theory and Applications
Publication Date: 06/25/2021
568 pp.
Hardcover: 978-1-53619-685-6. $310.00
e-book: 978-1-53619-792-1. $310.00

From conventional welding techniques to electron or laser beam, this book provides a comprehensive overview about processes, metallurgy, quality assessment, testing, and numerical simulation in welded structures.

Special Topics

Advances in Engineering Research. Volume 42
Victoria M. Petrova

In series: Advances in Engineering Research
Publication Date: 03/17/2021
236 pp.
Hardcover: 978-1-53619-385-5. $250.00
e-book: 978-1-53619-400-5. $250.00

This compilation comprises eight chapters that each present a particular advancement in engineering research. Chapter One describes four theories of heat transfer analysis and optimization and analyzes the positive and negative aspects of each theory. Chapter Two presents some of the main maximum power point tracking (MPPT) algorithms and evaluates some of them through a MatLab/Simulink® platform. Chapter Three discusses eye tracking technology, one of the most direct and continuous measures of attention, and its potential applications in manufacturing environments. Chapter Four focuses on the fundamentals of model predictive control and its application to multiphase electric drives for use in electric vehicles. Chapter Five presents a systematic design of a fully differential Gain-Boosted telescopic amplifier. Chapter Six deals with a method for evaluating the fine motor skills and hand-eye coordination of assembly line workers using eye-tracking technology. Similarly, the seventh chapter proposes a method of using eye-tracking technology to help understand the underlying cognitive processes of participants tasked with answering computer science questions. Finally, the eighth chapter addresses two popular problems in mechanical engineering from an inverse problem perspective.

Advances in Engineering Research. Volume 43
Victoria M. Petrova

In series: Advances in Engineering Research
Publication Date: 06/11/2021
221 pp.
Hardcover: 978-1-53619-753-2. $250.00
e-book: 978-1-53619-778-5. $250.00

This monograph consists of six chapters, each detailing a recent advancement in the field of engineering research. Chapter One proposes a new approach to the statistically proper analysis of the complex of the important mechanical properties such as tensile strength (σ), strain at break (ε), and Young’s modulus (E) of high-strength high-modulus oriented polymeric materials. Chapter Two proposes an approach to solving inverse problems of economic analysis using weighting factors based on the representation of the problem as an optimization one. Chapter Three explains the introduction of new OS kernel internals for new metrics for the Distributed Computing Environment (DCE) and cloud performance prediction. Chapter Four presents an overview of the theory of transcranial magnetic stimulation (TMS) that includes the operation principle, the mathematical model for the effect of electromagnetic induction on neuronal cable, and developing an optimized design for the TMS system. Chapter Five analyzes the implementation of two N3 compute-intensive embarrassingly parallel algorithms on multicore
architectures using OpenMP and manycore architectures using OpenCL and CUDA to solve a problem of materials science, i.e. the frequency of shears in the plastic deformation of metals. Lastly, Chapter Six deals with the main aspects of a multidisciplinary design optimization synthesis carried out for a novel spacecraft configuration able to perform a return mission from low Earth orbit, ending with a conventional landing on a horizontal runway.

**Advances in Engineering Research. Volume 44**
*Victoria M. Petrova*

In series: *Advances in Engineering Research*
Publication Date: 08/03/2021
251 pp.
Hardcover: 978-1-53619-950-5. $250.00
e-book: 978-1-53619-992-5. $250.00

This book compiles various recent advancements in engineering research. Chapter One deals with the important research problem of electric current processing and treatment of melts for increasing quality indicators of the produced castings. Chapter Two describes the use of computational fluid dynamics techniques to assess and design intensified distillation systems. Chapter Three examines machine learning opportunities for emerging memory and computing devices discovery. Lastly, Chapter Four details a case study in which an application of different approaches to missing data for short-term electric load forecasting by using an advanced gene expression programming algorithm is comprehensively introduced.

**Functional Properties of Shape Memory Materials and their Applications**
*Hisaaki Tobushi (Professor Emeritus, Department of Mechanical Engineering, Faculty of Engineering, Aichi Institute of Technology, Yakusa-cho, Japan), Ryosuke Matsui (Associate Professor, Aichi Institute of Technology, Toyota, Japan), Kohei Takeda (Assistant Professor, Aichi Institute of Technology, Toyota, Japan), Tadashige Ikeda (Professor, Chubu University, Kasugai, Japan) and Kazuhiro Kitamura (Professor, Aichi Institute of Technology, Kariya, Japan)*

In series: *Mechanical Engineering Theory and Applications*
Publication Date: 03/17/2021
395 pp.
Hardcover: 978-1-53619-183-7. $230.00
e-book: 978-1-53619-302-2. $230.00

This book is compiled into three parts. Part 1 describes the functional properties of shape memory alloy, such as, the shape memory effect and superelasticity, the constitutive equation for thermomechanical properties, the bi-axial tensile-torsional behavior, influence of strain rate on deformation behavior, cyclic deformation properties, micromechanical model of polycrystalline SMAs, application of thermomechanical model to tension-compression behavior, the transformation-induced creep and stress relaxation, and the torsional deformation of thin tape. Part 2 contains the advanced functions of shape-memory alloy and polymer such as the shape-retaining control using SMA system, the micromechanical model of shape memory polymer, performance of shape memory polymer composite, enhancement of fatigue life of SMA by ultrasonic shot peening and nitrogen ion implantation, enhancement of corrosion fatigue life of SMA, development of functionally-graded shape-memory alloy and polymer, development of shape memory composites and development of 3D-printing of shape memory polymer. Part 3 deals with the applications of shape-memory alloy and polymer such as the development of application model in engineering filed, the smart vortex generator for aircraft, the smart morphing flap driven by SMA wires and the development of application models of SMA brain spatula in medical engineering filed, the working support device in nursing care field and the energy conversion teaching material in education.

This book will be interested to graduate students, engineers, materials scientists and designers who are working in the field of mechanical and electric engineering, medical engineering, nursing care technology, aerospace engineering, robots, automatic machines, clothes and recycling for research, design, manufacturing and fabrication.
Multidisciplinary Science and Advanced Technologies
Dr. Kaushik Pal (Federal University of Rio de Janeiro, Cidade Universitária, Rio de Janeiro, Brazil), Dr. Fernando Gomes (Laboratório de Biopolímeros e Sensores/LaBioS Centro de Tecnologia– Cidade Universitária, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil) and Dr. Thinakaran Narayanan (Higher National Youth Skill Institute (IKTBN) Sepang, Bandar Baru Salak Tinggi, Selangor, Malaysia)
In series: Technology in a Globalizing World
Publication Date: 02/10/2021
257 pp.
Hardcover: 978-1-53618-959-9. $195.00
e-book: 978-1-53619-198-1. $195.00
Multidisciplinary Science and Advanced Technologies form a vast and diverse class of the engineering science and research divisions. This book discusses novel design techniques and smart mechanisms, as well as innovations that might be utilized in the future. Scientific modification can control industrial-scale assembly, a process that ultimately provides specific material function, depending on electronic development for advancements. Furthermore, the combination of supramolecular multidisciplinary technologies allows for the exploration of application-based materials. Smart materials are vital for the in-depth analysis of various morphologies. This book is an international forum for comprehensive soft-condensed matter physics, nanoscience principles, nanotechnology tools, and nanotechnology applications in the environmental, energy, and electronics sector, including a discussion of ethical issues in these fields. This book reviews the applications and market potential of a variety of media, including mirror, glazing, and display products, such as low-information content displays for banners and labels. The physicist, chemical engineer, materials scientist, nanotechnologist, and biologist at all levels, as well as academicians for unique device-based applications in various fields, will benefit from this book. Readers will gain an understanding of the practical and highly sensitive business fields for specific disciplinarians. The goal is to provide readers a broad review from a materials perspective, so that teachers can provide a comprehensive review of this technology to students. This book also highlights the entire gamut of smart engineering technologies and the materials design process of fabrications from past to present and future perspectives. The syllabi of various technical universities and research institutes are examined, explaining the basic perceptions of this emerging field.
In science today, the major focus of research and development in synthetic materials and spectroscopic analysis broadly deals with materials on the atomic and molecular scales. The vision for the future is to move beyond these already existing applications and explore new realms of electronic applications.

Systems Engineering
Networked Control Systems: Theory, Applications and Analysis
Shiwen Tong, PhD (Professor, College of Robotics, Beijing Union University, Beijing China) and Dianwei Qian, PhD (Associate Professor, School of Control and Computer Engineering, North China Electric Power University, Beijing, China)
In series: Systems Engineering Methods, Developments and Technology
Publication Date: 07/27/2021
159 pp.
Softcover: 978-1-53619-892-8. $95.00
e-book: 978-1-53619-906-2. $95.00
Networked Control System (NCS) can be regarded as a special type of control system in which sensors, controllers and actuators are connected to a closed loop. Media-sharing characteristics, time-delay, data packet dropout and data displacement are inevitable phenomena in such a control system, which can greatly degrade the control performance, and even make the control system unstable. Alleviating these effects has become one of the most attractive research hotspots in the last two decades. All the above three problems can be summarized as the time-delay issue. There are two kinds of time-delay compensation strategies: one is active compensation, and the other is passive compensation. For the former, prediction is the core idea. Selecting the appropriate candidate predicted control action according to the time delay information is a feasible solution. For the latter, making the system insensitive to delay is a good choice. This book covers the design, modeling, control, simulation and application of the networked control system. This book addresses some original contributions reporting the latest advances in networked control. It aims to gather the latest research on state-of-the-art methods, simulations and applications of networked control techniques. The editor hopes it can reveal some tendencies in this research field and benefit readers including professional researchers and students. This
is an interesting collection of networked control techniques, such as date-based control, tracking control, event-triggered control, formation control, etc.

UPCOMING PUBLICATIONS

Agriculture

Glyphosate: Agricultural Uses, Ecological Impacts and Potential Carcinogenic Effects
Kassio Ferreira Mendes
In series: Agriculture Issues and Policies
Expected Publication Date: 09/30/2021
Hardcover: 978-1-68507-076-2. $230.00
e-book: 978-1-68507-110-3. $230.00
Glyphosate is the most widely used herbicide in the world for post-emergence weed control. Given the wide spectrum of control and agronomic efficacy of this herbicide associated with the increase in the cultivation of genetically modified crops resistant to glyphosate, it is very important to understand the behavior and fate of this chemical product in the environment. Glyphosate should be used sustainably to reduce environmental impact, and this subject is covered in this book.

Horticulture

Vitis Products: Composition, Health Benefits and Economic Valorization
Renato Vasconcelos Botelho, PhD (Professor of Fruit Crops and Viticulture, State University of Mid-Western of Paraná, Department of Agronomy -Research Group in Fruit Crops and Post-Harvest, Brazil) and António Manuel Jordão, MSc, PhD (Professor of Oenology, Polytechnic Institute of Viseu, School of Agriculture, Portugal; Researcher of Chemistry Research Centre of Vila Real, Portugal)
In series: Plant Science Research and Practices
Expected Publication Date: 10/15/2021
436 pp.
Hardcover: 978-1-53619-982-6. $230.00
e-book: 978-1-68507-041-0. $230.00
Grapevines and their clusters are very rich in components with different and interesting healthy effects, which also extend to grape derivatives such as must, wines and all other products (extracts, flour, leaves, seeds, pomace, etc.). Bioactive constituents present in grapes and vines, mainly polyphenols, are attracting increasing interest from consumers demanding polyphenol-rich foods as a result of epidemiological evidence suggesting the protective potential of polyphenols against chronic diseases directly associated with oxidative damage, such as Alzheimer’s, cancers, diabetes, and hypertension, amongst others. In this regard, besides the traditional products from grapes, such as wine and juice, grape Vitis by-products are increasingly being re-utilized and transformed into high-value products for the food, cosmetics, and pharmaceutical industries. In this context, the book Vitis Products: Composition, Health Benefits and Economic Valorization intends to deeply discuss many aspects of the products derived from grapevines, including the diversity and potential of a wide range of economical possibilities, factors involved in their composition, varietal differences, and industrial process, showing a wide range of possibilities.

Special Topics

Agricultural Research Updates. Volume 37
Prathamesh Gorawala and Srushti Mandhatri
In series: Agricultural Research Updates
Expected Publication Date: 09/30/2021
243 pp.
Hardcover: 978-1-68507-073-1. $250.00
e-book: 978-1-68507-086-1. $250.00
This monograph consists of seven chapters that provide unique perspectives concerning issues related to agricultural research. Chapter One reviews techniques for the conversion of liquid digestate into solid products through pelletization, granulation, and other emerging technologies. Chapter Two compiles information on the benefits and potential risks of livestock waste treatment by composting and anaerobic digestion and discusses the effects of livestock compost and digested slurry on yield and quality of fresh-market tomatoes and rice grown in northern Japan. Chapter Three focuses on different systems of cyanobacteria that aid in sustainable agricultural practices. Chapter Four assesses the peer-reviewed literature concerning the effects of agricultural intensification on the conservation status of reptiles in Mediterranean woody crops. Chapter Five describes the preparation and mode of action of edible vaccines, as well as their application in areas such as cancer therapy, birth control, inhibiting autoimmune diseases, recombinant drug therapy, and more. Chapter Six reviews the value of essential oils as natural antimicrobial agents for increasing the shelf life and safety of minimally processed food. Finally, Chapter Seven discusses the methods and scope of plant genetic engineering as well as the applications, advantages and effects of genetically engineered plants on human health and the environment.

Chemistry

Biochemistry

Glycome: The Hidden Code in Biology
Dipak K. Banerjee, Ph.D.
In series: Biochemistry Research Trends
Expected Publication Date: 09/05/2021
434 pp.
Hardcover: 978-1-53619-377-0. $230.00
e-book: 978-1-53619-437-1. $230.00

“Glycome: The Hidden Code in Biology” addresses one of the most fundamental questions in biology today. The book targets readers with little expertise as well as the experts in Glycoscience. Sugars are electroneutral. However, linking sugars to sugars, or attaching sugars to proteins or lipids changes the structural and functional identities of the glycoconjugate, and enables to form cellular networks of 4Gs [i.e., glycoproteins (N-linked or O-linked), glycosphingolipids, proteoglycans and glycosaminoglycans (GAGs)]. These glycans (i) support growth, proliferation and differentiation of cells and tissues; (ii) protect cells from foreign invasions including bacteria, viruses, parasites as well as from changes in the extracellular environment; (iii) act as biomarkers and participate in transmembrane signaling. The glycans are not ubiquitous but they are tissue/species specific. Structurally, the glycans are diverse, and form linear to highly branched structures. This diversity is present not only across the species but also within cells of the same species, i.e., the glycoforms. Nuclear magnetic resonance (NMR) and mass spectrometric (MS) studies (i.e., Glycomics) have evaluated and contributed significantly in delineating the structural diversity of glycans. Glycomics, in fact, has helped in overcoming many earlier technological barriers which were otherwise very laborious and time consuming. Plant lectins being carbohydrate binding proteins with a high degree of sugar specificity have been useful tools to characterize the carbohydrate structures they recognize. The glycan structures complement their biosynthetic processes. Because of the highly compartmentalized nature of the process, the glycans move between compartments during their assembly. This is believed to be mediated by vesicular structures but the participation of exosomes cannot be ruled out. A large number of genetic disorders [gangliosidosis, mucopolysaccharidoses, congenital disorders of glycosylation (CDG)] are due to abnormal glycan synthesis or degradation. Disproportionate expression of glycans is also found in diseases like cancer, neurological disorders, diabetes, metabolic syndromes, and infection. This raises questions about the regulatory principle(s) in glycan biosynthesis. There is no template for glycan chain synthesis, elongation, processing or termination. The cells/tissues follow a highly conserved mechanism. The assumption is glycosylation uses donor and acceptor interactions as the driving force. Increased or decreased synthesis of glycans in response to the environmental change influence cell function, i.e., growth, survival or death favor of a “push-pull” hypothesis. In the absence of a genetic code for sugars, the assembly as well as the processing of glycan chains are controlled by the Glycome. Unlike the genome, the Glycome is hidden for the normal eye but its communication skills with the cellular microenvironment and genome for glycan synthesis and degradation are enormous. Seventeen chapters in the book are dedicated to walk the readers through the diversities of the Glycome. The authors have used mammalian, microbial and plant systems to achieve the desired goal.

Chemical and Environmental Health and Safety

Nano-Biotechnological Advancements in Environmental Issues: Applications and Challenges
Reetika Singh, PhD (National-Post Doctoral Fellow, Department of Biochemistry, University of Allahabad, Uttar Pradesh, India) and Ram Naresh Bharagava, PhD (Assistant Professor, Laboratory of Bioremediation and Metagenomics Research (LBMR), Department of
Environmental Microbiology (DEM), Babasaheb Bhimrao Ambedkar University (A Central University, Uttar Pradesh, India)
In series: Environmental Science, Engineering and Technology
Expected Publication Date: 09/30/2021
281 pp.
Hardcover: 978-1-53619-975-8. $195.00
e-book: 978-1-53619-984-0. $195.00
This book provides detailed knowledge on different types of pollutants and their hazardous effects on the environment, humans, animals, and plants. It also describes various modern nano-remediation approaches utilizing different nanomaterials for treatment/management of different wastes, such as nanomaterial-mediated degradation of pharmaceutical and personal care products, nanomaterial-mediated wastewater treatment, nano-biotechnology in solid waste management, nanotechnology in biophotolysis and biodiesel production, and nano-biotechnology in e-waste management. This is an urgent matter for the safety of the environment and for human and animal health.

General Chemistry

Advances in Chemistry Research. Volume 69
James C. Taylor
In series: Advances in Chemistry Research
Expected Publication Date: 08/20/2021
242 pp.
Hardcover: 978-1-68507-014-4. $250.00
e-book: 978-1-68507-052-6. $250.00
This monograph includes five chapters that detail recent advancements in chemistry research. Chapter One describes the presence of micropollutants that disrupt the endocrine system in drinking water and discusses challenges and strategies of removing these pollutants. Chapter Two covers bioactive and volatile compounds in mango and their effects on health. Chapter Three discusses the development of thymidine derivatives for treatment of COVID-19. Chapter Four focuses on the use of gold-phosphine complexes as catalysts for various C-C and C-heteroatom bond formation reactions. Chapter Five discusses the water chemistry control process in nuclear power plants.

General Chemistry

Chemical Vapor Deposition (CVD): Methods and Technologies
Levi Karlsson
In series: Chemical Engineering Methods and Technology
Expected Publication Date: 09/15/2021
218 pp.
Hardcover: 978-1-53619-949-9. $160.00
e-book: 978-1-53619-990-1. $160.00
Chemical vapor deposition (CVD) refers to a vacuum deposition method used to produce high quality, high-performance, solid materials in a variety of manufacturing industries. Chapter One provides a critical review of published experimental data for thin films of silicon nitride deposited by thermal and plasma CVD, plasma CVD, high density plasma CVD, atomic layer-by-layer deposition, and hot-wire CVD. Chapter Two describes several aspects of the use of CVD for single-crystal diamond synthesis for electronics. Chapter Three describes the properties of graphene and its preparation by a number of methods with a focus on the classical CVD method on copper foil together with graphene transfer onto a dielectric substrate.

Environmental Sciences

Ecology

The Influence of Ecosystem Services Towards Human Wellbeing
Hasmah Abdullah, PhD (Associate Professor, University Lecturer, School of Health Sciences, Health Campus, Universiti Sains, Kubang Kerian, Malaysia) and Rapeah Suppian, PhD (Associate Professor, University Lecturer, School of Health Sciences, Health Campus, Universiti Sains, Kubang Kerian, Malaysia)
In series: Environmental Science, Engineering and Technology
Expected Publication Date: 09/15/2021
Ecosystem services provide benefits to humans, including provisioning services (food, water, timber, fibre and genetic resources), regulating services (regulation of climate, floods, diseases and water quality), cultural services (recreational, aesthetic and spiritual), and support services (soil formation, pollination and nutrient cycling). Promoting the concept of ecosystem services reveals the potential of its contribution to environmental wellbeing for conservation and sustainability. Humans, as users of the provided services, benefit from ecosystem services, fostering dependency on nature. The use of ecosystem services may lead to unintended environmental consequences throughout the supply chain. Hence, this book will focus on the services provided for human wellbeing and a multilayer association with human problems worldwide when supply chains are disturbed.

Carbon emissions from city areas are responsible for 75% of world carbon dioxide emissions, making them a significant contributor to climate change. Urban populations are early responders to the impacts of climate change. In addition, ecosystem services are influenced by human activities. Domestic and industrial water pollution has led to the contamination of drinking water in many parts of the world. Waste management, such as solid waste management and biomedical waste management, is considered crucial for balancing ecosystem services as a consequence of human activities. In addition, air pollution has become part of ecosystem service disturbance, as it has become a worldwide problem and a major threat to the surrounding environment and human health. The major sources of air pollutants are mobile sources and stationary and transboundary emissions. Human activities, such as mining and exploration, have brought naturally occurring radioactive elements, such as gamma rays, which are present at relatively low concentrations in many geologic formations and earth materials, to the surface and have become a threat to human health. Among others, loud noise exposure in occupational settings has been found to be hazardous to hearing organs.

Environmental stressors that lead to ecosystem changes have been shown to trigger noncommunicable diseases, such as cardiovascular disease and cancer. The emergence and re-emergence of vector-borne diseases, such as Zika, Dengue and Malaria, are rapidly influenced by changes in ecosystem services. Many studies have been conducted to develop effective vaccines to combat such diseases. New drugs have been developed from natural resources with the aim of combating drug resistance, enhancing efficacy and reducing toxicity. In addition, a health education programme (HEP) is also being developed to improve the quality of life of patients. A broad spectrum of research is reported in this book covering environmental monitoring, modelling, molecular research, natural product discovery and health education programmes, showing the importance of support from ecosystem services that must be preserved for future wellbeing.

Environmental Conservation

Ecological Reciprocity: A Treatise on Kindness
Michael Charles Tobias, PhD and Jane Gray Morrison (Ecologist, Filmmaker)
In series: Conservation Biology and Biodiversity
Expected Publication Date: 09/15/2021
406 pp.
Hardcover: 978-1-53619-957-4. $110.00
e-book: 978-1-68507-064-9. $110.00
This elegant treatise examines the nature of kindness through the fascinating lenses and contexts of ancient, medieval and contemporary philosophy, natural history, theories of mind, of natural selection, eco-psychology and sociobiology. It challenges the reader to consider the myriad potential consequences of human behavior, examining various iconographic moments from the history of art and science as a precursor to the concept and vital potentials for ecological conversion. Focusing on the fundamental mechanisms of reciprocity among humans, other species, communities and nations, Tobias and Morrison lead readers on a remarkable journey whose itinerary, and the provocative questions explored, seek to affirm a pattern in evolution and in human thought that is emphatically oriented towards benevolence, not tyranny. Prosociality in all species – making others happy, kind gestures at any and every juncture of life – has, as a discipline of enquiry, enjoyed a social scientific renaissance during the last decade. Can natural selection move rapidly enough to meet that ultimate challenge? Can our species re-evolve in real time, moving from the ideas, to the ideals, to their applied engineering in a real world that is ecologically hemorrhaging? Which all the critical moral and cognitive changes in social communion such new human nature, as the Authors suggest, clearly requires?
This groundbreaking work of ecological philosophy, with its roots in ancient Greek thought, represents a radical break with nearly every traditional scientific paradigm, in exploring the intuitive geography and dramatic questions of ourselves – each and every one of us – that will prove crucial to the survival of our species, and all those we co-habit this miraculous planet with.

Special Topics

Advances in Environmental Research. Volume 83
Justin A. Daniels
In series: Advances in Environmental Research
Expected Publication Date: 09/30/2021
Hardcover: 978-1-68507-078-6. $250.00
e-book: 978-1-68507-112-7. $250.00
This edited volume consists of seven chapters, each describing a recent advancement in the field of environmental research. Chapter One reviews the ecologically beneficial, alternative technique of phycoremediation that involves the use of algal species for remediating the inorganic and organic effluents produced and released from shrimp aquaculture ponds. Chapter Two reviews the role of liquid chromatography techniques in the analysis of fullerenes and analyzes the occurrence of this family of compounds in the environment. Chapter Three argues that medical consequences of low-dose exposure to ionizing radiation are overestimated, which contributes to the under-utilization of nuclear power. Chapter Four deals with the current research activities related to different synthetic methods of g-C3N4 based nanocomposite materials and their application as an effective photocatalyst towards removing toxic organic pollutants such as dyes and phenols. Chapter Five presents a carbon sequestration design model system that can monitor, calculate and predict how much carbon can be absorbed by proposed plant species at a certain period. Chapter Six uses computational fluid dynamics to present recommendations for the most effective plantation strategies for urban vegetation to reduce pollution. Finally, Chapter Seven applies an importance-performance analysis to evaluate the condition of urban parks in Hong Kong.

Environmental Management: Ecosystems, Competitiveness and Waste Management
Miguel Fischer
In series: Environmental Science, Engineering and Technology
Expected Publication Date: 09/30/2021
198 pp.
Softcover: 978-1-68507-019-9. $95.00
e-book: 978-1-68507-059-5. $95.00
As defined by the EPA, an environmental management system refers to a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency. Accordingly, this book presents five chapters that introduce unique perspectives relating to the concept of environmental management. Chapter One describes the results of a large-scale study on the structure and governance of diverse ecosystem services of Bulgarian farms. Similarly, Chapter Two applies a holistic approach in the assessment of the competitiveness of agricultural holdings in Bulgaria as a whole, as well as in terms of their different specialization. Chapter Three includes information that enables the adequate identification of mine waste deposits, in order to evaluate the impact on human and ecological health, and to implement suitable alternatives for their environmental management. Chapter Four reviews the biomonitoring strategies employed to evaluate the negative environmental impact of mining waste, the remediation alternatives for mining-polluted sites, and environmental management approaches. Lastly, Chapter Five presents suggestions of actions for public managers and entrepreneurs of the solid waste sector with the perspective of process automation, waste destination, sustainability of the planet, and the reduction of waste production.

Life Sciences
Biology / Bacteriology

Bacteriology: Structure, Reproduction, Plant Diseases and Management
Dr. P.C. Trivedi and Dr. Tripti Agarwal
In series: Bacteriology Research Developments
Expected Publication Date: 09/20/2021
505 pp.
Hardcover: 978-1-53619-613-9. $310.00
e-book: 978-1-53619-678-8. $310.00
Plant diseases are a threat to agriculture and food production on a global scale. Significant yield losses have been recorded due to plant pathogens in most agriculture and horticulture crops. The effective management of these diseases is very difficult. As such, it is important to understand fundamental concepts of the management of plant diseases caused by bacteria. Bacteriology is a subdivision of microbiology and involves the documentation, description, and identification of bacteria. This book covers recent updates on the morphology, classification, genetics, ecology, and biochemistry of bacteria as well as the basic molecular concepts of bacteriology. This book has a futuristic approach and will help scholars understand the symptoms, mechanisms, and effective management of diseases caused by bacterial pathogens. This book is useful for students and researchers of plant sciences, botany, microbiology, pathology, agriculture science, veterinary science, medical science, and other allied areas.

Biofilms: Advances in Research and Applications
Shane Rowland
Biofilms are naturally occurring clusters of microorganisms that stick to non-biological surfaces, like rocks in a stream. This book contains eight chapters that examine biofilms from a variety of perspectives, including the latest research in this field. Chapter One comprehensively studies the role of endophytic microbes as a potential and alternative source of antimicrobial and antibiofilm bioactive components. Chapter Two discusses how to manage oral microbial biofilm using chemical and herbal medicine. Chapter Three highlights the importance of marine biofouling and the role of coccolid cyanobacteria in this process. Chapter Four focuses on biofilm development, its impact on human health and the problems that are associated with biofilm control. Chapter Five examines microbial biofilms and their role in the environment including agriculture and bioremediation. Chapter Six reviews natural terpenoids and provides descriptions of their structural origin, biological roles and multifunctional properties, such as promoting activity on health-beneficial bacteria. Chapter Seven explains the concepts of biofilm development and the importance of honey and its implications in human health and disease control. Chapter Eight thoroughly studies the potential of honey as antibiofilm, anti-quorum sensing and dispersal agent.

**Biology / Marine Biology**

*Advances in Marine Biology, Volume 5*
*Adam Kovács and Patrik Nagy*

This monograph includes seven chapters, each presenting recent advancements in the field of marine biology. Chapter One describes how the biodiversity of the Mediterranean marine environment has changed due to climate change and species invasions and proposes policy suggestions. Chapter Two discusses an integrated ecotoxicological view on elasmobranch conservation regarding chemical contamination alongside potential ecological outcomes for this group and human impacts derived from elasmobranch consumption. Chapter Three congregates information about the morphological traits of crabs to lay a foundation for a better understanding of taxonomic and phylogenetic studies, ecological studies, and the stock assessment and management of commercially important species. Chapter Four shows how foraminiferal associations are influenced by nutrients and abiotic factors that control the carbonate production in the modern outer shelf of Rio Grande do Norte, in the region of Açuí Reefs. Chapter Five describes the first satellite tagging research project in the southern Gulf of Mexico for bottlenose dolphins. Chapter Six investigates the threat posed by cutaneous fibropapillomatosis, a tumor that arises on the skin or internal organs of sea turtles and affects up to 97% of this population. Finally, Chapter Seven discusses the eco-biology, exploitation and social aspects related to the common octopus along the Kerkennah Island in the South Center of the Mediterranean Sea.

**Biology / Microbiology**

*ABCs of Microbiology*
*Anjana K. Vala (Department of Life Sciences, Maharaja Krishnakumarsinji Bhavnagar University, Bhavnagar, India)*

This book contains over 1200 multiple choice questions based on biochemistry, environmental microbiology, microbial genetics, general microbiology, cell biology, industrial microbiology, immunology and mycology. As most modern evaluations in science are based on multiple choice questions, this book provides a valuable resource for those studying microbiology and related fields.

*Biopharmacological Activities of Medicinal Plants and Bioactive Compounds*
*Ajeet Singh, PhD (Research Fellow, Indian Institute of Wheat and Barley Research, Karnal, Haryana, India) and Navneet Bithel, PhD (Department of Botany and Microbiology, Gurukula Kangri University, Haridwar, Uttarakhand, India)*
Biopharmacological Uses of Medicinal Plants and Bioactive Compounds presents comprehensive coverage and recent advances surrounding phytopharmaceuticals, traditional and alternative systems of medicines and uses of nanotechnology in biopharmaceutical products. Sections cover the role of medicinal plants, bioactive and biophytopharmaceuticals in the management of cancer, hepatitis, HIV, analgesics, inflammation, antibacterial, viral infections, fungal infections, neurological disorders, diabetes, ENT infections, dental decay, cardiovascular disorders, skin diseases, antiproliferative etc. This volume also includes biogenic synthesis of various type of nanoparticles using medical plant extracts, seaweeds, algae, and fungi for the new drug discovery.

This volume sheds new light on the immense potential of medicinal plants for human health from different technological aspects. It presents new research on bioactive compounds in medicinal plants that provide health benefits, including those that have proven especially effective in treating and managing diabetes mellitus and hypertension. It looks at the medicinal properties, antioxidant capacity, and antimicrobial activity of plants and provides scientific evidence on the use of medicinal plants in the treatment of certain diseases. Many of the plants described in the chapters are easily accessible and are believed to be effective with fewer side effects in comparison to modern drugs in the treatment of different diseases. The body of the book comprises thought-provoking and diverse chapters on the potential for utilization of plants in treating diseases of the skin and use of traditional medicine as anticancer, anti-HIV, and antibacterial agents. Each topic is introduced by providing a background on the disease, which contains updated statistics on the prevalence thereof, followed by the associated pathology, pharmacologically approved drugs currently on the market used for treatment of the disease, an array of medicinal plants used for treatment accompanied with a list of their active phytoconstituents and chemical structures thereof, as well as scientific evidence for use.

This book provides key information for everyone interested in drug discovery, including medicinal chemists, nutritionists, microbiologists, biochemists, toxicologists, drug developers and health care professionals. Students, professors and researchers working in the area of pharmaceutical sciences, botany, pharmaceutical microbiology, medical microbiology and beyond will also find the book useful.

Nonhuman Primate Models in Preclinical Research. Volume 2: Disease Models

Huifang Chen, M.D., Ph.D. (Professor of Surgery Department of Surgery, University of Montreal, Montreal, Quebec, Canada) and Jan Langermans, PhD (Professor, Animal Science Department, Biomedical Primate Research Centre, Rijswijk, the Netherlands; Department Population Health Sciences, Division Animals in Science and Society, Faculty of Veterinary Medicine, Utrecht University, Utrecht, the Netherlands)

In series: Animal Science, Issues and Research

Expected Publication Date: 08/20/2021

392 pp.

Hardcover: 978-1-53619-914-7. $230.00

e-book: 978-1-53619-931-4. $230.00

Despite many encouraging developments in the field of animal-free technologies, well-defined animal models are still needed to study fundamental properties of human diseases and to develop new prophylactic and therapeutic treatments against human diseases. Non-human primates (NHP) make up only a small, but important, part of the total number of animals used in biomedical and preclinical research. Due to their close phylogenetic relationship and the shared susceptibility to many human diseases, NHP can provide important research models to study these diseases and, as such, play a critical role in the advancement of various areas in the medical field. Studies in NHP have contributed to our understanding of various diseases and fundamental biological phenomena and they continue to be important in the development of new therapies, treatments, drugs and vaccines. Moreover, NHP models also contribute to our general knowledge of the processes that underlie non-disease and disease conditions. Important areas where NHP can provide important information include (emerging) infectious diseases, organ transplantation, neurological and aging-related disorders. Although not covered in this book due to time constraints, the need for, and benefits of, NHP models has been demonstrated most recently in the SARS-CoV-2 pandemic.

The present book is the second of two volumes and covers important disease areas where NHP are used as model species. This volume includes different chapters on NHP models in infectious diseases, aging, neurodegenerative disorders, organ transplantation and cancer.
Mathematics and Statistics

Special Topics

Advances in Mathematics Research. Volume 29
Albert R. Baswell

In series: Advances in Mathematics Research
Expected Publication Date: 09/15/2021
282 pp.
Hardcover: 978-1-53619-759-4. $250.00
e-book: 978-1-68507-035-9. $250.00

This compilation contains seven chapters, each detailing a particular advancement in mathematics research. Chapter One presents labeled paths as methods for encryption and decryption. Chapter Two presents the possibilities of risk assessment and management assistance built around Bayesian tools. Chapter Three analyzes in detail the Lie point symmetries of the second-order scalar ordinary differential equations appearing in the Painlevé–Gambier classification. Chapter Four focuses on the application of Adomian decomposition method (ADM) for solving singular and non-singular ordinary and partial differential equations with initial and boundary conditions. Chapter Five describes the structure of compact global attractor (Levinson center) for monotone Bohr-Levitan almost periodic dynamical systems. Chapter Six presents the mathematical modeling from the PI model of three real segments derived from the electric power network of two concessionaires located in the city of Ijuí, Brazil. Finally, Chapter Seven presents a study of the mathematical aspects of the theory of error-detecting/correcting codes based on coding theory.

Applications of Lévy Processes
Oleg Kudryavtsev (Head of Department of Informatics and Information Customs Technologies, Russian Customs Academy, Rostov-on-Don, Russia; Southern Federal University, Rostov-on-Don, Russia) and Antonino Zanette (Dipartimento di Scienze Economiche e Statistiche Università di Udine, Italy)

In series: Mathematics Research Developments
Expected Publication Date: 09/15/2021
269 pp.
Hardcover: 978-1-53619-525-5. $195.00
e-book: 978-1-53619-849-2. $195.00

Lévy processes have found applications in various fields, including physics, chemistry, long-term climate change, telephone communication, and finance. The most famous Lévy process in finance is the Black–Scholes model. This book presents important financial applications of Lévy processes. The Editors consider jump-diffusion and pure non-Gaussian Lévy processes, the multi-dimensional Black–Scholes model, and regime-switching Lévy models. This book is comprised of seven chapters that focus on different approaches to solving applied problems under Lévy processes: Monte Carlo simulations, machine learning, the frame projection method, dynamic programming, the Fourier cosine series expansion, finite difference schemes, and the Wiener–Hopf factorization. Various numerical examples are carefully presented in tables and figures to illustrate the methods designed in the book.

Physics and Astronomy

Astronomy and Astrophysics

Advances in Dark Matter Research
George M. Drake

In series: Advances in Astronomy and Astrophysics
Expected Publication Date: 09/30/2021
Softcover: 978-1-53619-897-3. $82.00
e-book: 978-1-68507-058-8. $82.00

This monograph includes four chapters that present recent scientific advancements in dark matter research. Chapter One argues that hydrogen atoms provide the most natural explanation of dark matter. Chapter Two presents possible candidates for dark matter in the context of string theory. Chapter Three proposes simple solutions to the problems of dark energy and dark matter using the theory of general inconstancy and the Bodmer-Terazawa-Witten hypothesis. Chapter Four reviews dark matter as sterile neutrinos and fermions, dark photons, and dark energy, as well as the measurement of the fraction of dark energy density in the universe.
**Special Topics**

**Horizons in World Physics. Volume 305**

*Albert Reimer*

In series: *Horizons in World Physics*

Expected Publication Date: 09/30/2021

282 pp.

Hardcover: 978-1-53619-951-2. $250.00

e-book: 978-1-68507-057-1. $250.00

This edited volume includes seven chapters describing recent advancements in physics research from scientists around the world. Chapter One provides an insight into amino acid molecule fragmentation under low- and high-energy electron impact. Chapter Two introduces a new method for passive analysis of the molecular structure of the biomatrix of fungi in vivo. Chapter Three analyzes how width of measuring range affects accuracy of estimated values of thermoelastic and geometrical properties of semiconductors. Chapter Four summarizes modern developments in cosmology in connection with gamma ray bursts. Chapter Five gives a survey of the development of methods for the calculation of current density and eddy currents in a group of long solid parallel conductors. Chapter Six attempts to reconcile quantum field theory predictions with cosmological observations using unified dark energy models. Finally, Chapter Seven reviews alternative proposals to the ΛCDM model of the universe.

**Horizons in World Physics. Volume 306**

*Albert Reimer*

In series: *Horizons in World Physics*

Expected Publication Date: 09/30/2021

282 pp.

Hardcover: 978-1-68507-077-9. $250.00

e-book: 978-1-68507-088-5. $250.00

This monograph includes five chapters that present recent advancements in physics from authors around the world. Chapter One explores how theories of physics have influenced the international relations discipline and considers what international relations theorists can learn from physics in the future. Chapter Two presents various approaches for determining the electromagnetic field in fixed and steadily rotating charged bodies in the form of a cylinder and a sphere. Chapter Three deals with the synthesis and emission properties of multiple rare earth doped white light-emitting single-phase perovskites. Chapter Four discusses two theoretical methods used to explore the kinetic behavior of the multi-step process of batch protein crystallization. Finally, Chapter Five proposes a modified version of the dual copy idea, which states that the two theories of perturbative gluon-gluon and graviton-graviton scattering amplitudes are dual descriptions of the same physics, in which an exact relation between classical, spherically symmetric metrics and gauge field static potentials is established.

**Technology and Engineering**

**Electrical Engineering**

**Planar Antenna: Design, Fabrication, Testing, and Application**

*Praveen Kumar Malik, PhD (Professor, School of Electronics and Electrical Engineering, Lovely Professional University, Phagwara, Punjab, India)*

In series: *Electrical Engineering Developments*

Expected Publication Date: 10/15/2021

406 pp.

Hardcover: 978-1-53619-898-0. $230.00

e-book: 978-1-68507-042-7. $230.00

This book focuses on recent advances in the field of planar antenna design and their applications in various fields of research including space communication, mobile communication, wireless communication, and wearable applications. Planar antennas are also used in medical applications including microwave imaging, medical implants, hyperthermia treatments, and wireless wellness monitoring. However, most of these applications still use bulky antenna systems which hamper their efficiency and applicability despite high application potential. The primary objective of recent antenna research is the reduction in size and complexity. Students, scholars and researchers are used to doing mathematical modelling and pattern measurements in simulated environments only. Our aim is to show academic and industry researchers as well as advanced students and lecturers in electronics, electrical and instrumentation engineering how to do measurements in real-world environments. This book will present planar antenna design concepts, methods, and techniques to enhance performance parameters, as well as applications for IoTs and device-to-device communication. We will provide the latest techniques used for the design of antennas in terms of their structures, defected ground, MIMO, and fractal design. This book will also address the specific steps to resolve issues in designing antennas and how to design conformal and miniaturized antenna structures for various applications.
Materials Science

Advances in Materials Science Research. Volume 45
Maryann C. Wythers
In series: Advances in Materials Science Research
Expected Publication Date: 09/30/2021
224 pp.
Hardcover: 978-1-68507-098-4. $250.00
e-book: 978-1-68507-126-4. $250.00
This edited monograph presents five chapters, each detailing a recent advancement in materials science research. Chapter One focuses on several topics in the field of spintronics, including giant magnetoresistance observed in spin valves using various iron oxides and their interesting magnetization reversals by interlayer exchange coupling and spin-polarized tunneling in magnetic tunnel junctions using electrodes of half-metallic magnetite. Chapter Two describes the synthesis of eight coordination polymers by vial reaction method. Chapter Three introduces physical, thermal and electrochemical properties of ionic liquid-based polymer electrolytes and their applications in rechargeable lithium batteries. Chapter Four explores the aspects of opening of bandgap in graphene. Chapter Five describes the use of aluminum alloys, which are lightweight and high-strength materials, in the construction of the hull of a ship.

Advances in Materials Science Research. Volume 46
Maryann C. Wythers
In series: Advances in Materials Science Research
Expected Publication Date: 09/30/2021
294 pp.
Hardcover: 978-1-68507-074-8. $250.00
e-book: 978-1-68507-087-8. $250.00
This edited monograph includes five chapters, each detailing recent advancements in materials science research. Chapter One discusses various processes to manufacture lithium alloys and salts as well as fabricated pebbles of lithium-based ceramics with desired properties for their use as tritium breeder materials. Chapter Two examines how the mechanical performance of glass fiber reinforced hybrid composites changes according to glass fiber type, glass fiber end form, other reinforcing non-fibrous or fiber-based materials and composite manufacturing method. Chapter Three describes studies concerning the properties of synthesized organometallics. Chapter Four investigates the correlation between the surface chemistry and the corrosion resistance of silanized samples of AZ91D magnesium alloy. Lastly, Chapter Five describes the control methods of brittle intermetallic compounds in the welding process of titanium and other alloys.

Mechanical Engineering

Technical Notes on Next Generation Aero Combustor Design-Development and Related Combustion Research
Jushan Chin (Senior Combustor Engineer Rolls-Royce (Retired); Previously Visiting Professor, Mechanical Engineering, Purdue University, AIAA Associate Fellow) and Jin Dang (Mechanical Engineer, Fossil Energy Research Corp)
In series: Mechanical Engineering Theory and Applications
Expected Publication Date: 08/31/2021
165 pp.
Softcover: 978-1-53619-724-2. $95.00
e-book: 978-1-68507-109-7. $95.00
The aim of this book is to identify that extra high-pressure ratio (such as about 70) civil aero engine low emissions combustors and extra high fuel air ratio (FAR) (such as FAR>0.051) military aero engine combustors make up the next generation of aero combustors. The aero thermal design of these combustors is very different from previous combustors and the major design points are proposed. Two types of high-pressure low emissions combustor design have been suggested: one is without fuel staging and the other is with fuel staging. The high FAR combustor design is brand new. The layout of the next-generation aero combustor is very different. There are no primary holes, no intermediate holes, and no dilution holes. They all have direct mixing combustion. For low-emissions combustors, it is lean direct mixing (LDM) combustion. For high-FAR combustors, it is stoichiometric direct mixing combustion. Combustion air fraction is very high (such as >75%). That will induce idle condition lean blow out (LBO) issue. The present book has proposed several design approaches to solve idle LBO issue, which are effective. Pilot fuel air combustion is designed at idle condition. For civil combustor, maximum condition is designed for low emissions, while for high FAR combustor, maximum condition is designed for non-visible smoke, low luminous flame radiation and good combustion efficiency. For each type of combustor, the fuel air module configuration is designed, which is the most essential part of combustor design. The brand-new combustor cooling design has used a compound angle tangential inlet cooling hole configuration. Such a cooling design provides high cooling effectiveness. The diffuser configuration is totally
new. It is an air bleeding diffuser, directly stretching forward to contact the dome. The bled air flows to the annular channel as cooling air.

Aero combustor development is discussed in this book. In particular, the combustor developments from technology readiness level (TRL) 3 to TRL level 6 have been discussed in detail. Also reported is the technology to run combustor development tests correctly.

Three topics of related combustion research by the present author are summarized in the brochure. They are:

a) Fuel injection and co-flowing air combination. The key point is, for next generation combustor development, the designer should not only think about atomization. The combination of fuel injection and co-flowing air should be considered together as a whole device.

b) Fuel spray evaporation calculation, the key is an engineering calculation of multi-component fuel evaporation shall be used.

c) Non-luminous flame radiation calculation, which has been significantly updated.

The present book is a summary of the author’s ten years of study on next-generation aero combustors after retirement. It represents advanced aero combustor technology level.

Special Topics

Research Challenges in Science, Engineering and Technology

Dr. S. Kannadhasan (Assistant Professor, Department of Electronics and Communication Engineering, Chera College of Engineering, K. Paramathi, Karur, Tamilnadu, India), Dr. R. Nagarajan (Professor, Department of Electrical and Electronics Engineering, Gnanamani College of Technology, A.K Samuthiram, Namakkal, Tamilnadu, India) and M. Shanmuganantham (Vice Principal, Department of Electrical and Electronics Engineering, Tamilnadu Government Polytechnic College, Madurai, Tamilnadu, India)

In series: Advances in Applied Science and Engineering

Expected Publication Date: 09/30/2021

361 pp.

Hardcover: 978-1-68507-008-3. $230.00

e-book: 978-1-68507-028-1. $230.00

This edited volume includes eighteen chapters and discusses various research challenges in science, engineering and technology. Topics discussed include learning methods of artificial intelligence, computerized medical image processing, human-computer interaction for detection of hand gestures, community energy storage, e-learning, prediction of diabetic risk, hydrogen fuel cells for automobiles, solar cells, and more.
SOCIAL SCIENCES
Intercultural Issues in the Global Auto Industry
Liviu Warter, PhD (Founder & President of the Center for Socio-Economic Studies and Multiculturalism in Iasi, Romania) and Iulian Warter, PhD (Founder & President of the Center for Socio-Economic Studies and Multiculturalism in Iasi, Romania)

In series: Business Issues, Competition and Entrepreneurship
Publication Date: 01/15/2021
130 pp.
Softcover: 978-1-53619-117-2. $95.00
e-book: 978-1-53619-142-4. $95.00

This monograph is focused on intercultural issues, particularly in the global auto industry. The foreign direct investments (FDI) reasons are the result of globalization, of the need of growth and of achieving synergies. Most of the professionals consider that FDI is one of the most significant business phenomena in the past decades, but warn about the FDI dangers. The most challenging part of the FDI process is the integration of two entities that present different organizational and national cultures. This monograph emphasizes the relationship between culture and FDI performance in the global auto industry. The main goal of this book is to uncover intercultural issues that managers encounter during the FDI, M&A or global alliances. The expectation of the authors of this monograph is that the conclusions would help forewarn scholars and practitioners of the need to thoroughly understand the cultural issues influencing the global automotive industry. The monograph will be useful for academic researchers, postgraduate students, for MBA/Executive Education and for practitioners.

Human Capital and Economic Transformation of China
Yanqing Jiang (Professor, School of Economics and Finance, Shanghai International Studies University, P.R. China) and Yingjie Li (Postgraduate Student, School of Economics and Finance, Shanghai International Studies University, P.R. China)

In series: China in Transition
Publication Date: 03/17/2021
233 pp.
Hardcover: 978-1-53619-272-8. $160.00

Market-oriented reforms initiated four decades ago have constantly fueled a high speed of development in China. The country’s industrial structure has experienced rapid evolution. In the meantime, especially in the general context of globalization, China has also opened to foreign trade and foreign direct investment, transforming itself from a virtually completely closed economy into a major trading nation and the largest developing-country destination for foreign direct investment in the world. Human capital is thought to be one of the key factors that shape the transformation of the Chinese economy. With different human capital intensities, uneven development is one major issue in the process of China’s industrial transformation under new trends of globalization. Substantial disparities across different Chinese regions, e.g. the gaps in regional industrial development and those in incomes and living standards have been one prominent feature of China, and are closely related to different speeds of human capital accumulation. This book therefore aims to explore the potential and actual mechanisms through which human capital accumulation and human capital intensity may affect industrial development and development disparities in China. The book is able to provide the readers with new facts and new findings that shed light on their understanding of important issues related to human capital and economic transformation of China.
Business Ethics

East European Culture and Business Ethics
*Iulian Warter, PhD (Founder & President of the Center for Socio-Economic Studies and Multiculturalism in Iasi, Romania) and Liviu Warter, PhD (Founder & President of the Center for Socio-Economic Studies and Multiculturalism in Iasi, Romania)*

In series: *Business Issues, Competition and Entrepreneurship*
Publication Date: 01/21/2021
138 pp.
Softcover: 978-1-53619-118-9. $95.00
e-book: 978-1-53619-143-1. $95.00

This book concentrates on some leading questions in business ethics research in the last two decades and tries to find explanations concerning cultural issues. It focuses on the alignment or congruence between business ethics and cultural contexts with a special emphasis on Eastern European countries. The core of this book is doing business in Central and Eastern Europe (CEE) in order to throw light on the cultural issues related to business ethics. Its primary purpose is a finer view of the impact of national, organizational and professional cultures in business ethics. The general questions encountered in this book are related to the nexus between culture and ethics in (CEE), national, organizational and professional cultures’ link to (CEE) countries’ ethics. The aim of this book is a deeper understanding of the cultural differences in Central and Eastern Europe. This might help organizations provide better opportunities for doing business across a wide cultural spectrum. With the increase of global mobility, cultural and ethical issues become more and more important. Multi-national corporations might garner a competitive advantage when they understand the importance of local culture and ethics. International business professionals may benefit from a deeper understanding of cultural values that affect the perceptions of individuals during negotiation and decision-making across cultures. Multinational companies that do not take into consideration or minimize the importance of cultural and ethical issues expose themselves to a higher risk of failure. The expectation of the authors of this book is that the conclusions would help alert international business scholars and practitioners of the need to thoroughly understand the cultural issues influencing ethics.

Economics

Progress in Economics Research. Volume 46
*Albert Tavidze*

In series: *Progress in Economics Research*
Publication Date: 05/24/2021
274 pp.
Hardcover: 978-1-53619-704-4. $250.00
e-book: 978-1-53619-711-2. $250.00

This monograph consists of six chapters that each present new research in the field of economics. Chapter One discusses the new monetary policy and instruments introduced by the Fed after 2008. Chapter Two analyzes the export of liquefied natural gas from Trinidad and Tobago to the United States. Chapter Three explores population perception about the availability of bicycle lanes in São Paulo as an alternative to public transportation. Chapter Four examines the relationship between West Texas Intermediate oil prices and the United States Dollar/Trinidad and Tobago Dollar (USD/TTD) currency pair. Chapter Five aims at determining the factors affecting the choice of national pension funds investment regime in 82 countries. Lastly, Chapter Six seeks to investigate the relationship between Henry Hub natural gas prices and the USD/TTD exchange rate.
The Effects of COVID-19 on the Global and Domestic Economy
Magnus Strömberg
In series: Economic Issues, Problems and Perspectives
Publication Date: 08/03/2021
301 pp.
Hardcover: 978-1-53619-952-9. $230.00
e-book: 978-1-53619-995-6. $230.00
In the year since the COVID-19 outbreak was first diagnosed, it has spread to over 200 countries and all U.S. states. The pandemic has negatively affected global economic growth beyond anything experienced in nearly a century. Estimates so far indicate the virus reduced global economic growth to an annualized rate of -4.5% to -6.0% in 2020, with a partial recovery of 2.5% to 5.2% projected for 2021. Global trade is estimated to have fallen by 5.3% in 2020, but is projected to grow by 8.0% in 2021. The full economic impact of the pandemic likely will remain unclear until the negative health effects peak. This book provides an overview of the global and domestic economic costs to date and the response by governments and international institutions to address these effects.

The Future of Real Estate
Jan Veuger, PhD (Professor Blockchain, Saxion University of Applied Sciences, Schools of Finance & Accounting, Creative Technology and School of Governance, Law and Urban Development in the Netherlands)
In series: Economic Issues, Problems and Perspectives
Publication Date: 04/21/2021
274 pp.
Hardcover: 978-1-53619-414-2. $195.00
e-book: 978-1-53619-582-8. $195.00
No one can really predict how the real estate market will develop. However, we can look at patterns, how they might develop and thus give a direction to the future of real estate. This book wants to contribute to that.
COVID-19 has had a considerable influence on society and real estate, particularly in the recent period. We are surprised by a development that we had not seen coming and that has seriously impacted our lives. The various manifestations of lockdowns around the world have been gradually phased out and reset in 2020. This has a structural impact on living, working and shopping and therefore has a direct impact on the use of property. Since COVID-19 will be present in many respects for the foreseeable future, the pandemic will have a significant impact on real estate and urban developments. Perhaps when we look back on this period, this pandemic will prove to have been the starting point for drastic property changes.
Many were surprised by the empty shelves in supermarkets during the first days of the pandemic. The supply chains were running at full speed, but a large part of the retail sector came to a standstill or switched to online. Multi-channel has now really proven itself and COVID-19 has abruptly increased the demands on “last mile” logistics spaces. Much more will change in the area of supply chains. Moreover, in light of increasing trade tensions, there is a trend of onshoring and it is clear that logistics and warehousing will become increasingly important. Public space is also in the spotlight. The importance of parks and greenery was great during the lockdown. Guaranteed distance on streets and squares will remain the focus of attention in the coming period. Space is scarce. We need terraces in order to realize some turnover. And the fact that the car is currently considered a safe means of transport—what does that mean in terms of traffic pressure?
The Impact of the COVID-19 Pandemic on International Oil Markets

Alexander G. Tvalchrelidze (Doctor of Science, Professor, Head of Department, Alexander Tvalchrelidze Caucasus Institute of Mineral Resources, Ivane Javakhishvili Tbilisi State University, Georgia)

In series: Economic Issues, Problems and Perspectives
Publication Date: 05/24/2021
231 pp.
Hardcover: 978-1-53619-595-8. $195.00
e-book: 978-1-53619-698-6. $195.00

This book is dedicated to an in-depth statistical analysis and modelling of international oil markets before and during the COVID-19 pandemic with special attention placed on the oil exporting countries Russia and Iran. It is proven that the negative impact of the pandemic on oil markets is huge and expressed by dramatically diminished volume of derivatives contracts at oil markets resulting in failure of oil prices. The coronavirus pandemic highlighted contradictions between the main geoeconomic playmakers of the world – USA, EU, China and partly Russia – however, only the USA has corresponding economic vehicles and instruments, described in the book, for ruling international oil markets.

Economics of Health and Social Care

The Economics of Diseases and Cures

Randall Waechter, PhD (Associate Director of Research, Assistant Dean School of Graduate Studies, and Associate Professor School of Medicine, St. George’s University, West Indies)

In series: Economic Issues, Problems and Perspectives
Publication Date: 05/14/2021
375 pp.
Hardcover: 978-1-53619-492-0. $230.00
e-book: 978-1-53619-614-6. $230.00

This book examines the process of cure discovery and the economic impact of cures across varying diseases. It is the first time anyone has attempted to examine the [economic] returns across a wide spectrum of disease categories, using a common frame of reference.

International Economics and Trade

US-China Trade: Perspectives and Impact on the Global Economy

John C. Amon

In series: Trade Issues, Policies and Laws
Publication Date: 08/10/2021
156 pp.
Softcover: 978-1-53619-956-7. $95.00
e-book: 978-1-53619-985-7. $95.00

The United States of America and the Peoples’ Republic of China are the world’s leading economies. As such, if one wishes to understand the global economy, he or she must consider the economic relationship between these two countries. Chapter One examines the complex trade interrelationship among the US, China, and Africa, and the impact this system has on Africa’s development. Chapter Two analyzes the overall situation of the development of the Sino-US trade by examining the history of trade between China and the US starting from the late 18th century. Chapter Three provides an overview of the trade war between China and the United States and illustrates the impact of this conflict on Latin America.
Public Economics

Local-Scale Economics: Local-Scale Economics: Statistical Indicators and Latent Patterns of Labour Market Areas in Italy
Francesco Maria Chelli (Professor, Università Politecnica delle Marche, Ancona Italy), Barbara Ermini, (Researcher in Applied Economics, Università Politecnica delle Marche, Ancona Italy) and Luca Salvati, (Researcher in Economic Statistics, Università di Macerata, Italy)

In series: Economic Issues, Problems and Perspectives
Publication Date: 03/17/2021
437 pp.
Hardcover: 978-1-53619-211-7, $230.00
e-book: 978-1-53619-309-1, $230.00

This book proposes an articulated and multidisciplinary research path that introduces to the potential of adopting territorial statistics, namely those elaborated at the level of Local Labour Systems, for carry out spatial analysis of apparent and latent interactions between socioeconomic phenomena and environmental dynamics at a sufficiently broad and efficient geographical unit of analysis. This allows to examine in a more exhaustive manner the complexity and non-linearity of several socio-economic and territorial processes and to address the multidimensional concept of sustainability from below. Studies included in this book contribute to an integrated, multidisciplinary reading that covers the three pillars of sustainability. Italy is relevant case study in this sense and can be assumed as a paradigmatic country also for other advanced European nations that undertook territorial analysis at a very disaggregated spatial level (i.e., UK, Spain, Germany and France among others).

Financial Economics

Advances in Capital Structure Research
Karel Marleau

In series: Economic Issues, Problems and Perspectives
Publication Date: 07/30/2021
119 pp.
Softcover: 978-1-53619-948-2, $82.00
e-book: 978-1-53619-969-7, $82.00

Capital structure refers to the distribution of debt and equity a company uses to finance its overall operations and growth. This four-chapter volume details recent advancements in capital structure research, including perspectives on the global water industry and European banks as well as an analysis of SME financing behavior and a systematic literature review.

General Business

Decision Support Systems: Types, Advantages and Disadvantages
Frances J. Roberts

In series: Business Issues, Competition and Entrepreneurship
Publication Date: 08/10/2021
169 pp.
Softcover: 978-1-53619-954-3, $95.00
e-book: 978-1-53619-988-8, $95.00

A decision support system (DSS) is a computer program used to support determinations, judgments, and courses of action in an organization or business. Chapter One provides an overview of model-driven DSSs and the utility and limits of these systems in real estate. Chapter Two reviews, classifies, and compares the DSSs for fund raising management with particular reference to the different considered approaches, the mathematical methods employed, the specific considered parts of the process, the requirements and the conclusions of the related studies, the applications utilized by non-profit organizations, the complexity and the usability of the systems, the numerical achieved results, and possible further developments. Chapter Three describes a DSS for vocational training organizations based on the Choquet integral, a well-founded and widely used technique for multicriteria decision making.
Exploring Cities and Countries of the World. Volume 3
Kathie Summers
In series: Exploring Cities and Countries of the World
Publication Date: 07/14/2021
231 pp.
Hardcover: 978-1-53619-921-5. $250.00
e-book: 978-1-53619-925-3. $250.00
This edited volume consists of six chapters that describe the culture, lifestyle, and perspectives of people living all over the world, as well as the design of urban spaces, historical city centers, and tourist destinations. Chapter One offers an ethnography of the social attitudes, small-scale economies, political constructs and technological adaptions of hillside families in southeastern Haiti. Chapter Two analyzes the ways in which senior museum administrators in Italy respond to falling attendance from a branding perspective. Chapter Three presents the challenges encountered while developing design strategies for historical city centers and construction projects over two case studies. Chapter Four discusses narration as a design methodology as well as a means of representation and presents examples of proposed urban design projects for five different cities. Chapter Five describes how the people in Costa Rica perceive edible flowers, if and how they consume them, how they buy them and how much they are acquainted with possible health risks associated with their consumption. Finally, Chapter Six focuses on the need to change governance strategies of tourist destinations due to globalization and technological development and proposes a methodological framework to responsibly manage stakeholders involved in tourism destinations.

Macroeconomics

Human Capital and Development
Gary I. Lilienthal, PhD(Professor, Department of Intellectual Property Law, Tashkent State University of Law, Tashkent, Uzbekistan)
In series: Economic Issues, Problems and Perspectives
Publication Date: 06/02/2021
360 pp.
Hardcover: 978-1-53619-714-3. $230.00
e-book: 978-1-53619-733-4. $230.00
This book asks the following incisive questions. Does the body of scholarship on the term “human capital” constitute a species of the meaning of the term “slavery,” and if so, in what way? How has the so-called capabilities approach to human development affected the scholarship of human development, in the context of curbing the catastrophic excesses of market behavior? How is it that some humans can be domesticated to create human capital for other groups of humans? To what extent can the international legal instruments effectively fight and combat child labor? How have dynastic China and India developed very long-term systems for the creation and maintenance of national human capital among its peoples? Have the state responses to pandemics been medicalized as a device for human capital maintenance, and if so, in what ways? What is the true meaning of the term “fit and proper” as it is imported into development and dissolution of human capital at the professional or “mandarin” levels of societies?
Taking these questions together, the book Human Capital and Development asks this question: have national forms of slavery developed from what is now described as the capabilities approach to human development, with human domestication and child labor forming national systems of human capital formation, maintained by medicalization and controlled by judgments by authorities of fitness and propriety? Chapter One contains a complete scholarly survey of the field of human capital, covering legal, sociological, regulatory, and economic facets of the field. Chapter Two is a detailed critical literature review of the field of human development, linking this still nascent field to that of human capital. Chapter Three follows from Chapter One, elaborating on the new and virtually unspoken field of human domestication, as it serves to create human capital. Chapter Four discusses the international law field of child labor and elaborates on the dual effects on human capital and human development of child labor in its current form. Chapter Five is a comparative analysis of how the two ancient societies of China and India had deployed systems lasting beyond archaeological spans of time to maintain their national human capital, by regulating their supplies of water to their vast populations. Chapter Six in many ways follows on from chapter Three on human domestication, as it discusses
critically how the epideictic rhetoric of pandemic contagion and control might marshal human capital in the various strata of society. Chapter Seven is a critical analysis of how human capital is formed by imperial legislation in the upper levels of society’s “mandarins,” its professional classes, by implementing around the world a common “fit and proper,” or integrity, test.

The overall research outcomes suggest that human capital is human differentiation, by the masters onto the servants. Human development is a dynamic conjunction of those capabilities of apparently freely maintaining social networks. Those who had abolished the progymnasmata education system had now reinstated some lower levels of its simpler exercises, ensuring continuing human domestication and maintaining a human capital in explicit knowledge. Thus, child labor remains a national-level program for formation of national employee human capital. In dynastic China, emperors had wholly owned the people’s human capital, and both stabilized and assessed it through local customary registries. In India, sacred rivers were themselves entities containing the culture’s externalized symbology. The International Sanitary Conferences confirmed already-developing European national rules into an international order of human capital medicalization, disguised as human development. The public parties to a “fit and proper” assessment are said to be the court and an ellipsis of members of the public, without the public ever actually participating in the assessment. Thus, human capital in a profession is created in a national professional class purely by the authority of differentiation.

Management

Employee Engagement: A Human Resource Management Perspective
Cam Caldwell, PhD (Retired Professor, Business, American University of the Emirates; University of Illinois Springfield, Illinois, USA) and Verl Anderson, PhD (Professor of Management, Dixie State University, St. George, UT, USA)

In series: Business Issues, Competition and Entrepreneurship
Publication Date: 06/11/2021
189 pp.
Hardcover: 978-1-53619-687-0. $160.00
e-book: 978-1-53619-735-8. $160.00

Leaders continue to struggle to earn the followership of others – a challenge they have faced for millennia. According to extensive research, the key to effective leadership lies in demonstrating the ability to achieve a worthy purpose while simultaneously helping employees to improve themselves. Lacking the capacity to demonstrate those two abilities, leaders consistently fail to engage, empower, and enable employees to contribute to their companies’ success.

This book addresses the importance of employee engagement – the degree to which employees feel connected to their organizations, dedicated to its purposes, and able to utilize their talents to help organizations succeed. The alarming findings of leadership research confirm that more employees currently feel negatively engaged than fully positively engaged in their relationships with leaders, managers, and supervisors.

In addition to identifying the nature of engagement, we have explained why those who lead organizations are so often ineffective – and we offer suggestions throughout this book to help leaders, managers, supervisors, and those who work in Human Resource Management to create organizational relationships that build employee trust, commitment, and ownership. Readers of this book will find well-documented information incorporating the findings of management experts, practitioners, and consultants – but also new ideas that we have refined from our past research about human relationships and leadership effectiveness.

Trust has often been called the most important ingredient in successful relationships. Ethics and leadership have been described as two sides of the same coin. Employee commitment is acknowledged to be the key to competitive advantage. Each of these factors is closely related to employee engagement and each enables leaders to develop relationships that build more effective organizations.

Although there are no instant answers or magic wand solutions to restoring the lack of trust that enormous numbers of individuals have in organizations, leaders, and managers, we confidently proclaim to those who read this book that the information, recommendations, and observations contained herein are worthy of your close attention – and your application.
Public Finance

Public Debt: Impact, Management and Challenges
Antoine Bélanger
In series: Economic Issues, Problems and Perspectives
Publication Date: 03/04/2021
196 pp.
Softcover: 978-1-53619-326-8. $95.00
e-book: 978-1-53619-374-9. $95.00
This book comprises four chapters, each of which examines public debt from a specific economic perspective. Chapter 1 studies potential fiscal externalities of the public debt in the framework of a monetary union. Chapter 2 examines the theoretical literature concerning how and if public debt impairs economic growth and finds no univocal and straightforward answer. Chapter 3 discusses the economic impact of the SARS-CoV-2 virus and addresses the question of whether limits to public debt ought to be respected or disregarded in the face of huge unemployment, collapsing tax revenues, and generous public expenditure programs. Lastly, Chapter 4 analyzes the response of central banks in emerging inflation targeting countries with floating exchange rates to changes in public debt.

Special Topics

An Introduction to the Circular Economy
Pierfrancesco Morganti (Professor, Academy of History of Healthcare Art, R&D Unit, Rome, Italy; Visiting Professor China Medical University, Shenyang, China) and Maria-Beatrice Coltelli (Associate Professor, Department of Civil and Industrial Engineering, University of Pisa, Pisa, Italy)
In series: Economic Issues, Problems and Perspectives
Publication Date: 05/24/2021
463 pp.
Hardcover: 978-1-53619-233-9. $270.00
e-book: 978-1-53619-661-0. $270.00
This book tries to debate on the significance of circular economy, underlying the necessity to change our way of producing, consuming, and traveling on a daily basis. The passage from a linear economy to a circular economy will help us to reduce the degradation of the environment for avoiding future disastrous consequences, such as depletion of biodiversity, scarcity of raw materials and drinking water, rising waters, etc. The circular economy, therefore, involves designing a product so that it can be recycled or its components reused. Reuse consists of introducing the product back into the economic circuit in its original condition; repair makes it possible to fix a broken good; and recovery consists of reusing its components. This is the significance of the so-called 3R strategy, illustrated in this book.

Collected Papers: Financial Regulation in Estonia, Poland and Latvia within the Context of European Union Membership
Dr. Graeme Scott Baber (Researcher in Financial Law, UK)
In series: Laws and Legislation
Publication Date: 04/15/2021
223 pp.
Hardcover: 978-1-53619-467-8. $160.00
e-book: 978-1-53619-559-0. $160.00
This book, entitled Collected Papers: Financial Regulation in Estonia, Poland and Latvia within the Context of European Union Membership, brings together five papers that the author wrote during the course of his career. The first and the last are short articles on general topics – with the former being written approximately ten years earlier than the latter. Both are constructed around defining events – the first the enactment of the Lisbon Treaty, which can be seen with the benefit of hindsight as a time of unity and promise within the European Union, and the other the process of the United Kingdom leaving the European Union – a time at which both the unity and the promise have withered. The second and the third are substantive items – the former examining the extent to which laws of the then-new Member States of the European Union Estonia, Poland and Latvia comply with that Union’s free movement of capital rules, and the latter...
reporting the results of a survey of company executives within those three countries on their views as to the degree to which their businesses are affected by national limitations on the free movement of capital. The fourth paper investigates the extent to which accession to the European Union has affected regulation of the retail banking sector in those three states.

**Emerging Trends in Global Organizational Science Phenomena: Critical Roles of Politics, Leadership, Stress, and Context**

Gerald R. Ferris, PhD (Marie Krafft Professor of Management, Professor of Psychology, and Professor of Sport Management, Florida State University, Tallahassee, Florida, USA), Pamela L. Perrewé, PhD (Robert O. Lawton Distinguished Professor, Haywood and Betty Taylor Eminent Scholar of Business Administration, Professor of Sport Management, and Distinguished Research Professor, Florida State University, Tallahassee, Florida, USA) and Adebowale Akande, PhD (International Director, IR GLOBE Cross-Cul, Vancouver, BC, Canada)

In series: Organization, Business and Management

Publication Date: 06/25/2021

737 pp.
Hardcover: 978-1-53619-175-2. $350.00

This volume is a collection of 32 original chapters, reporting on research conducted around the world by top scholars in over 50 countries in an effort to bring to bear a greater collective comprehension of how people in work organizations around the world think, feel, and behave (politics, leadership, stress and differing global contexts). It can be of great use to several different audiences. Useful in classroom settings for graduate seminars, and even special courses in: Business, Organizational Behavior (OB), HRM, OD, OT, OS, Management, Industrial Sociology, Politics, Negotiations, Gender, Ethnic and Cultural Studies, Labor Relations, Marketing, Political Economy, Family and Consumer Science, Law, Journalism and Communications, Nursing Science Administration, Public Policy, Interdisciplinary Studies, Social Work, Industrial/Organizational Psychology, Social Psychology, Social Economics, and in-house training programs, MILR, MPA, MBA and executive educations classes. Overall, one of the most current, practical, conceptual, and up-to-date researched global perspective reference texts today on the market.

**Global Challenges of Digital Transformation of Markets**

Elena de la Poza, PhD (Professor, Finance Universitat Politècnica de València, Valencia, Spain) and Sergey E. Barykin, PhD (Professor, Economics, Peter the Great St. Petersburg Polytechnic University, St Petersburg, Russia)

In series: Economic Issues, Problems and Perspectives

Publication Date: 07/14/2021

626 pp.
Hardcover: 978-1-53619-754-9. $310.00
e-book: 978-1-53619-864-5. $310.00

As rapid changes are brought on by technologies and by the challenges facing humanity, existing businesses consistently update and reinvent. This book tackles the challenges of adopting and reinventing business models due to the digital transformation in logistics and supply chain management, digitization of trade networks and global markets, with a primary focus on business processes, marketing transformation and human resources management.
Power Imbalance, Bullying and Harassment in Academia and the Glocal (Local and Global) Workplace

Fay Patel, PhD (Academic, Researcher and International Higher Education Consultant - Australia, Canada, New Zealand, USA, South Africa, Bangladesh, Malaysia, and Hong Kong)

In series: Bullying and Victimization
Publication Date: 07/23/2021
272 pp.
Hardcover: 978-1-53619-703-7. $195.00
e-book: 978-1-53619-878-2. $195.00

The book Power Imbalance, Bullying and Harassment in Academia and the Glocal (Local and Global) Workplace introduces a candid and open discussion on a sensitive topic. Breaking the “code of silence” on bullying and harassment (including sexual harassment) in academia and the glocal workplace is the central focus of the book. The author advocates a call to action to hold perpetrators and the executive leadership teams of higher education institutions and corporate organizations accountable and responsible for bullying and harassment behaviors in the glocal (local and global) workplace.

The book aims to raise the bar for ethical considerations in working with employees who may be vulnerable in the glocal workplace; to call out the perpetrators of bullying and harassment in the glocal workplace and academia; to ensure that the mental wellbeing of employees is a priority; to place responsibility and accountability for bullying and harassment on the shoulders of the executive leadership of international higher education institutions and corporations; and to call upon stakeholder groups to shatter the “code of silence” with a youtubebullyharrasser movement.

Employers are expected to enhance their vigilance on the matter of bullying and harassment and to report perpetrators through a national and international monitoring system which names the perpetrators and prevents them from causing harm in their current organization and from moving surreptitiously to other workplace communities. This book is an account of bullying and harassment in academia and other workplaces written by those who experienced and/or witnessed bullying and harassment. It includes chapters on the political economic factors influencing equity, diversity and inclusion agendas over decades; the impact of bullying and harassment in the COVID-19 period when various communities are vulnerable; and critically reviews and presents real-life scenarios in academia and the glocal workplace which are both covert and overt. However, these underhanded activities, often with the knowledge and approval of executive leadership, remain unchallenged by employees and stakeholder groups because of the threat of loss of one's livelihood. The contributors bring valuable insights into the covert operations of the perpetrators, who are sometimes the executive leaders (women and men) themselves.

This book is essential for understanding the dark web of deceit, lies, conspiracies and mobbing cultures which ensnares innocent targets, across glocal organizational contexts. Profiles and descriptors within the chapters and case studies act as alert signals to identify bullies. The contributors bring personal, creative and academic perspectives together, offering the readership sobering and authentic accounts of traumatic experiences and challenges in the glocal workplace.

Smart Development: The Political Economy in a Post-COVID-19 World

Arno Tausch (Honorary Associate Professor of Economics, Corvinus University, Budapest, Hungary; Adjunct Professor (Universitatsdozent) of Political Science, Department of Political Science, Innsbruck University, Austria)

In series: Political Science and History
Publication Date: 03/17/2021
179 pp.
Hardcover: 978-1-53619-379-4. $160.00
e-book: 978-1-53619-416-6. $160.00

In its much-debated Human Development Report 2020, the United Nations Human Development Program attempted to present indicators of development which are planetary pressures-adjusted. In the present book by Arno Tausch, the author presents further reflections in this important and evolving field, vital for any informed debate about the Paris Climate Accord. Tausch adjusts the development achievements and setbacks of the countries of the world by ecological footprint per capita. With the hitherto existing globalized political economy in ruins in the wake of the Covid-19 pandemic and the ensuing global economic depression, a new societal contract has to emerge which combines well-being with a minimum of energy inputs, thus reducing planetary pressures.

Tausch attempts to answer vital questions, raised by the debates on the Paris climate accords, and the recent UNDP Human Development Index. Is a liberal economy, based on economic freedom, compatible with the attempt to “deliver” a maximum amount of democracy, economic growth, gender equality, human development, research and development, and social cohesion with a minimum of planetary pressure?

Tausch looks at the cross-national drivers and bottlenecks of “smart development,” using standard comparative cross-national data. The book shows that those attempting to reduce planetary pressure and to work towards fulfilling the Paris Climate
Accords have to start thinking about such issues as gender justice, economic freedom, globalization, population density, and migration, if they really want to bring about development with a minimum of planetary pressure.

**Social Capital: Issues, Challenges and Perspectives**

**Robert Jackson**

*In series: Economic Issues, Problems and Perspectives*

Publication Date: 06/10/2021

191 pp.

Softcover: 978-1-53619-622-1. $95.00

e-book: 978-1-53619-642-9. $95.00

This book contains five chapters centered around the topic of social capital, defined as the networks of relationships among people who live and work in a particular society, enabling that society to function effectively. Chapter One advances the understanding of social capital creation by Indian Higher Educational Institutions (HEIs), and argues about its importance and value, both for the HEIs and the community. Chapter Two looks at bridging and bonding social capital in the context of mobile online gaming, and how in-game international communities can facilitate accumulation of cross-cultural social capital. Chapter Three analyzes the role of social trust in the social progress of 238 European regions. Chapter Four examines how social capital may favor the development of a successful and sustainable circular economy business model, particularly in the forestry sector. Lastly, Chapter Five examines the nature of camp and its use in Old Navy advertising and how camp uniquely resonates with queer audiences.

**Academic Development**

**Academic Achievements: Perspectives, Gender Differences and Outcomes**

**Sidney J. Hewitt**

*In series: Education in a Competitive and Globalizing World*

Publication Date: 05/24/2021

223 pp.

Hardcover: 978-1-53619-444-9. $160.00

e-book: 978-1-53619-709-9. $160.00

One pressing concern that exists in education around the world today stems from the differences in experiences between male and female students and how these differences manifest in academic outcomes. Differences in students’ experiences also depend upon a wide variety of other factors, including race, economic status and environment. For example, women and girls in the Devanga community in India face discrimination in the form of reduced educational opportunities and a sense of social obligation to take on nurturing and care-giver roles, whereas male students face no such restrictions. Conversely, female students in Lebanon outperform male students in many subjects, though women and girls nonetheless face significant gender discrimination in Lebanese society. This book presents a compilation of studies that focus on disparities in education resulting from factors including race, gender and economic background in places like India, Rwanda, and Texas, as they apply to elementary, middle and high school students as well as college students.
Assessment, Evaluation and Research Methods

**Education in Europe: Perspectives, Opportunities and Challenges**

*Aikaterini Kokkinou, Ph.D. (Associate Professor, Hellenic Military Academy, Department of Humanities, Vari, Greece; University of the Aegean, Department of Financial and Management Engineering, Mytilene, Greece)*

In series: *Education in a Competitive and Globalizing World*

Publication Date: 04/21/2021

246 pp.

Hardcover: 978-1-53619-409-8. $160.00


This book is a comprehensive collection of chapters focusing on current techniques and strategies in education policy planning and application, summarizing the debate for the future and prospects of education, within the current socio-economic development and growth spectrum.

This book considers a broad perspective to increase the information base and derive broader conclusions about education policies and activities. More specifically, this book presents a discussion of the environment, institutions and education policy issues, focusing on the institutional setting, as well as literature relating to education policy and practice. Moreover, this book identifies and examines relevant key research issues, building a conceptual framework drawing on the application of education and socio-economic development and growth process, enabling a comparative analysis in European level, explaining also any related socio-economic consequences. This book also presents a survey of the choices concerning education policy regarding development and efficiency enhancement, describing the instruments, the actors involved, the actions undertaken, and those which, although promoted in the context of other policies, affect the same channels or pursue similar aims. Moreover, this book explores and studies core dimensions of the interaction between education, research and development, efficiency, new paradigms, methods and techniques along with socio-economic links. Overall, this book describes the main kinds of policy interventions that are implemented, providing at the same time some useful elements, in order to understand the assumptions and theories which underpin them.

This book fills a gap in education literature by exploring and studying various dimensions of the interaction between one of the most important socio-economic aspects, namely education, and interactions between related factors (both theoretically and empirically). Special focus is put on the appreciation of the ways in which education activities and policies change and adapt in the presence of new constraints of changing configurations of the knowledge-based economy combined with the emergence and adaptation of institutional or economic structures. Within this framework, this book acts as a platform for theoretical and empirical research, rendering a creative source for motivation, scientific dialogue, collaborative approaches, as well as knowledge creation and dissemination.

To achieve its aims, the book consists of seven chapters by fifteen expert contributors.

**Education in India: Perspectives, Opportunities and Challenges**

*Dr. Anju Beniwal (Assistant Professor of Sociology in Government Meera Girls College, Udaipur, India)*

In series: *Education in a Competitive and Globalizing World*

Publication Date: 04/16/2021

163 pp.

Softcover: 978-1-53619-442-5. $95.00

e-book: 978-1-53619-503-3. $95.00

Education builds the individual, so it builds the nation. Education is the primary means of socialization in every society and plays a very important role in the economic development of any country. Education helps people increase knowledge, results in skill development, and enables them to know their rights and duties towards their family, society, and the nation. Various future prospects have been considered and policies have been drafted to ensure quality education in India. The aim of education should always be to improve and raise the entire system and to impart knowledge, develop vision and good moral values. The rapid changes and complexity of today’s world present new challenges and put new demands on our education system. In confronting this challenge, it is necessary to understand the various perspectives and opportunities of education. This edited collection mainly focuses on the following issues regarding education:

- Higher Education System: Ancient to Modern Age
- Human Rights Education: Needs and Future Actions
- Mixed Mode Course Contrive and Distribution
- Open and Distance Education
- Reflective Practice in Teaching and Learning
• Changing Scenario in Higher Education of India
• Indian Education System: Opportunities and Challenges
• New Education Environment: Issues, Challenges and Constraints.

Distance Education

eLearning

Challenges and Opportunities of Online Learning
Ditte Kolbæk (Independent Researcher, Former Aalborg University, Copenhagen, Denmark)
In series: Education in a Competitive and Globalizing World
Publication Date: 05/05/2021
330 pp.
Hardcover: 978-1-53619-486-9. $230.00
The COVID-19 pandemic has sent students and teachers home, and during the last several months they have learned to study and teach online. Hence, e-learning has become a hot issue and provides the theme for this book entitled Challenges and Opportunities of Online Learning. The aim of this book is to link theoretical approaches with practical experiences and inspire teachers, students, and researchers in the field of e-learning in higher education. By reading this book, teachers in higher education may learn lessons from colleagues’ experience that may enable them to dare trying out new ways of e-learning. This book includes contributions from four continents – the USA, South America, Africa and Europe – and the authors detail technical considerations as well as provide the different perspectives on e-learning of faculty, teachers, and students.

Conversational Agents as Online Learning Tutors
Guglielmo Trentin (Research Director, Institute for Educational Technology, National Research Council, Italy)
In series: Education in a Competitive and Globalizing World
Publication Date: 05/05/2021
226 pp.
Hardcover: 978-1-53619-489-0. $160.00
e-book: 978-1-53619-603-0. $160.00
By gathering important contributions from leading international experts in the field, this book explores the application of conversational agents in the specific role of tutor in e-learning processes (e.g. MOOCs, Mobile Assisted Learning). The aim is to investigate: [a] their technological implementation; [b] the underlying instructional design; [c] the type of activities that conversational agents carry out; [d] the outcomes of different experimental pilots and prototypes.

Education and Public Policy

Re-Conceptualizing the Paradox in (Education) Policy Implementation: Unravelling Perspectives on the Policy/Practice Gap
Hope Pius Nudzor
In series: Education in a Competitive and Globalizing World
Publication Date: 03/09/2021
220 pp.
Hardcover: 978-1-53619-226-1. $160.00
A review of current (education) policy and practice endorse the view of an apparent paradox in policy implementation. Although tremendous investments (in terms of energy, time and financial resources) are made in enacting policies, there is ample evidence to suggest that policy actors are impervious to policy information. Change agents and implementers of policy are often seen as pursuing different agendas when it comes to the task policy implementation. As aptly asserted by Sabatier and Jenkins-
that are ‘intended’ to put policy into effect or practice. The point, according to the post-modernist thinking on which this book draws, is that simple policy descriptions of practice do not capture the multiplicity and complexity of the practice of policy on the ground, as such, the implementation of policy in practice almost always means outcomes differ from policy-makers’ intentions. First, Chapters 1 to 4 set the context for the book. Chapter 1 defines (education) policy, and in the process, the traditional problem-solving definition of policy is juxtaposed with the process model, and through that a third conception (i.e. the theoretical eclecticism approach) is gauged to help provide both practical and theoretical bases for understanding how policy and practice exist in dynamic and iterative relationships. Chapters 2 and 3 give insights into how education policy-making is made and implemented respectively to unravel some of the influences on policy processes. Chapter 4 explicates (from within relevant literature) the policy paradox to assist readers to understand perspectives that are advanced in latter chapters to unravel and/or explain the existence or occurrence of this policy phenomenon. Second, Chapters 5 to 7 draw on literature from disparate sources to unravel perspectives on the policy implementation paradox, whilst Chapter 8 presents the key messages that are tangential to achieving the objectives of the book. Overall, the Chapter 8 performs three functions, namely it:

- summarizes perspectives presented in the scholarly literature to demystify and unravel the policy implementation paradox
- illustrates the reasons for the choice of the post-modernist perspective as the most appropriate and/or best suited perspective for unravelling this policy phenomenon; and
- outlines the relevance (and/or justifications) of the post-modernist conception of policy as both ‘text’ and ‘discourse’ as a framework for understanding the policy implementation paradox and the dynamism of policy processes at large.

The contribution of this book is seen particularly in its ability to leverage the post-modernist conception of policy as both ‘text’ and ‘discourse’ to stress the importance of recognizing the role of implementation in actually changing policy. Brought directly into the context of the policy implementation paradox, the book (drawing on the post-modernist conception of policy) clearly propels the dynamism of policy processes, and uses this to explain the reasons why policy implementation outcomes most often differ from policy-makers’ intentions. First, the book makes the point aptly and forcefully that because policy processes are dynamic, there is usually conflicts among those who make policy as well as those who put policy provisions into practice, about what the important issues or problems for policy are and what the desired policy goals ought to be. Second, it puts down the issue of disconnect between policy intentions in theory and policy implementation outcomes in practice invariably to the active processes involved in interpreting policy. Policy statements, in the view of the book and in the post-modernist tradition, are almost always subject to multiple interpretations and re-interpretations depending upon the standpoint of the people doing the interpretive ‘work’. Third, the policy/practice gap is explained as existing and/or occurring because the practice of policy on the ground is extremely complex, both that which is being ‘described’ by policy and those that are ‘intended’ to put policy into effect or practice. The point, according to the post-modernist thinking on which this book draws, is that simple policy descriptions of practice do not capture the multiplicity and complexity of the practice of policy on the ground, as such, the implementation of policy in practice almost always means outcomes differ from policy-makers’ intentions.

Against the backdrop of these three reasons alluded to, the book attributes the underlying causes of the policy implementation paradox to two interrelated factors. One, it is argued that the paradox in policy implementation occurs mainly because of what post-modernist thinkers call policy refraction. That is to say, because policies in practice tend to evolve through the interactions of a multiplicity of actors, they become distorted and less coherent as they are interpreted and put into practice by the ‘ground-level’ actors and implementers. Two, it is contended that the emergence of post-modern theory (with its contemporary understanding of the nature of reality and how to ‘go on’ in life) has undermined the ‘modernist’ philosophy to such an extent that older ideas of fixed structures conditioning behaviour and imposing regularity and predictability on social life have become considerably weakened, if not demolished completely. Essentially, the book argues that the post-modern theoretical movement has had tremendous effect of stressing the unpredictability of human behaviour in policy implementation processes, and by extension, the unpredictability of policy outcomes as against policy intentions.

Refugee Education in South Asia: Policies and Perspectives
Mahbub Alam Prodip (Associate Professor, Department of Public Administration, University of Rajshahi, Bangladesh), Goutam Roy (Assistant Professor, Institute of Education and Research, University of Rajshahi, Bangladesh) and Debasish Nandy, PhD, (Associate Professor and Head, Department of Political Science, Kazi Nazrul University, West Bengal, India)
In series: Education in a Competitive and Globalizing World
Publication Date: 07/22/2021
249 pp.
Hardcover: 978-1-53619-459-3. $160.00
e-book: 978-1-53619-673-3. $160.00
This edited volume aims to understand the policies, practices and limitations of refugee education in four South Asian countries: Bangladesh, India, Nepal and Pakistan. Evidence suggests that refugee education in three countries including Bangladesh, India and Pakistan is being viewed as a relief activity, whereas education for Bhutanese refugees in Nepal is being observed as a development activity. This book suggests that refugee education in Bangladesh, India and Pakistan should be provided from a development point of view whereby refugee children can live with honor and dignity if they have an opportunity to be integrated in host countries, resettled in third countries or repatriated in their home countries.

**General Education**

**Progress in Education. Volume 66**
*Roberta V. Nata*

In series: *Progress in Education*
Publication Date: 03/30/2021
217 pp.
Hardcover: 978-1-53619-366-4. $250.00
e-book: 978-1-53619-454-8. $250.00

This compilation deals with a variety of topics related to education, ranging from the challenge of reintegration in Ukraine to biological influences on behavior and learning. Chapter One describes the mental health issues that children can face in the school environment related to depression and suicide and discusses how schools can improve suicide prevention efforts. The second chapter outlines the innovative teaching method of flipped classes wherein class lectures become home activities and homework becomes an in-class activity and presents the results of a study focused on this style of teaching. Following this, Chapter Three focuses on Ukraine, where conflict with Russia has impacted many aspects of civic life, including public education. The fourth chapter explains how the booking platform Airbnb impacts the social fabric of Berlin and how this social change can be taught in schools. Chapter Five explores Massive Open Online Courses (MOOCs) in India and proposes improvements for these courses. The sixth chapter discusses solutions to continue effective teaching during the pandemic, and the seventh chapter examines how cortisol can impact a student’s performance from a biochemical point of view. The final chapter aims to establish how best to integrate psychology education into the pre-registration nurse training curriculum to enhance clinical practice.

**Progress in Education. Volume 67**
*Roberta V. Nata*

In series: *Progress in Education*
Publication Date: 07/14/2021
274 pp.
Hardcover: 978-1-53619-916-1. $250.00
e-book: 978-1-53619-929-1. $250.00

This edited volume includes ten chapters, each of which provides a unique perspective on specific topics in the field of education. Chapter One constitutes a literature review on how crucial occupational factors affect the way teachers tend to approach and respond to their daily school duties. Chapter Two aims to gain an understanding of special education teachers’ instructional perspectives and their instructional practices when providing comprehension instruction for students with autism spectrum disorder. Chapter Three highlights the evolution of the Portuguese scientific system over recent decades. Chapter Four focuses on the use of music as an educational modality to help children with language and learning problems. Chapter Five presents a technological ecosystem for classroom management that offers electronically mediated classroom support with engaging activities and learning strategies. Chapter Six describes an intervention program that was developed to raise awareness of cyberbullying and help children acquire effective coping strategies. Chapter Seven examines how using e-learning technology with graphical music representations can lead to increased confidence levels in students who have no prior music training. Chapter Eight analyzes student behaviors collected from three different learning management systems used in distance learning. Chapter Nine describes various types of nursing curricula with a special focus on the role of conceptual frameworks in shaping curricula. Finally, Chapter Ten provides an overview of the historical development of pedagogical approaches in nursing education.
Teacher Education: Opportunities, Challenges and Perspectives  
**Ivan Mattsson**

In series: *Education in a Competitive and Globalizing World*

Publication Date: 08/11/2021

225 pp.

Hardcover: 978-1-68507-011-3, $160.00

e-book: 978-1-68507-029-8, $160.00

In order for students to succeed in the academic environment, teachers must be well-equipped to handle a wide variety of challenges. As such, the professional development and personal wellbeing of teachers is of paramount importance. Instead of focusing on students, this book examines the lives of teachers and investigates means by which to improve their skillsets and quality of life, which results in a better experience for students as well. Chapter One investigates pedagogical approaches and curricula used in contemporary popular music courses delivered by Australian higher education institutions, with a specific focus on guitar tuition. Chapter Two explores the opportunities and challenges present in the Cambodian education system in connection with establishing effective teacher education programs, particularly for ongoing professional learning. Chapter Three presents the concept of social-emotional teaching to address the importance of wellbeing of teachers. Chapter Four includes a personal narrative relating to a teacher’s experience teaching mathematics education courses remotely to elementary teacher candidates during the pandemic. Chapter Five examines the professional identity of the subject discipline teacher educator.

Higher Education

**Open Higher Education in the 21st Century**  
*Ritimoni Bordoloi, PhD (Assistant Professor, Discipline of Education, Krishna Kanta Handiqui State Open University, Guwahati, Assam, India) and Prasenjit Das, PhD (Associate Professor, Discipline of English, Krishna Kanta Handiqui State Open University, Guwahati, Assam, India)*

In series: *Education in a Competitive and Globalizing World*

Publication Date: 05/24/2021

351 pp.

Hardcover: 978-1-53619-612-2, $230.00

e-book: 978-1-53619-644-3, $230.00

This book contains 14 original chapters on the changing face of higher education in the 21st century. This book explores some of the latest possibilities and developments in the 21st century higher education through different context specific discussions on the contours of ODL, use of Mobile Learning, game based learning, integration of Artificial Intelligence in education and so forth which are indeed some of the latest developments. Fresh and experienced readers will greatly benefit from the chapters in this book as they deal with open education, sustainable education, skill-based education, technology enabled learning, techno pedagogy, inter institutional studies on the prospects of lifelong learning, community and ODL institutions, quality assurance in ODL institutions, education for empowerment and so on which have emerged as the most dominant concepts in recent times. However, more than anything else, this book will help readers consider the relevance of open higher education in a wider context.

**The Impact of COVID-19 on Teaching and Learning in Higher Education**  
*Sylvie Studente, PhD (Assistant Professor, Regent’s University London, London, United Kingdom), Stephen Ellis, PhD (Ex Business School Dean, Regent’s University London, London, United Kingdom) and Bhavini Desai, PhD (Associate Professor, Regent’s University London, London, United Kingdom)*

In series: *Education in a Competitive and Globalizing World*

Publication Date: 08/03/2021

217 pp.

Hardcover: 978-1-53619-947-5, $160.00

e-book: 978-1-53619-971-0, $160.00
The outbreak of the COVID-19 pandemic has generated much uncertainty around the HE landscape. Global lockdown measures led to university campuses closing and moving to an online mode for teaching and learning. Scholars have reported that the physical closure of HE institutions has been detrimental to student learning worldwide, whilst others have advocated the possible opportunities that may arise from reshaping HE through technologies. The disruption caused to education by the pandemic has had a significant impact on the learning experience for students; self-directed study time has increased, levels of stress and anxiety experienced by students has increased, and the lack of face-to-face interaction with lecturers and other students has led to feelings of isolation. Educators have reported that due to the immediate urgency of the lockdown there was little time to plan in advance for online delivery and assessment. From a financial perspective, the effects of the pandemic led to a loss for UK universities of £790 million during 2020, which is forecast to increase to a loss of £2.6bn during 2021. Enrolment numbers have declined, and the recruitment of international students, who make up a high number of the market sector, has been severely impacted. It is clear that HE institutions as a whole are facing significant challenges in these uncertain times.

This edited collection addresses the need to examine the far-reaching impacts of the COVID-19 pandemic upon teaching and learning in higher education, examining the challenges and opportunities associated with the impact of the COVID-19 pandemic and outlining current perspectives, practices and innovations which will contribute to an understanding of the current situation for higher education institutions. Research and best practices on adapting to online modes of delivery and the implications of this are reported upon. The need for this edited collection is to share best practices with educators during this time of uncertainty.

Special Education

Communicative Disorders

Manual Sign Acquisition in Children with Developmental Disabilities
Nicola Grove, Ph.D. (Tizard Centre, University of Kent, Horningham, Wiltshire, England) and Kaisa Launonen (Department of Psychology & Logopaedics, Faculty of Medicine, University of Helsinki, Finland)

In series: Languages and Linguistics
Publication Date: 02/15/2021
460 pp.
Softcover: 978-1-53619-208-7. $89.00
hardcover 978-1-53615-377-4, e-book: 978-1-53615-378-1. $89.00

Manual signs are used worldwide to support the communication and language development of children who have developmental disabilities. This book provides an overview of forty years of research and practice by recognised experts, from a developmental perspective. Uniquely, the book includes contributions on both sign languages and sign systems, linking the two fields of Deaf studies and Augmentative and Alternative Communication which have historically been seen as separate. This text is the most authoritative single text to date on the topic, providing an invaluable resource for speech pathologists, researchers, psychologists and educators. The main sections of the book include; the typical development of sign language and of gesture; literature reviews on sign acquisition in children with disabilities such as Down syndrome, autism spectrum disorders, Llandau Kleffner syndrome and deaf blindness. An important chapter deals with the latest research on sign language impairments in deaf children with developmental language difficulties, or autism spectrum disorders. The third section of the book addresses assessment and intervention, covering vocabulary, sign production difficulties and intelligibility, grammar and multi-signing, and pragmatics and discourse skills. The final two sections are concerned with use of signs in context: in the home, in school, and in different cultures. Throughout, care is taken to ensure that the voices of users are present and vivid, whether these be family members, teaching staff or the children themselves, with an entire chapter given over to an interview with a young adult’s reflections on her use of sign since childhood. The book concludes with a call for a multimodal perspective on augmentative communication to be adopted in the future.
Special Topics

Child Interaction: Perspectives, Activities and Outcomes

Maria Sakellariou (Department of Pre-School Education, University of Ioannina, Greece; University Campus, University of Ioannina, Ioannina, Greece)

In series: Education in a Competitive and Globalizing World
Publication Date: 05/24/2021
417 pp.
Hardcover: 978-1-53619-514-9. $230.00
e-book: 978-1-53619-601-6. $230.00

Today there is growing scientific and research interest in the study of child interactions and their importance in development, learning and well-being. Research interest in this field is fueled by timeless documentation that children who come to kindergarten with a developed ability to interact with their peers, have more positive attitudes towards school, gain higher performance in cognitive subjects and adapt more quickly to new experiences. In fact, modern research shows that participation in high-quality education and training programs during childhood has a positive impact on academic achievements in school, reduces the risk of school repetition and reduces the need for intervention for social or special educational reasons.

Child interaction and the acquisition of basic social skills begins early, from early childhood and is shaped over time, provided that children are given the opportunity to acquire them.

The authors of this collective volume, with many years of personal experience, document with scientific validity the importance of interaction in childhood, through perspectives, activities and outcomes, many of which seem simpler than they are, yet practice much greater impact on children’s lives than it may initially seem.

In this book, the authors offer teachers new visions and perspectives to upgrade and improve his/her practices, in order to contribute decisively to the development and learning of children. However, as the pages of this book have shown, these new perspectives are created when we are able to listen to and respect children as capable participants in the pedagogical process and when their views are dealt with responsibly and fairly.

Education in Africa: Perspectives, Opportunities and Challenges

Gilbert Motsaathebe, PhD (Department of Journalism, Film and Television, University of Johannesburg, Johannesburg, South Africa)

In series: Education in a Competitive and Globalizing World
Publication Date: 02/10/2021
263 pp.
Hardcover: 978-1-53619-043-4. $195.00
e-book: 978-1-53619-071-7. $195.00

This book comes at a time when Africa is attempting to reinvigorate itself, putting itself on a path for continued stability and economic growth. These reformations have been more pronounced in the educational system, as educational institutions in Africa try to find new ways of making themselves more relevant and repositioning themselves to respond to numerous problems confronting the continent. The book tackles wide-ranging and topical issues that include the decolonisation of education, the implications of COVID-19 on institutions of higher learning, pandemic discourse and education in Africa, gender issues in education, indigenous knowledge systems, transnational education (TNE) partnerships and distance learning issues. This book is a timely contribution that includes views from seasoned scholars from different parts of the continent, such as Ghana, Uganda, Nigeria, Zimbabwe, South Africa and Kenya, as well as the African Diaspora such as Germany and the United Kingdom. The book will be a useful resource for educators, policymakers and students in various sub-fields related to education.
Service Leadership Theory: Origin and Nature
Daniel TL Shek, PhD, FHKPS, BBS, SBS, JP (Interim Vice President (Research and Innovation), Associate Vice President (Undergraduate Programme), Chair Professor of Applied Social Sciences, and Li and Fung Professor in Service Leadership Education, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong, PR China, Advisory Professor of East China Normal University, Honorary Professor of Kiang Wu Nursing College of Macau and Adjunct Professor, Division of Adolescent Medicine, Department of Pediatrics, University of Kentucky College of Medicine, Lexington, United States), Xiaoqin Zhu, PhD (Research Assistant Professor in the Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hong Kong, PR China), Diya Dou, PhD (Research Assistant Professor in the Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hung Hom, Hong Kong, PR China) and Joav Merrick, MD, MMedSci, DMsc (Professor of Pediatrics at the Division of Pediatrics, Hadassah Hebrew University Medical Center, Mt Scopus Campus, Jerusalem, Israel, Kentucky Children’s Hospital, University of Kentucky, Lexington, United States and Professor of Public Health at the Center for Healthy Development, School of Public Health, Georgia State University, Atlanta, United States, the Former Medical Director of the Division for Intellectual and Developmental Disabilities, Ministry of Social Affairs and Social Services, Jerusalem and the Founder and Director of the National Institute of Child Health and Human Development in Israel)

In series: Public Health: Practices, Methods and Policies
Publication Date: 04/08/2021
210 pp.
Hardcover: 978-1-53619-389-3. $160.00
e-book: 978-1-53619-430-2. $160.00

Service leadership is conceived as “satisfying needs by consistently providing quality personal service to everyone one comes into contact with, including one’s self, others, groups, communities, systems, and environments.” Effective service leadership is determined by three Cs – “Competence,” “Character,” and “Care.” To nurture these important leadership qualities in university students, the “Service Leadership Education Initiative” was launched in eight public universities in Hong Kong. The introduction of this new concept is due to the fact that worldwide economic structure has shifted from manufacturing economies to service economies. The key concepts and propositions in service leadership theory (SLT), such as the strong emphasis on humanity, moral character, caring, and trust, have deep theoretical roots in the existing well-established theories and empirical findings in the social science literature. In addition, these important elements of service leadership have been successfully practiced and proved to exert beneficial influences on personal and organizational success. These findings give support to the validity of the SLT and its further application in education and industry. We earnestly hope that service leaders and organizations can put SLT propositions into practice to achieve success.

Teachers and Principals: Global Practices, Challenges and Prospects
James E. Kelly
In series: Education in a Competitive and Globalizing World
Publication Date: 05/14/2021
207 pp.
Hardcover: 978-1-53619-623-8. $160.00
e-book: 978-1-53619-649-8. $160.00

This book is comprised of seven chapters about the experiences of teachers and principals in the public education system. Chapter One investigates teachers’ and principals’ perspectives on the issue of students’ risky online behaviors as well as the role of their resilience in their perspectives on this topic. Chapter Two assesses the extent to which English Language Learner status was related to the reading achievement of Texas Grade 4 boys and girls in special education. Chapter Three studies the degree to which differences were present between experienced, moderately experienced, and new school principals in terms of what they emphasized and how they spent their work time at their campuses. Chapter Four examines the reading, mathematics, and science performance of elementary school students
Based on the years of experience of their school principal, Chapter Five presents the results of a study that was conducted to examine the relationship between the number of school counselors employed at the elementary, middle, and high school levels and the percentage of students determined to be at risk during the 2018-2019 school year in Texas. Chapter Six examines the effect of bilingual education programs on the reading performance of Grade 5 students in Texas during the 2018-2019 school year. Finally, Chapter Seven studies the degree to which differences were present in the percentages of all students who enrolled in a dual-credit mathematics course in Texas public high schools by their economic status.

The Teachers’ Lounge: Tales Told and Lessons Learned
Patrice W. Glenn Jones, EdS, PhD (Department of Liberal Arts, Embry-Riddle Aeronautical University, Daytona Beach, FL, USA; Department of Academic Affairs, Alabama State University, Montgomery, AL, USA), Elizabeth K. Davenport, JD, PhD (Department of Educational Leadership, Policy, and Law, Alabama State University, Montgomery, AL, USA) and Rose-May Frazier, PhD (Director of Academic Advising and College Life Coaching, Florida State University, FL, USA)

In series: Advancements in Learning and Instruction
Publication Date: 05/10/2021
201 pp.
Softcover: 978-1-53619-498-2. $95.00
e-book: 978-1-53619-572-9. $95.00

Behind the doors of teachers’ lounges, teachers share with each other. They share their frustrations and enjoyment. They also share stories about the students they serve. Sometimes these stories are meant to entertain, and at other times, these stories are designed to illustrate a message about the nature of students and the importance of teacher behaviors. Through the edited book volume, The Teachers’ Lounge: Tales Told and Lessons Learned, the editors manage to capture the spirit of teacher communalism in print form. Fun, heart-warming, and even bewildering within-school tales are shared. Through the narratives presented, associated lessons are also shared. These lessons elevate new, as well as experienced, teacher capacity and encourage responsible teaching behaviors. Each chapter ends with questions and statements for reflection and discussion, creating a comprehensively engaging and didactic experience from which all teachers could benefit. Though it was especially developed for new and emerging teachers, this volume serves as a didactic glimpse into teaching and a powerful resource for all teachers.

“This volume made me reflect upon my time as a teacher. I could relate to every word within it. I also got a good laugh.”—Garrett Dennis, Councilman, City of Jacksonville, Florida

“This volume is a considerate contribution to help prepare new teachers for the reality of the classroom. It is reflective, responsible, and resolute.”—David H. Jackson, Jr., Professor of History, Associate Provost for Graduate Education & Dean School of Graduate Studies, Research, and Continuing Education, Florida A&M University

“I really wish I had a resource like this when I began teaching. I was bombarded with theory, but there was nothing that I could really relate to. I had so many misconceptions that I was forced to reconcile with reality. This book opens the door to the world of real teaching for new teachers. It will help many.”—Lasonya G. Rentz, Guidance Counselor

“Books like this are essential if we are going to prepare a new generation of teachers who are ready to assist and foster growth in all students.”—Diedrich Arterberry, Veteran Teacher

Topics in Science Education
Matthew N. Bowman

In series: Education in a Competitive and Globalizing World
Publication Date: 07/22/2021
243 pp.
Hardcover: 978-1-53619-769-3. $160.00
e-book: 978-1-53619-827-0. $160.00

Science education represents one of the most fundamental components of any well-designed public education program, as teaching science helps students understand critical thinking skills and evidence-based reasoning. However, the field of science education is not without its controversies, as the multifaceted and complex nature of science leads to differences of opinion on the merits of various teaching modalities. Chapter One of this book explains the tension that exists between individual learning styles, which can vary significantly among students, and the need to offer practical guidance to science teachers, who generally plan their curricula on a class/course basis. Chapter Two describes the lack of consensus on the meaning of STEM or STEAM education among educators and attempts to resolve this ambiguity by clearly defining STEM education. Chapter Three presents a study that includes a design and implementation of playful science projects in the elementary classroom that facilitate the learning of STEM concepts in
formal contexts and promote positive emotions in students. Chapter Four discusses the tendency for teachers to experience negative emotions when conducting STEM education as well as the impact of a teacher’s emotional state on student outcomes. Chapter Five explores the logical basis of Einstein’s theory of general relativity and its meaning as derived by Einstein’s inquiry process. Finally, Chapter Six expresses the importance of teaching science through inquiry by presenting a case study of a simple inquiry-based activity in a public senior high school in Japan.

**Universal Primary Education in Africa: English Speaking Countries**

Daniel N Sijuna, PhD (Professor of History of Education and Comparative Education, Department of Educational Foundations, Kenyatta University, Nairobi, Kenya), Isabella Musyoka –Kamere, PhD (Senior Lecturer of History of Education and Comparative Education, Department of Educational Foundations, Kenyatta University, Nairobi, Kenya) and Kisilu Kombo, PhD (Associate Professor of Sociology and Philosophy of Education, Department Educational Foundations, Kenyatta University, Nairobi, Kenya)

In series: African Studies
Publication Date: 03/09/2021
334 pp.
Hardcover: 978-1-53619-160-8. $230.00
e-book: 978-1-53619-225-4. $230.00

Many countries all over the world are struggling to achieve for all. As part of such effort, they have strategized to provide universal primary education which normally refers to the enrollment of all school age children in primary schools, namely achieving one hundred percent of the net enrollment. While such efforts have been realized in many developing countries, it is a major challenge in most developing countries, especially in Africa following the attainment of independence. This book focuses on the influence of donor agencies in setting for the development of education in Africa leading to the preliminary interventions by different African English countries through the provision of free primary education. It is noted that most of the countries which introduced fee remission through free primary education experienced massive enrollments as many children from disadvantaged groups took advantage of the policy intervention to send their children to school. However, the push for it came to be identified with increasing deterioration in the quality of primary education right from the provision of physical facilities, teaching and learning materials, deployment of teachers, performance and transition from primary to secondary education. The quality of infrastructure and teaching and learning materials were in a deplorable state, especially in the rural areas, where such enrollments were well above the official recommended number of pupils per classroom. It proceeds to provide an interesting and easy to read accounts of the development of universal primary education in selected countries analyzing successes and challenges. Among the key challenges identified in the implementation of the UPE policy include; the lack of adequate planning, financing, inadequate infrastructure, and the HIV/AIDS scourge. On the basis of the above challenges, it is important that policy measures are put in place to improve the quality of primary education in many countries.

**Art**

Creating a Global Cultural City via Public Participation in the Arts: Conversations with Hong Kong’s Leading Arts and Cultural Administrators

Patrick Lo, PhD (Associate Professor, Faculty of Library, Information & Media Science, University of Tsukuba, Japan), Wei-En Hsu (Associate Professor, Hong Kong Academy for Performing Arts, Hong Kong; Accomplished pianist, organist, conductor, répétiteur and composer), Stephanie H. S. Wu (Freelance writer, Hong Kong) J. Travis, PhD (Visiting Fellow, City University of Hong Kong, Media & Marketing Communications, Hong Kong) and
Major changes are affecting the cultural sector around the world, and there is a need for new skills and knowledge in arts and cultural administration. This book features insightful interviews with 22 leading arts and cultural directors/CEOs in Hong Kong – discussing the most up-to-date trends and professional practices in this field. The institutions represented in the work are quite diverse, covering art archives, performing arts institutions, and even literary festivals and orchestras, etc. This book is of definite interest to arts and cultural administration professionals who are already practicing in the field, mid-level managers who are aspiring to advance their careers and to become future leaders, as well as general readers who just want to know more about the current state of arts management and the roles that our artists and organizations play in Hong Kong and in the global context.

In writing this book, the author desired to familiarize the general public with some of the fine pieces of Egyptian sculpture and goldsmiths’ work, and to point out how to approach them in order to appreciate their worth.

The purpose of the present work is to study what is known of one of the most important genres of Greek sculpture—the monuments erected at Olympia and elsewhere in the Greek world in honor of victorious athletes at the Olympic games. Since only meagre remnants of these monuments have survived, the work is in the main concerned with the attempt to reconstruct their various types and poses.

How They Succeeded is the life-stories of successful men and women Each story contains the elements that make men and women successful; and they are intended to
show that character, energy, and an indomitable ambition will succeed in the world, and that in this land, where all men are born equal and have an equal chance in life, there is no reason for despair.

Asian History

Dissecting History and Problematizing the Past in Indonesia
Didik Pradjoko (Department of History, Faculty of Humanities, Universitas Indonesia, Depok, Indonesia) and Dewaki Kramadibrata (Department of Literature, Faculty of Humanities, Universitas Indonesia, Depok, Indonesia)

In series: Asian Political, Economic and Social Issues
Publication Date: 03/24/2021
404 pp.
Hardcover: 978-1-53619-369-5. $230.00
e-book: 978-1-53619-399-2. $230.00

Studies on Indonesian history commonly deal with issues revolving around the nation’s politics, religion, and identity. However, the development of human civilization does not always occur in merely these three aspects. Other aspects such as technological and scientific advancement are also factors which contribute to the progress of human life. Unfortunately, it is uncommon for the academic discipline of history to tackle such issues, especially with a more particular focus on Indonesia. Dealing with these two major themes may also pose some difficulties. To understand recent technological and scientific developments, understanding our ancestors’ ways of survival, cultivation, and belief system becomes necessary. Nonetheless, without using manuscripts or conducting interviews with local people of a particular place, information regarding our ancestors’ way of life would become mere stories.

To overcome these obstacles, Dissecting History and Articulating the Past is produced as an edited volume which explores these issues, particularly in the space of Indonesia. To provide more comprehensive information, Indonesia’s relation with its neighboring countries such as Malaysia and Australia is also presented in this edited volume. This edited volume consists of 7 parts, each of which examines particular issues: (1) History of Indonesian Infrastructures; (2) History and Indonesian Politics; (3) History and Social Issues; (4) History and Transnational Relation; (5) History and Economics; (6) Religion in Indonesian History; (7) History and Manuscripts.

The chapters of the edited volume are written by researchers from particular regions in Indonesia. In studying their places of origin, these researchers write the chapters with emotional attachments uniquely belonging to them. Such emotional attachments result in findings with unique perspectives which differ from those of foreign and other Indonesian researchers who have studied the same location. At the same time, researchers who present their findings on Indonesia-Malaysia or Indonesia-Australia relation (along with the life of society in respective countries) also make fresh contributions to existing repository of historical writings on politics and international relations. With diverse issues explored and investigated, this edited volume will prove to be useful for not only historians, but also researchers from different academic disciplines whose focus of research is related to technology and culture.

European History

A Walking Tour of Italy’s WWII Battlefields: Breaking the Gustav and Hitler Lines
Frank de Planta de Wildenberg (Lt Col (Retd), Lead Author and History Tour Guide) and Robert Irving Desourdis (Master Solution Architect, Desourdis Collaboration, LLC, Olympia, Washington, USA)

In series: Europe: Past, Present and Future
Publication Date: 03/04/2021
243 pp.
Hardcover: 978-1-53619-076-2. $195.00
e-book: 978-1-53619-145-5. $195.00

The Italian Campaign is truly an amazing, and often heartbreaking, story, and it certainly generates sympathy as well as respect for the soldiers who fought there, particularly the sacrificed Texas and Polish soldiers as well as the British “D-Day Dodgers.” In addition to the British soldiers, you gain a new and far greater appreciation of the men in the 36th Texas and Polish Divisions because of their commitment, heroism and sacrifice in these battles, much less the many others from multiple nations who fought in Italy in 1943 and 1944. This book is the second title in the NOVA Science Publishers Homeland Security Series presenting a walking tour of World War II battle sites in mainland Italy.
These books were derived from the sights and sounds experienced while on Marty Gane’s South Mountain Expeditions 2014 tour called WWII Invasion of Italy: From Sicily to Rome. The late Edwin Cole Bearss [1] was the lead South Mountain historian for the tour, and helped select our expert history guide British Lt Col (Retd) Frank de Planta de Wildenberg, a deservedly renown Italian battlefield tour leader. Franks designed the tour route, providing the specific strategic and tactical on-the-ground details we experienced at each stand (tour location) we visited. Ed Bearss provided insightful commentary and likened situations to his own combat experience as a Marine in the WWII Pacific theater.

This book provides the images and narration of Frank and Ed as we were taken on the tour of battle sites as the Allies tried four times to break through the Gustav Line and then another battle for the Hitler Line. Nowhere has the importance of terrain in ground combat more apparent, and perhaps more exaggerated, than in Italy, and even more so in and around Montecassino.

This book documents Frank’s and Ed’s accurate and insightful narrative and many photographs drawn from tour video. We were continuously impressed with the full visibility of the Liri Valley floor from the surrounding heights above Rte. 6, the chosen Allied route to Rome. These heights enabled domination of the battles fought for the Gustav Line by physically underpowered and tactically overmatched Allied armies. Creating this book series brought back many emotive sights, sounds, stories and emotions (unfortunately, not the food) experienced on the tour. We hope it provides some sense of that experience for the reader.

A Walking Tour of Italy’s WWII Battlefields: From the Anzio Landings to Rome
Frank de Planta de Wildenberg Lt Col (Retd), Lead Author and History Tour Guide) and Robert Irving Desourdis (Master Solution Architect, Desourdis Collaboration, LLC, Olympia, Washington, USA)

In series: Europe: Past, Present and Future
Publication Date: 03/17/2021
242 pp.
Hardcover: 978-1-53619-077-9. $195.00
e-book: 978-1-53619-197-4. $195.00

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• A Walking Tour of Italy’s WWII Battlefields: From the Salerno Landings to San Pietro Infine
• A Walking Tour of Italy’s WWII Battlefields: Breaking the Gustav and Hitler Lines
• A Walking Tour of Italy’s WWII Battlefields: From the Anzio Landings to Rome

These books were derived from the sights and sounds experienced during Marty Gane’s South Mountain Expeditions tour called WWII Invasion of Italy: From Sicily to Rome, conducted in September 2014. The late Edwin Cole Bearss was the lead South Mountain historian for the tour, and helped select our expert history guide British Lt Col (Retd) Frank de Planta de Wildenberg, a deservedly renown Italian battlefield tour leader. Franks designed the tour route, providing the specific strategic and tactical on-the-ground details experienced at each tour stand site. Ed Bearss provided insightful commentary and likened situations to his own combat experience as a Marine in the WWII Pacific theater.

After experiencing the disaster of the underpowered US 36th Division at the Rapido crossing as described in Book 1 and the four battles for the high ground around Montecassino to break the Gustav Line from Book 2, the walking tour from Anzio to Rome demonstrates more horrific losses of men and material for little gain. The cost of attacking the “tough old gut,” includes the American Rangers at Cisterna and the British in the World War I trench warfare of the Lobster Claws above Anzio. Added to these losses are the men and woman behind the lines, the doctors and nurses, lost to the terror shelling by long-range cannon like Anzio Annie, reminiscent of the Paris Gun during WWII.

The late Ed Bearss history tours always emphasize the importance of the terrain in victory or defeat for the ground soldier, his or her units, and the armies as a whole. From the Alban Hills, German artillery observers could see everything that moved on the Anzio Plan, call in indirect fire from many guns with impunity, or lob shells into the port area miles behind the fighting. Just as at Salerno, the Allies had to capture this high ground to protect the beachhead, and once through the Velletri Gap, move north toward Rome.
A Walking Tour of Italy’s WWII Battlefields: From the Salerno Landings to San Pietro Infine
Frank de Planta de Wildenberg (Lt Col (Retd), Lead Author and History Tour Guide) and Robert Irving Desourdis (Master Solution Architect, Desourdis Collaboration, LLC, Olympia, Washington, USA)

In series: Europe: Past, Present and Future
Publication Date: 03/04/2021
182 pp.
Hardcover: 978-1-53618-572-0. $160.00

The Italian Campaign is truly an amazing, and often heartbreaking, story, and it certainly generates sympathy as well as respect for the soldiers who fought there, particularly the sacrificed Texas and Polish soldiers as well as the British “D-Day Dodgers.” In addition to the British soldiers, you gain a new and far greater appreciation of the men in the 36th Texas and Polish Divisions because of their commitment, heroism and sacrifice in these battles, much less the many others from multiple nations who fought in Italy in 1943 and 1944. This book is the first title in the NOVA Science Publishers Homeland Security Series presenting a walking tour of World War II battle sites in mainland Italy:

• A Walking Tour of Italy’s WWII Battlefields: From the Salerno Landings to San Pietro Infine
• A Walking Tour of Italy’s WWII Battlefields: Breaking the Gustav and Hitler Lines
• A Walking Tour of Italy’s WWII Battlefields: From the Anzio Landings to Rome.

These books were derived from the sights and sounds I experienced while on Marty Gane’s South Mountain Expeditions tour called WWII Invasion of Italy: From Sicily to Rome, which she conducted in September 2014. The late Edwin Cole Bearss was the lead South Mountain historian for the tour, and helped select our expert history guide British Lt Col (Retd) Frank de Planta de Wildenberg, a deservedly renown Italian battlefield tour leader. Franks designed the tour route, providing the specific strategic and tactical on-the-ground details we experienced at each stand (tour location) we visited. Ed Bearss provided insightful color commentary and likened situations to his own combat experience as a Marine in the WWII Pacific theater.

This book provides the images and narration of Frank and Ed as we were taken from the Allied seaborne landings at Salerno to the fights for the high ground surrounding the beachhead to the devastation wrought at San Pietro Infine, the subject of a well-known period film by John Houston. During the development of the Ed Bearss memoir trilogy books (see Footnote 7 above), I created the preliminary Italian tour history that has been reviewed, vastly improved and supplemented by Frank de Planta, necessarily and deservedly the book’s first author. Working with someone like Frank de Planta, as with both Ed Bearss and Barney Nolan in their memoirs, has proven (almost) as enjoyable as touring the Italian battlefields. Creating this book series brought back many emotive sights, sounds, stories and emotions (unfortunately, not the food) I felt while on the tour. We hope it provides some sense of that experience for the reader.

Many excellent academic books have been written explaining Italian battlefield events to the detail, and we include these books in Frank’s exhaustive bibliography. However, this book brings the tour experience, being there on the ground, as close as possible to reality for the reader by showing you many images from where the armies fought and died to set Italy free and attack the “soft underbelly” of the Third Reich. Its purpose is to have the reader experience the tour as we did, incorporating images from the extensive video I took that September in Italy. It was hard to imagine the violence that happened there over 75 years ago. Our tour guide, Frank de Planta, with color commentary from Ed Bearss, provided an emotive and accurate explanation of the events, the scenes, and the sacrifice. We hope this book provides at least a fraction of the experience many on this tour experienced there.

Italy, The Magic Land
Lilian Whiting

In series: Historical Manuscripts
Publication Date: 06/25/2021
265 pp.
Hardcover: 978-1-53619-785-3. $195.00
e-book: 978-1-53619-834-8. $195.00

Italy, the Magic Land is a descriptive travelogue written by Lilian Whiting.
Lives of the Most Eminent Literary and Scientific Men of France.  
**Volume 1**
*Mary Wollstonecraft Shelley*
In series: *Historical Manuscripts*
Publication Date: 08/11/2021
355 pp.
Hardcover: 978-1-53619-852-2, $230.00  
e-book: 978-1-53619-998-7, $230.00
Mary Wollstonecraft Shelley achieved most of her fame for the classic novel, *Frankenstein*. Shelley also penned this 2-volume book which consists of biographies of important literary and scientific thinkers of the 14th to 18th centuries.

Lives of the Most Eminent Literary and Scientific Men of France.  
**Volume 2**
*Mary Wollstonecraft Shelley*
In series: *Historical Manuscripts*
Publication Date: 08/11/2021
306 pp.
Hardcover: 978-1-53619-851-5, $230.00  
e-book: 978-1-68507-044-1, $230.00
Mary Wollstonecraft Shelley achieved most of her fame for the classic novel, *Frankenstein*. Shelley also penned this 2-volume book which consists of biographies of important literary and scientific thinkers of the 14th to 18th centuries.

Queens of Old Spain  
*Martin Andrew Sharp Hume*
In series: *Historical Manuscripts*
Publication Date: 05/05/2021
332 pp.
Hardcover: 978-1-53619-541-5, $230.00  
e-book: 978-1-53619-659-7, $230.00
In Spain, the share of ladies in deciding the political destinies of the country from the throne has been more conspicuous than in other European monarchies. The oriental traditions dominant in Spain for centuries tended to make wives the humble satellites rather than the equal companions of their husbands. But whilst these traditions limited the power of Spanish women generally, they were insufficient to counteract the extraordinary political influence of a series of remarkable feminine personalities who have on occasion during the course of four centuries practically wielded the sceptres of Spain.

The History of London  
*Walter Besant*
In series: *Europe: Past, Present and Future*
Publication Date: 08/03/2021
300 pp.
Hardcover: 978-1-53619-867-6, $230.00  
e-book: 978-1-53619-974-1, $230.00
Written in the late 1800’s, *The History of London* by Sir Walter Besant gives an account of the city from its humble beginnings to the greatness of the Victorian era. Although its premise is the history of London, it does not confine itself to mere facts about that one city, but explores what life was like for the citizens of London across its long history, and the links between historical events, culture and the experiences of Londoners and wider society.
**Latin American and Caribbean History**

**Encyclopedia of Latin America (12 Volume Set)**  
*Anders N. Toft and Jacob M. Andreasen*  
In series: *Central America and the Caribbean*  
Publication Date: 02/05/2021  
3672 pp.  
Hardcover: 978-1-53618-629-1. $1,850.00  
e-book: 978-1-53618-793-9. $1,850.00  
Encyclopedia of Latin America organizes researchers from around the world in Latin American studies and related disciplines and maintains an up-to-date reference work for readers worldwide. Please review the Table of Contents for more in-depth information.

**U.S. History**

**History of the Expedition under the Command of Captains Lewis and Clark, Volume 1**  
*Meriwether Lewis and William Clark*  
In series: *American History, Culture and Literature*  
Publication Date: 01/13/2021  
342 pp.  
Hardcover: 978-1-53619-057-1. $230.00  
e-book: 978-1-53619-165-3. $230.00  
History of the Expedition under the Command of Captains Lewis and Clark, is a fascinating account of the first exploration of the Missouri River, the journey over the Rocky Mountains, and the Columbia River to the Pacific Ocean. This 2 volume book contains an accurate diary of the journey to discover the Northwest Passage, commissioned by and reported to Thomas Jefferson.

**History of the Expedition Under the Command of Captains Lewis and Clark, Volume II**  
*Meriwether Lewis and William Clark*  
In series: *American History, Culture and Literature*  
Publication Date: 02/05/2021  
387 pp.  
Hardcover: 978-1-53619-058-8. $230.00  
e-book: 978-1-53619-166-0. $230.00  
History of the Expedition under the Command of Captains Lewis and Clark, is a fascinating account of the first exploration of the Missouri River, the journey over the Rocky Mountains, and the Columbia River to the Pacific Ocean. This 2 volume book contains an accurate diary of the journey to discover the Northwest Passage, commissioned by a
Looking to the general trend of Washington’s military career, it is emphasized, throughout the volume, that the moral, religious, and patriotic motives that energized his life and shaped his character were so absolutely interwoven with the fibre of his professional experiences, that the soul of the Man magnified the greatness of the Soldier.

Applied Linguistics Research and Good Practices for Multicultural and Multilingual Classrooms
Isaak Papadopoulos (Teaching Staff Member, Center of Greek Education, Greece) and Smaragda Papadopoulou (Full Professor of Language Teaching, University of Ioannina, Greece)
In series: Languages and Linguistics
Publication Date: 05/24/2021
210 pp.
Hardcover: 978-1-53619-611-5. $160.00
e-book: 978-1-53619-637-5. $160.00
This book aspires to provide a reflective and descriptive account of innovative research works and practices related to promoting and accommodating cultural and linguistic diversity in education. Within a diverse world, classrooms with diversity are not considered to be a major challenge, especially when researchers and teachers are making a joint attempt to accommodate this diversity of skills, competences, knowledge, expertise, feeling, languages, and cultures. This book has been developed to cover various aspects of approaching and supporting multilingual and multicultural classrooms through a selection of chapters, which shed light onto experiences in the field. The contributors of this book report and reflect on practices that raise students’ multilingual and inter/multicultural awareness, communication and interaction. They discuss challenges of various contexts and provide perspectives from different angles on the above-mentioned issues underlining the need for continuous research, implementation and reflection in modern diverse classrooms. Teachers and researchers internationally seem to have placed this diversity at the center of their attention and this book is an example of best practices and pieces of research towards supporting such classrooms which have been seen as a crossroad for languages and cultures.

Literacies, Culture, and Society towards Industrial Revolution 4.0: Reviewing Policies, Expanding Research, Enriching Practices in Asia
Fuad Abdul Hamied (English Education Department, Indonesia University of Education, Universitas Pendidikan Indonesia, Bandung, Indonesia)
In series: Languages and Linguistics
Publication Date: 01/27/2021
381 pp.
Hardcover: 978-1-53618-963-6. $230.00
e-book: 978-1-53619-039-7. $230.00
This book began as one of the publication outlets for two flagship conferences in 2019: 12th Conaplin (Conference on Applied Linguistics) and 3rd Icollite (International Conference on Language, Literature, Culture, and Education) which bring forth broad topics in the fields of education, applied linguistics, and literature organized by the Indonesia University of Education (UPI – Universitas Pendidikan Indonesia). Conaplin
is one of the first annual conferences held by UPI, organized by the Language Centre in collaboration with the English Language Department. Icollite, on the other hand, emerged from the local scientific forum into an international conference to showcase the latest insights offered by new doctoral graduates in the Faculty of Language and Literature Education. For the themes of 2019 put forth by the two conferences, 12th Conaplin’s “Applied Linguistics and Industrial Revolution 4.0: Reviewing Policy, Expanding Research, Enriching Practices” and 3rd Icollite’s “Bridging Literacies, Culture, and Society towards Education 4.0”, we highlight the importance of current buzz words in the language and education fields. We have observed that the proliferation of the use of these terms signals how communities in general, especially those in higher education, are grappling with responding to rapid changes in the IR 4.0. In the era we live in, humanity is being reshaped at an unprecedented speed and scale, mainly due to the advancement of technology. In order to maintain balance in our educational system so that social and cultural aspects can work harmoniously with the advancement of technology that can sometimes be isolating and impersonal, we collectively need to identify new and innovative ways in which we support the full potentials of our students, colleagues, and communities in interconnected global interactions. To this end, we need to review our existing policies in education, expanding our research to foster more collaboration and interdisciplinary connection to provide solutions and alternatives to problems that might arise as the consequence of the changing times.

Nazarudin (Lecturer, Academic Affiliation: Linguistics Department, Faculty of Humanities, Universitas Indonesia, Kampus UI, Depok, West Java, Indonesia) and A. T. P. G. van Engelenhoven (Lecturer, Institute of Area Studies, Leiden University, Leiden, Netherlands)
In series: Languages and Linguistics
Publication Date: 03/19/2021
449 pp.
Online Book: 978-1-53619-337-4. $0.00
To study language and linguistics means to unravel reality with all its aspects. By contextualizing today’s reality in different perspectives, we can gain a bigger picture of language phenomena within its context. The chapters in this edited volume present research findings complementing or even challenging ongoing scholarly discussions in the linguistics and humanity studies. The chapters are divided into three big sections based on the issues being discussed: (1) Language and Identity in the Media, (2) Language Acquisition and Education, and (3) Language and Politics. Besides the obvious urgency to problematize these issues due to the dynamics of language development around the globe, there will always be a need to constantly create new conversations on how language and linguistics interacts with multidiscipline study, such as identity, media, and politics. The wide variety of aspects of language studies that are being analyzed in the chapters are shown through the point of view of non-Western scholars, in this case Indonesian scholars. Therefore, it provides alternative ways of interpreting the data and the text. The issues being discussed might seem universal as depicted in the choices of texts, which come from different countries. However, the specificity of each context contributes to a more complex discussion of cross-linguistics aspects on language studies.

Sociolinguistics and Dialectological Studies in Indonesia
Sonya Puspasari Suganda (Lecturer, Head of Post Graduate Linguistics Program Linguistics Department, Faculty of Humanities, Universitas Indonesia) and Antonia Soriente (Lecturer, Department of Asian, African and Mediterranean Studies, Universtiy of Naples ‘L’Orientale’, Naples, Italy)
In series: Languages and Linguistics
Publication Date: 07/06/2021
314 pp.
Hardcover: 978-1-53619-460-9. $230.00
e-book: 978-1-53619-736-5. $230.00
This book contains chapters which are classified into three major themes, namely Dialectology Studies in Indonesia, Sociolinguistics Issues in Java, and Meanings and Society. The first part of the edited volume discusses the close relationship between culture, traditions, and myths in the community, such as the tradition of Labuhan in East Java as a ritual offering to the Queen of the Southern Sea. There are multiple factors influencing languages in different regions in Indonesia, which include economic development from the tourism sector. The second part focuses on the concept of the relationship between language and its speakers. Family, as the smallest unit of society, is considered the most ideal place for language maintenance. Country is also assumed to play an important role in determining what language to maintain through lessons taught in school. The interesting thing, however, is that in the Indonesian context, administrative boundary is not always equivalent with the language boundary. Expansion or unification of regions, for instance, may change the language curriculum taught in schools. Meanwhile, Meanings and Society chapters show that the intention to maintain
tradition and establish harmonious relations with other speakers from different backgrounds may also influence the way someone speaks. It is not surprising, therefore, that code switching in a conversation, which is done with the intention to show solidarity towards speakers from different backgrounds, has become a common phenomenon in Indonesia. The studies in this book constitute empirical studies of the Indonesian people’s everyday lives particularly those concerning the abundance of languages spoken across the country.

Literature

**A History of Italian Literature**  
*Richard Garnett*  
In series: *Historical Manuscripts*  
Publication Date: 04/15/2021  
364 pp.  
Hardcover: 978-1-53619-423-4. $230.00  
e-book: 978-1-53619-474-6. $230.00  
This book summarizes the history of Italian literature from its inception to the early twentieth century and analyzes it in the context of other contemporary European literature as well as the literature of antiquity.

**Life and Letters of Robert Browning**  
*Mrs. Sutherland Orr*  
In series: *Historical Figures*  
Publication Date: 03/17/2021  
321 pp.  
Hardcover: 978-1-53619-352-7. $230.00  
e-book: 978-1-53619-404-3. $230.00  
Robert Browning was one of the greatest English poets of the Victorian era. This biography contains letters Browning wrote to relatives and friends throughout his life, giving an insight into his formation as a poet.

**The Journal of Leo Tolstoi (First Volume- 1895-1899)**  
*Leo Tolstoi*  
In series: *Historical Figures*  
Publication Date: 06/25/2021  
273 pp.  
Hardcover: 978-1-53619-784-6. $195.00  
e-book: 978-1-53619-828-7. $195.00  
The ultimate meaning of the Russian Revolution which took place on March 7, 1917, can be best understood through the pages of the Journal of Leo Tolstoi which is here printed. The spiritual qualities which make up the mind and personality of Tolstoi are the spiritual qualities which make up the new era among men which is being waged so painfully and so uncompromisingly on the soil of Russia. One holds the key to the other, for no land but Russia could have produced a Tolstoi, and in no land but Russia could Tolstoi have been so embraced and so absorbed.
Philosophy

A Course of Philosophy and Mathematics: Toward a General Theory of Reality
Nicolas Laos (Mathematical Modelling and Noopolitics Consultant, Adjunct Professor of Philosophy, Faculty of Philosophy at the Academia Teológica de San Andrés, Veracruz, Mexico)
In series: Mathematics Research Developments
Publication Date: 05/05/2021
492 pp.
Hardcover: 978-1-53619-517-0. $310.00
e-book: 978-1-53619-618-4. $310.00
The nature of this book is fourfold: First, it provides comprehensive education in ontology, epistemology, logic, and ethics. From this perspective, it can be treated as a philosophical textbook. Second, it provides comprehensive education in mathematical analysis and analytic geometry, including significant aspects of set theory, topology, mathematical logic, number systems, abstract algebra, linear algebra, and the theory of differential equations. From this perspective, it can be treated as a mathematical textbook. Third, it makes a student and a researcher in philosophy and/or mathematics capable of developing a holistic approach to reality, of undertaking interdisciplinary endeavors, of understanding (and possibly contributing to) advances and research projects in different academic disciplines, and of having more sources of inspiration and pleasure. From this perspective, it can be treated as a contribution to pedagogy and as an attempt to refresh and, indeed, revitalize modern philosophy. Fourth, it seeks to defend, refresh, and enrich philosophical and scientific structuralism and dynamical philosophy (known also as dynamism). From this perspective, this book can be treated as a research monograph on structuralism and dynamism, tackling the fundamental problems of reality, truth, and consciousness. In this context, Nicolas Laos expounds and proposes: (i) the concepts of dynamized time and dynamized space; (ii) a theory and method that he calls the “dialectic of rational dynamicity”; and (iii) his attempt to consider the fundamental problems of philosophy and science from the perspective of the dialectic of rational dynamicity. Thus, this book pertains to every field that is controlled by the function of consciousness, namely, being, knowing, and acting. The philosophy of rational dynamicity, as the author explains in this book, is a way of contemplating the laws of motion of nature, history, and spirit.

Nihilism: The Philosophy of Nothingness
James Biser Whisker, PhD (Professor Emeritus, West Virginia University, West Virginia, USA) and John R. Coe, EdD (Central Office Administrator, Wood County Schools, West Virginia, USA)
In series: World Philosophy
Publication Date: 06/11/2021
236 pp.
Hardcover: 978-1-53619-741-9. $195.00
e-book: 978-1-53619-802-7. $195.00
Nihilism is a highly negative system of thought with roots in early Greek philosophy. It came into prominence as a major movement with Friedrich Nietzsche's unparalleled assault on Christianity and Christian morality. It became a dominant theme in the dark philosophical system known as existentialism, and thus became an important force in nineteenth century literature and in twentieth century ideologies. It seeks destruction of one or more aspects of society without offering a viable alternative, frequently assuming that the better world will automatically appear after the old world is obliterated. Loathing the building blocks of the present system, nihilism asserts that the better world will be composed of new, but unspecified, components. French philosophy during and after the French Revolution, and virtually all nineteenth century Russian literature, was dominated by nihilism. German Nazism had a nihilistic base which was carefully concealed by racist rantings. Marxism, with so many of its ideas stolen from Russian and French nihilists, proclaimed that faulty economics brought about misery and poverty which would be eradicated by the new but unspecified and undescribed socialist ethic. Revolutionary systems in the twentieth century have delved heavily into the rich trove of nihilist literature to promote, describe, and espouse revolutions which have marked much of that century. Few contemporary nihilists have offered any new insights into reality, choosing only to manipulate the basic concepts heretofore advanced. But the earlier nihilistic ideas have become an all-inspiring training primer for nihilists of future polities. To understand the philosophy of nihilism is to understand the revolutions that have continued to challenge modern societies.
Perspectives on Critical Thinking

John C. Sanders

In series: World Philosophy
Publication Date: 05/14/2021
201 pp.
Hardcover: 978-1-53619-621-4. $160.00
e-book: 978-1-53619-638-2. $160.00

This book consists of seven chapters, each providing a different point of view on the topic of critical thinking, which is defined as the analysis of facts to form a judgment. Chapter One aims to develop a method for improving students’ critical thinking skills using cooperative learning. Chapter Two focuses on an education program designed to develop students’ creativity and critical thinking skills and the impact this program had on teachers in Portuguese public schools. Chapter Three discusses the methods of teaching critical thinking that are most suitable for the Russian educational community. Chapter Four analyzes the importance of critical thinking skills for fighting misinformation in the context of the COVID-19 pandemic, around which many unscientific rumors and conspiracy theories are propagated alongside truthful information. Chapter Five also concerns the COVID-19 pandemic, specifically in connection with the natural human bias towards optimism and how this bias distorts risk assessment in health-related decisions but also provides a sense of control and hope. Chapter Six discusses how teachers can leverage Donald Trump’s proclivity towards manipulative rhetoric, glaring fallacies, and conspiracy theories for teaching critical thinking skills, as well as the potential pitfalls of doing so. Finally, Chapter Seven aims to rethink Essential Learning Outcomes by examining what skills are valued by employers and proposes a strategy of cross-listing courses to facilitate skill acquisition across disciplines.

Philosophy and the Everyday Lives

Fristian Hadinata (Philosophy Department, Faculty of Humanities, Universitas Indonesia, Depok, Indonesia) and James Farlow Mendrofa (Philosophy Department, Faculty of Humanities, Universitas Indonesia, Depok, Indonesia)

In series: World Philosophy
Publication Date: 02/17/2021
264 pp.
Hardcover: 978-1-53619-154-7. $195.00
e-book: 978-1-53619-219-3. $195.00

Studying philosophy means unraveling reality in all its aspects. By contextualizing today’s reality in its social, political, ecological, spiritual and also aesthetic context, the chapters in this edited volume present research findings complementing or even challenging ongoing scholarly discussions in philosophy and humanity. The chapters are divided into five sections based on the issues being discussed: (1) Law and Politics, (2) Economy, (3) Humanity and Wellbeing, (4) Rethinking Spirituality, and (5) Arts. Besides the obvious urgency to problematize these issues due to the dynamics of paradigm and theories in the field of philosophy, there will always be a need to constantly create new conversations. The wide variety of aspects of humanity that are being analyzed in the chapters are done by non-Western scholars, in this case Indonesian scholars, and this provides alternative ways of interpreting philosophical concepts in relation to everyday realities. The issues being discussed might seem universal as depicted in the choices of texts, which come from different countries. However, the specificity of each context contributes to a more complex discussion of various philosophical aspects. The readings and interpretations of the philosophical theories build a non-Western scholarship which is definitely needed to enrich the process of knowledge production in the humanities and social sciences. The multiplicity of the texts chosen as case studies in each chapter is the primary specialty of this edited volume since there are not a lot of projects that cover multiple issues coming from different locales in one book with an interdisciplinary approach.

The Earth in Fragments: A Memoir by Michael Charles Tobias

Michael Charles Tobias, PhD

In series: Distinguished Men and Women of Science, Medicine and the Arts
Publication Date: 01/05/2021
349 pp.
Hardcover: 978-1-53618-987-2. $145.00

As a child, Michael Charles Tobias encountered a wolf caged in a zoo. Gazing upon the pacing, desperate animal, Tobias asked his Father, “Why is he in jail?” For over half a
Social Sciences

century, Tobias has roamed the earth in search of an answer. This memoir is a testimony to Tobias’ field research, expeditions, deliberations, and some answers to that haunting question. Systems ecologist, philosopher, historian of ideas, anthropologist, ethicist and philanthropist, Tobias has emerged as one of the most influential and far-reaching ecological philosophers of this generation. The Earth in Fragments: A Memoir by Michael Charles Tobias chronicles many of his most incisive areas of research, activism and philosophical inflections.

Much of the data, conveyed in a personal and enlightening series of recollections, lends incisive clarity to the emergence and escalating challenges of the environmental and life sciences fields. Tobias shares glimpses into many of the often ethically-harrowing research conundrums confronting him and his wife, Jane Gray Morrison, as they have effectively endeavored throughout the globe, focusing upon animal rights and conservation biology initiatives. Their more than 50 books and 75 films have shed a powerful spotlight on many of the most pressing issues of our time.

The anecdotes pour forth, from an ancient monastery in the Sinai, across the Himalayas, to the Arctic and Antarctic, where Tobias was among the first to draw global attention to the crises mounting across the Last Continent. We see him behind the scenes, directing the ambitious ten-hour drama, “Voice of the Planet” in two-dozen countries, examining the Gaia Hypothesis; conducting a project in the heart of the 1989 catastrophic oil spill in Alaska; his irressible quest to understand the runaway train of human overpopulation across the planet in his book and accompanying PBS film “World War III.”

We follow his probing philosophical meditations-in-action as an animal liberationist from California, Mali, Kenya, China, Greece and Russia. We see his appeal for a “new human nature” in cutting-edge scientific research calling for an interspecies revolution that is at once pantheistic, ethically holistic, and as imaginative and ecologically paradoxical as it is pragmatic. The reader is led through a dazzling and provocative labyrinth of deeply moving eco-science in countries like New Zealand, Madagascar, Brazil, Chile’s Rapa Nui, and throughout Europe, West Africa and Asia. From the Ecuadorian Amazon to Haiti; from Mozambique, Yemen, and Namibia to Borneo, Tobias and Morrison have worked to bring critical conservation strategies and policy priorities to government leaders and scientists throughout the world.

With insights from paleontology, Renaissance art history, deep demography, and the most recent advances in biodiversity conservation and biosemiotics, Tobias leads readers on an exquisite and uplifting journey that, while describing much devastation, provides hopeful glimpses into a near future that is not only possible, but essential for the well-being of the world, as viewed, lived and chronicled by one man at the heart of the Anthropocene.

The Lives and Opinions of Eminent Philosophers
Diogenes Laërtius

In series: World Philosophy
Publication Date: 06/11/2021
473 pp.
Hardcover: 978-1-53619-725-9. $270.00
e-book: 978-1-53619-782-2. $270.00

Diogenes Laërtius divides the philosophy of the Greeks into the Ionic, beginning with Anaximander, and ending with Theophrastus (in which class he includes the Socratic philosophy and all its various ramifications); and the Italian, beginning with Pythagoras, and ending with Epicurus, in which he includes the Eleatics as well as Heraclitus and the Sceptics. His work is the chief source of information we possess concerning the history of Greek philosophy and is the foundation of nearly all modern treatises on that subject.

Moral Identity and Self-Discovery
Verl Anderson, PhD (Professor of Management, College of Business, Dixie State University, St. George, UT, USA) and Cam Caldwell, PhD (Retired Professor, Business, American University of the Emirates; University of Illinois Springfield, Illinois, USA)

In series: World Philosophy
Publication Date: 07/22/2021
205 pp.
Hardcover: 978-1-53619-666-5. $160.00
e-book: 978-1-53619-863-8. $160.00

We live in a time when trust in leaders at all levels of society has declined, when students at colleges and universities openly acknowledge that they cheat, and when the reputations of even the most admired leaders have been sullied by misconduct. It is a time when the future of tomorrow’s generation appears to be growing dimmer and those who have passed on burdens that will have to be borne have clearly neglected their moral
responsibilities. Fixing the blame is far less important than fixing the problem. The root cause of today’s concerns and tomorrow’s future lies in the failure of those who claimed to be trusted leaders to demonstrate personal integrity. This book introduces the concept of “moral identity” as a metric for leaders and organizations of all types to reexamine their moral responsibility. We suggest that moral identity provides a compass for leaders and organizations to adopt in rethinking their obligations to themselves, to their associates, to their customers, to society, and to future generations. The book includes a metric for personal self-assessment, for guiding individuals and organizations, and for establishing a standard for evaluating those who aspire to lead. This book takes a harsh look at the failings of leaders and provides a meaningful resource to those who are willing to lead society to rethink its future.

Religion

Religion and Public Life
Dr. David Muskhelishvili (Doctor of Historical Sciences, Professor, Academician, Member of Georgian Academy of Sciences, Georgia)

In series: Religion and Society
Publication Date: 01/29/2021
205 pp.
Softcover: 978-1-53618-904-9. $95.00
e-book: 978-1-53619-157-8. $95.00

Liberal theologians believe in the necessity of a revision of Christian doctrine, trusting that science excludes the belief in divine intervention. However, divine intervention is perfectly in agreement with the laws of nature and science. Accordingly, there is no reason to reject the Bible and traditional Christian doctrine. A new model of the coexistence of religious and secular discourses is revealed in this collection.

Most of the existing papers focus on the problem of the relationship between church and state in the modern era. In this collection, different experiences are presented along with their significance for specific countries, mostly the Georgian experience on the issues of church and state relations. The role of the religious leader in modern society is described, focusing on his spiritual mission in restoring, enhancing and developing traditional values in society. In particular, the role of His Holiness and Beatitude, the Catholicos-Patriarch of All Georgia, Ilia II is examined for his multifaceted endeavors to strengthen Georgian society and develop traditional spiritual values after the perennial atheism.

This collection is intended for readers interested in the problems of the main right of humanity, freedom of belief, in the modern global era and in the age of secularism.

Today, there is a lack of spirituality around the world. Traditional spiritual values are inhibited; in many European countries, the activity of church figures is stalled, and people are not allowed to choose education based on traditional values. This causes great dissatisfaction in society, as it is believed that traditional spiritual values are the main markers of national identity, and their development and preservation are essential.

Hence, this book will be of great interest for readers interested in the problems of spirituality in both Christian and non-Christian countries. It will be of interest for scholars, as well as for political figures who often encounter such problems in their activities.

See No Evil: Secularization versus Sacred Scriptures
Jonathan E. Leightner (Full Professor, Augusta University, Lincolnton, Georgia, USA)

In series: Religion and Society
Publication Date: 03/04/2021
259 pp.
Hardcover: 978-1-53619-270-4. $195.00
e-book: 978-1-53619-315-2. $195.00

The subjective depends on the situation, the people involved, the time, and the environment. The objective is true for all situations, all people, all times, and in all environments. Many issues are uncontroversially subjective. However, is anything objective? Current intellectual secular culture (which includes Post-Modernism, Post-Modernity, Atheistic Existentialism, Pragmatism, and Post-Structuralism) claims that there are no objective truths (everything is subjective) and that each individual can pick his or her own goals and values. This book investigates the inadequacies of this secular approach when dealing with the purpose of life and the problem of evil by contrasting the behavioral imperatives of secular culture with what the sacred texts of Judaism, Christianity, Islam, Hinduism, and Theravada Buddhism say.

If everything is subjective then each individual does not have inherent worth. “Inherent worth” implies an objective value – a value that is not determined by the situation. The notion that everyone has inherent worth is the foundation on which lying,
stealing, murder, rape, adultery, and genocide are judged as “wrong.” If everything is subjective then we cannot condemn Adolf Hitler for wanting to kill all the Jews or for one group of people for wanting to enslave all of another group.

There are two important consequences of current intellectual secular culture’s rejection of all objective values. First, by interpreting everything as subjective and self-centered, current intellectual secular culture cannot provide purpose to life that is bigger than the individual. In contrast, the five religions considered in this book demand that people embrace goals that are bigger than their self-centered desires. Second, current intellectual secular culture’s rejection of all objective values makes it impossible to condemn some acts as evil. When evil is not condemned, it thrives. The five religions examined do condemn evil and provide answers to the following “problem of evil.”

If God is all good than He would not want the innocent to suffer.
If God is all powerful, He could prevent the innocent from suffering.
We notice that many innocent people suffer in this world
Thus God must either not be all good or not all powerful.
This is a particularly difficult problem for the Abrahamic religions (Judaism, Christianity, and Islam) because they affirm an all-powerful and all-good God. This is less of a problem for Hinduism and Buddhism because these eastern religions believe in reincarnation. Under reincarnation, what may look like an innocent suffering is actually a guilty person paying for his or her evil deeds from this or a previous life. However, the sacred texts for all five religions provide answers to this problem, but not the answers that we often hear from theologians. This book aims at satisfying some of humanity’s greatest needs – the need for purpose and the need for an answer to why innocents often suffer.

**Christianity**

**A Class-Book of New Testament History**
*George Frederick Maclear*

In series: *Historical Manuscripts*
Publication Date: 08/11/2021
297 pp.
Hardcover: 978-1-53619-912-3. $230.00
e-book: 978-1-68507-049-6. $230.00

A Class-Book of New Testament History forms a sequel to the author’s Class-Book of Old Testament History, continuing the narrative from the point at which it ends, and carrying it on to the close of St Paul’s second imprisonment at Rome.

**Life of St. Francis of Assisi**
*Paul Sabatier*

In series: *Historical Figures*
Publication Date: 03/09/2021
285 pp.
Hardcover: 978-1-53619-298-8. $230.00
e-book: 978-1-53619-344-2. $230.00

Francis of Assisi is pre-eminently the saint of the Middle Ages. Owing nothing to church or school he was truly theodidact, and if he perhaps did not perceive the revolutionary bearing of his preaching, he at least always refused to be ordained priest. He divined the superiority of the spiritual priesthood. Saint Francis of Assisi (Italian: San Francesco d’Assisi), born Giovanni di Pietro di Bernardone, informally named as Francesco (1181/1182 - 3 October 1226), was an Italian Catholic friar, deacon and preacher. He founded the men's Order of Friars Minor, the women's Order of Saint Clare, the Third Order of Saint Francis and the Custody of the Holy Land. Francis is one of the most venerated religious figures in history. Pope Gregory IX canonized Francis on 16 July 1228. Along with Saint Catherine of Siena, he was designated Patron saint of Italy. He later became associated with patronage of animals and the natural environment, and it became customary for Catholic and Anglican churches to hold ceremonies blessing animals on his feast day of 4 October. He is often remembered as the patron saint of animals. In 1219, he went to Egypt in an attempt to convert the Sultan to put an end to the conflict of the Crusades. By this point, the Franciscan Order had grown to such an extent that its primitive organizational structure was no longer sufficient. He returned to Italy to organize the Order. Once his community was authorized by the Pope, he withdrew increasingly from external affairs. Francis is also known for his love of the Eucharist. In 1223, Francis arranged for the first Christmas live nativity scene. According to Christian tradition, in 1224 he received the stigmata during the apparition of Seraphic angels in a religious ecstasy making him the first recorded person in Christian history to bear the wounds of Christ’s Passion. He died during the evening hours of 3 October 1226, while listening to a reading he had requested of Psalm 142.
Islamism: Global Surveys and Implications for the Future of the Arab Countries

Arno Tausch (Honorary Associate Professor of Economics, Corvinus University, Budapest, Hungary; Adjunct Professor of Political Science, Department of Political Science, Innsbruck University, Austria)

In series: Religion and Society
Publication Date: 01/05/2021
307 pp.
Hardcover: 978-1-53619-024-3. $125.00
e-book: 978-1-53619-046-5. $125.00

This work is a collection of essays on Islamism and global opinion surveys, focusing on their implications for the future of Arab countries. Much of Western academia and the media still seem to be unable to come to terms with the real challenges posed by Islamism two decades after 9/11 and half a decade after the horrendous Paris 2015 terror attacks.

What is at stake is the question of whether moderate Islamist political movements can and should be partnered with the West. President Obama personally issued the Presidential Study Directive 11 (PSD-11) in 2010, ultimately concluding that the United States should shift from its longstanding policy of supporting “stability” in the Middle East and North Africa to a policy of backing moderate Islamic political movements. The present book squarely contradicts this perspective. Bassam Tibi maintains that only liberal Islam approves of democracy, while Islamism absolutely does not.

The empirical basis of the book is based on estimates of the development of civil society in the Arab World by using comparative opinion survey data based on the evaluation of the World Values Survey and other global and regional surveys. Variables of trust, non-violence, gender justice and tolerance towards homosexuals indicate some of existing deficits in the development of civil societies in the region. Thus, Inglehart and Norris correctly foresaw that the real distinguishing parameter for Huntington’s theory is not his opinion on democracy, but his societal opinion on gender issues. This perspective is followed up with an empirical analysis of the gender ideology of Islamism and its gender values, all based on World Values Survey data. Muslim feminism, which implies the rejection of Islamism and the veil, and the democracy movement in the Muslim world are closely interrelated.

In a chapter on Islamism and anti-Semitism, the book identifies the extent of relationships between anti-Semitism, the current economic and social situation, religious data, and opinions on terrorism among the global Muslim society. Islamism is deeply connected to anti-Semitism.

The book also explores which factors contribute to the approval of terrorist acts, measured by such variables as opinions on suicide bombing and the favorability of terrorist organizations such as Hamas and Hezbollah. The book shows how wrong it is to neglect the underlying ideological radicalism which characterizes the support of organizations such as the Muslim Brotherhood and its affiliates in the region. Along with most radicalized factions of Islamist terrorism, they share intense hatred of Jews and Free Masons and Western civilization.

In a concluding chapter, the book analyzes globalization, the environment in the Arab World and the future “greening” of Arab politics.

Special Topics

Books and Printing: A Treasury for Typophiles

Paul A. Bennett

In series: Fine Arts, Music and Literature
Publication Date: 01/27/2021
385 pp.
Hardcover: 978-1-53619-110-3. $230.00
e-book: 978-1-53619-169-1. $230.00

Books and Printing: A Treasury for Typophiles is a collection of articles by some of the most famous book designers and historians, including Beatrice Warde, Updike, and Morison. Some of the subjects included, are printers' marks, the fine art of printing, typefaces, calligraphy, and the parts of the book. This book will be of interest to anyone who wants to know about the art of printing and book making.
African Politics, Economics and Security

Immigration Detention and Enforcement

Viresh van Baardewijk

In series: Immigration in the 21st Century: Political, Social and Economic Issues

Publication Date: 06/25/2021
326 pp.
Hardcover: 978-1-53619-749-5. $230.00
e-book: 978-1-53619-830-0. $230.00

The Immigration and Nationality Act (INA) authorizes—and in some cases requires—the Department of Homeland Security (DHS) to detain non-U.S. nationals (aliens) arrested for immigration violations that render them removable from the United States. An alien may be subject to detention pending an administrative determination as to whether the alien should be removed, and, if subject to a final order of removal, pending efforts to secure the alien’s removal from the United States. The immigration detention scheme is multifaceted, with different rules that turn on several factors, such as whether the alien is seeking admission into the United States or has been lawfully admitted into the country; whether the alien has engaged in certain proscribed conduct; and whether the alien has been issued a final order of removal. In many instances DHS maintains discretion to release an alien from custody. But in some instances, such as when an alien has committed specified crimes, the governing statutes have been understood to allow release from detention only in limited circumstances. This book focuses on current topics concerning immigration detention and enforcement.

American Government and Politics

Afghanistan: U.S Policies, Legislation and Key Issues

James A. Benn

In series: Politics and Economics of the Middle East

Publication Date: 06/25/2021
305 pp.
Hardcover: 978-1-53619-748-8. $230.00
e-book: 978-1-53619-831-7. $230.00

Afghanistan has been a significant U.S. foreign policy concern since 2001, when the United States, in response to the terrorist attacks of September 11, 2001, led a military campaign against Al Qaeda and the Taliban government that harbored and supported it. In the intervening 18 years, the United States has suffered approximately 2,400 military fatalities in Afghanistan, with the cost of military operations reaching nearly $750 billion. Congress has appropriated approximately $133 billion for reconstruction. In that time, an elected Afghan government has replaced the Taliban, and most measures of human development have improved, although Afghanistan’s future prospects remain mixed in light of the country’s ongoing violent conflict and political contention.

Children in Custody at the Border

Ralph D. Rowland

In series: American Political, Economic, and Security Issues

Publication Date: 06/11/2021
286 pp.
Hardcover: 978-1-53619-746-4. $195.00
e-book: 978-1-53619-781-5. $195.00

There has been a dramatic increase in the numbers of families and children arriving on the southern border over the past several years. Most of these families and children arrived from Central America, fleeing vicious cartels, gang violence, and extreme poverty. After surviving long and dangerous journeys, these families should have been met with safe refuge, but they instead encountered the Trump administration’s myriad inhume border policies like family separation, zero tolerance detention, and the Remain in Mexico policy. These policies and management decisions have contributed to mass overcrowding and widespread inhume conditions at Customs and Border Protection facilities across the southern border. This book looks at the issues involving children in custody.
Current Developments in the U.S.-China Relationship

Ewan Burns

In series: American Political, Economic, and Security Issues
Publication Date: 04/08/2021
400 pp.
Hardcover: 978-1-53619-450-0, $230.00
e-book: 978-1-53619-536-1, $230.00

The United States and the People’s Republic of China (PRC or China) are involved in a prolonged stand-off over trade and in competition that is spilling from political and military areas into a growing number of other spheres, including technology, finance, and education, severely straining ties of diplomatic relations. The two lead the world in the size of their economies, their defense budgets, and their global greenhouse gas emissions. This book looks at the current status of the U.S.-China relationship.

Current Issues in U.S.-European Relations

Richard Sanders

In series: American Political, Economic, and Security Issues
Publication Date: 06/02/2021
350 pp.
Hardcover: 978-1-53619-577-4, $230.00

Since the end of the Second World War, successive U.S. administrations and many members of Congress have supported a close U.S. partnership with Europe. Often termed the transatlantic relationship, the U.S.-European partnership encompasses the NATO alliance, relations with the European Union (EU), and extensive bilateral political and economic ties. Despite periodic tensions over the past 70 years, U.S. and European policymakers have valued the transatlantic partnership as serving their respective geostrategic and economic interests. This book discusses U.S.-EU relations that may be of interest including U.S.-European cooperation on challenges such as managing a resurgent Russia, proposed new U.S.-EU trade agreement negotiations, trade and tariff policies and the U.S.-EU economic relationship.

The Border Wall: Effect on Tribal and Private Landowners

Alexander Durrell

In series: American Political, Economic, and Security Issues
Publication Date: 03/04/2021
380 pp.
Hardcover: 978-1-53619-278-0, $230.00
e-book: 978-1-53619-318-3, $230.00

Private, tribal, and state-owned land constitutes 70 percent of the border. In order to construct barriers across this land, the administration has used eminent domain, a process by which the government can forcibly seize privately-owned land for public use in exchange for compensation. This book look at the effect of the border wall on private and tribal landowners.

Congressional Activity

Black Lung Programs: MSHA, Benefits and Challenges

Ross D. Blodgett

In series: Congressional Policies, Practices and Procedures
Publication Date: 03/24/2021
298 pp.
Hardcover: 978-1-53619-388-6, $230.00
e-book: 978-1-53619-402-9, $230.00

The federal government pays benefits to coal miners affected by coal workers’ pneumoconiosis (CWP, commonly referred to as black lung disease) and other lung diseases linked to coal mining in cases where responsible mine operators are not able to pay. This book looks at the Mine Safety and Health Administration’s coal dust rules and provides background information and policy options concerning the Black Lung Disability Trust Fund.
Foreign Relations

U.S and European Countries: Overview, Policy and Implications
Francisca Warner
In series: European Political, Economic, and Security Issues
Publication Date: 08/11/2021
315 pp.
Hardcover: 978-1-53619-979-6. $230.00
This book looks at the background of various European countries and their relationship with the United States.

Laws and Legislation

Elder Justice: Abuse, Legislation and Financial Exploitation
Vince D. Anderson
In series: Congressional Policies, Practices and Procedures
Publication Date: 04/08/2021
366 pp.
Hardcover: 978-1-53619-447-0. $230.00
e-book: 978-1-53619-510-1. $230.00
Seniors in nursing homes are among the people most vulnerable to life-threatening consequences of abuse and neglect. Across the country, that vulnerability is being exploited in unimaginably cruel ways in nursing homes that are unsafe, understaffed, and uninterested in providing even the most basic humane level of care. Chapter 1 looks at elder abuse and especially nursing home abuse.
Elder abuse is a complex issue. As such, it often leads to calls for a multifaceted policy response that combines public health interventions, social services programs, and law enforcement. Chapter 2 provides a brief legislative history of the Elder Justice Act, summarizes elder justice provisions enacted as part of the ACA, and describes administrative efforts related to implementation and funding, along with several issues for Congress regarding the act’s reauthorization.
Elder financial exploitation—the fraudulent or illegal use of an older adult’s funds or property—has far-reaching effects on victims and society. Chapter 3 examines the status of HHS’s efforts to compile nationwide data through NAMRS on the extent of financial exploitation and the challenges involved, and what is known about the costs of financial exploitation to victims and others.

Religious Liberty and Public Accommodation Laws:
Constitutional Rights versus Statutory Obligations
Anthony Walsh (Department of Criminal Justice, Boise State University, Boise, Idaho, USA)
In series: Laws and Legislation
Publication Date: 05/14/2021
264 pp.
Hardcover: 978-1-53619-578-1. $195.00
e-book: 978-1-53619-657-3. $195.00
The foundational principle of this book is the sacred rights enumerated in the United States Constitution, specifically, in the First and Thirteenth Amendments. With the politicization of the LGBTQ movement, concern for these rights have again come to the forefront of American jurisprudence. The rights enumerated in these amendments have frequently been violated by the various states when, in the name of public accommodation laws, they have attempted to force Christian business owners and religious entities to facilitate events, provide services, express opinions, change attitudes, or to enter into associations that violate their religious consciences. The book explores what it means to have free exercise of religion, free speech, and to be
free of involuntary servitude in the context of the contending rights claimed by LGBTQ individuals. LGBTQ rights are neither denied nor disparaged, but the author argues that the constitutional rights of religious dissenters should not be denied or disparaged either. He also argues that when constitutional rights clash with statutory obligations, the former always triumphs. This has always been black letter law, and remains so in all cases except those in which LGBTQ rights clash with those of Christians.

The book is not just a legal monograph. It engages political, philosophical, and sociological issues such as freedom v. equality, socialism v. republicanism, the liberal-progressive agenda in higher education, and the many benefits Christianity has bestowed on Western civilization. The underlying theme, however, remains, and that theme is that if we lose the freedom of religious conscience which the founding fathers made the “first freedom”, we will lose all freedom.

Unaccompanied Children: Policies, Oversight and Legislation

Martin Turan

In series: Immigration in the 21st Century: Political, Social and Economic Issues

Publication Date: 06/25/2021
345 pp.
Hardcover: 978-1-53619-757-0. $230.00
e-book: 978-1-53619-829-4. $230.00

Chapter 1 examines the Trump administration’s care for unaccompanied children in government custody and the impact of administration policies on the health and wellbeing of children. Chapter 2 describes failures in HHS’s processes to ensure the safety of children in the care of the federal government and safeguard. $32,125,779 in taxpayer funds.
The Office of Refugee Resettlement’s (ORR) grant announcements solicit care providers for unaccompanied children. Chapter 3 examines (1) how ORR considers state licensing issues and past performance in its review of grant applications; (2) state licensing agencies’ oversight of ORR grantees, and how ORR and states share information; and (3) how ORR addresses grantee noncompliance. Legislation on unauthorized childhood arrivals dates to 2001. Most measures on unauthorized childhood arrivals that have seen legislative action have proposed mechanisms for eligible individuals to become lawful permanent residents (LPRs), typically through a two-stage process. Chapter 4 considers House and Senate measures on unauthorized childhood arrivals that have seen legislative action, focusing in particular on legislation considered in the 115th and 116th Congresses. It also discusses the related Deferred Action for Childhood Arrivals (DACA) initiative and DACA-related data.

Presidents


Prebble Q. Ramswell, PhD (Councilwoman, City of Destin, Florida, USA)

In series: American Political, Economic, and Security Issues

Publication Date: 05/10/2021
245 pp.
Softcover: 978-1-53619-538-5. $95.00
e-book: 978-1-53619-616-0. $95.00

In 2016, both the United Kingdom and the United States found themselves embroiled in bitter battles, battles in which the citizens themselves became their own worst enemies. The Brexit campaign and campaign for the 45th presidency precipitated a rebirth of populism and nationalism, invigorating entire populations and inducing even the most casual observer into political action and discourse. Yet, in both cases, what began as an endeavor to serve the needs of the citizenry morphed into a battlefield of derision and division. Racism and xenophobia are no longer isolated issues affecting only small segments of society. Hate crimes, hate speech, and overt racial discrimination are on the rise worldwide stemming from populist empowerment. Domestic terrorism has surged across the West, particularly in the US. An atmosphere of hostility has emerged, pitting neighbor against neighbor, as it insidiously sweeps through society, permanently altering our understanding of right and wrong and law and order. These issues are now at the forefront of debate and have assumed a position on the frontline of political warfare worldwide.
The parallels between the societal changes in the UK and US are not merely provocative, they are disarming, particularly in light of the ensuing rise in far-right and far-left terrorism across the West. In the US, this societal transformation and rise in domestic threat demonstrates a charged and changed political atmosphere, as well as heralding the decline of American democracy.
Donald J. Trump: Notable or Notorious?
Bruce E. Johansen, PhD (University of Nebraska at Omaha, Omaha, Nebraska, USA) and Adebowale Akande (IR Research Guest Professor/Chief Advisor, GLOBE Cross-Cul, Vancouver, BC, Canada)
In series: American Political, Economic, and Security Issues
Publication Date: 05/05/2021
379 pp.
Hardcover: 978-1-53619-490-6. $230.00
e-book: 978-1-53619-558-3. $230.00
Whatever anyone may say about Donald John Trump – and more has been said, most likely, about him than any other person on the planet Earth – a generous majority would probably agree that his presidency has been the most unusual in United States history. This book looks at Trump’s use of alternative reality through a screen of Trump’s lifetime work.

Theodore Roosevelt: An Autobiography by Theodore Roosevelt
Theodore Roosevelt
In series: Historical Manuscripts
Publication Date: 06/11/2021
384 pp.
Hardcover: 978-1-53619-742-6. $230.00
Theodore Roosevelt was a fascinating man. This autobiography, written a hundred years ago, presents his life and career from his own perspective.

Asian Countries: Economic, Political and Social Issues
Mohsen Bahmani-Oskooee (Center for Research on International Economics, University of Wisconsin, Milwaukee, WI, USA), Sahar Bahmani (Department of Business, University of Wisconsin-Parkside, Kenosha, Wisconsin, USA) and Tatchawan Kanitpong, PhD (Associate Professor and Dean, NIDA Business School, Bangkok, Thailand)
In series: Asian Political, Economic and Social Issues
Publication Date: 01/27/2021
289 pp.
Hardcover: 978-1-53619-027-4. $195.00
e-book: 978-1-53619-085-4. $195.00
Over the last four decades, Asian countries have experienced a substantial increase in their global competitiveness. While some of this is due to their economic activity, politics are also a contributing factor. Technological advances, particularly concerning the internet and social media, have also contributed, as have many other factors. We expect information and communication technology led by the development of the internet to make the transformation of knowledge easier and more efficient, thus contributing to faster economic growth worldwide. Sound macroeconomic policy and political conditions facilitate this process. Many Asian countries have learned from the experience of the Asian Crisis of 1987 when the Thai baht lost its value due to a shortage of reserves by the Central bank of Thailand, and capital outflow spread throughout the region. Asian countries now know that to avoid such a run on foreign currencies, they must hold enough reserves to support their own currency. Sound fiscal and monetary policies, as well as an exchange rate policy combined with an efficient banking system, are required to enhance the reserve policy. Another requirement for the effectiveness of macroeconomic policies is desirable political conditions to enhance international confidence in these countries. Strong political stability requires sound rules, laws, and democratic institutions that must be transparent. Granting excessive power to any one ruler has proved to lead to corruption which is an impediment to growth. This book addresses the issues above by providing theoretical and empirical evidence using data from some countries in Asia.
Challenges of Law and Governance in Indonesia in the Disruptive Era I
Heru Susetyo (Manager of Research, Publication and Citation at Faculty of Law, Universitas Indonesia, Depok, Indonesia) and Qurrata Ayuni (Managing Editor of Law and Development Journal Faculty of Law, Universitas Indonesia, Depok, Indonesia)

In series: Asian Political, Economic and Social Issues
Publication Date: 04/15/2021
243 pp.
Hardcover: 978-1-53619-129-5. $160.00
e-book: 978-1-53619-348-0. $160.00

This book originates from papers presented at the 2nd ICLAVE 2018 conference in Bali, Indonesia, on 5-6 November 2018, organized by the faculty of law at Universitas Indonesia. The conference aims to provide an international platform for academicians, researchers and budding students around the world to share their findings and foster future collaborations. Various topics related to the clash between law and the Industrial Revolution 4.0 were covered at the conference. The organizer believes that the law must deal with disruptive innovation, digitalization, and the constant development of technology concerning how to protect personal data, artificial intelligence, financial technology, and other things that accompany technological progress. There are around 30 articles in this book that discuss laws in the disruptive era from the perspectives of administrative law, constitutional law, business law, intellectual property law, and criminal law.

Challenges of Law and Governance in Indonesia in the Disruptive Era II
Heru Susetyo (Manager of Research, Publication and Citation at Faculty of Law, Universitas Indonesia, Depok, Indonesia) and Qurrata Ayuni (Managing Editor of Law and Development Journal Faculty of Law, Universitas Indonesia, Depok, Indonesia)

In series: Asian Political, Economic and Social Issues
Publication Date: 04/15/2021
402 pp.
Hardcover: 978-1-53619-130-1. $230.00
e-book: 978-1-53619-354-1. $230.00

This book originates from papers presented at the 2nd ICLAVE 2018 conference in Bali, Indonesia, on 5-6 November 2018, organized by the faculty of law at Universitas Indonesia. The conference aims to provide an international platform for academicians, researchers and budding students around the world to share their findings and foster future collaborations. Various topics related to the clash between law and the Industrial Revolution 4.0 were covered at the conference. The theme for the 2nd International Conference on Law and Governance in a Global Context (the 2nd ICLAVE) is "Law and Governance in the Disruptive Era." The term “disruptive” refers to the latest trends related to the utilization of technology, automation process, data exchange and cloud computing, and also includes the cyber-physical system, Internet of Things (IoT), cloud computing, and cognitive computing. The organizer believes that the law must deal with disruptive innovation, digitalization, and the constant development of technology concerning how to protect personal data, artificial intelligence, financial technology, and other things that accompany technological progress. There are around 30 articles in this book that discuss laws in the disruptive era from the perspectives of human rights and access to justice, adat (customary) law and Sharia law, judiciary law, and international law.

Governance and Security Issues in South Asia
C. Vinodan, PhD (Director, School of International Relations and Politics, Mahatma Gandhi University, P.D Hills, Kottayam, Kerala, India), Rajeev M.M, PhD (Assistant Professor, Department of Social Work, Central University of Rajasthan, Kishangarh, Rajasthan, India) and Anju Lis Kurian, PhD (UGC Post-Doctoral Fellow, School of International Relations and Politics, Mahatma Gandhi University, P.D Hills, Kottayam, Kerala, India)

In series: Asian Political, Economic and Social Issues
Publication Date: 04/15/2021
343 pp.
Hardcover: 978-1-53619-461-6. $230.00
South Asia represents an extravagantly diverse region with a multitude of asymmetrical characteristics with regard to size, population, biodiversity and economy. Governance and Security issues in South Asia incarnates a comprehensive peep into the nature, gravity, navigation and drivers of governance and security issues across the South Asian region. While canvassing the different aspects of governance and security issues in the region, the authors have critically portrayed security dilemmas and governance pitfalls. The book is useful for academicians, policy makers, scholars, researchers, development professionals, think tanks and people involved in South Asian affairs.

Taiwan: Environmental, Political and Social Issues

Caleb M. Clark (Department of Political Science, Auburn University, Auburn, AL, US), Karl Ho (School of Economic, Political, and Policy Sciences, University of Texas, Dallas, TX, US) and Alexander C. Tan (Department of Political Science and International Relations, University of Canterbury, Canterbury, New Zealand; Taiwan Institute for Governance and Communications, National Chengchi University, Mucha, Taiwan)

In series: Asian Political, Economic and Social Issues
Publication Date: 07/14/2021
354 pp.
Hardcover: 978-1-53619-837-9. $230.00
e-book: 978-1-53619-871-3. $230.00

At the turn of the century, Taiwan appeared to be a success story in both its economic and political development. Rapid economic growth and economic transformation had commenced in the 1960s and continued through the 1990s, earning the name of a “miracle” in the 1980s. While considerably delayed, the country’s transformation from a one-party dictatorship began slowly in the late 1980s but was completed without much trauma by the mid-1990s, reflecting both reforms from above by the ruling Kuomintang (KMT) and pressure from below by the opposition Democratic Progressive Party (DPP). The first two decades of the 21st century brought generally bad news, however. The economy slowed and became considerably more dependent on China, who claimed sovereign control over Taiwan; and politics became more conflictual as Taiwan’s situation worsened. In terms of issues, national identity and cross-Strait relations dominated Taiwan politics throughout much of the democratic era. However by the late 2010s, economic and social issues had become important concerns as well. Consequently, as the 2020s opened, Taiwan was clearly at a crossroads in its international, political, and social situation. This book analyzes issues in contemporary Taiwan. The first two chapters consider a variety of issues; the next four analyze cross-Strait relations; then come three chapters on issues and the party system and three on constitutional and legal issues; and the final one focuses on a social issue.

India

West Bengal: Economic, Political and Social Issues

Rhianu Bowell

In series: India: Economic, Political and Social Issues
Publication Date: 02/15/2021
103 pp.
Softcover: 978-1-53619-237-7. $82.00
e-book: 978-1-53619-258-2. $82.00

Globally, industrialization and urbanization are leading to improvement in society’s economic condition which is often accompanied by lifestyle changes including physical inactivity, unhealthy diet and harmful use of tobacco and alcohol. These altered lifestyles bring about non-communicable diseases (NCDs) like obesity, hypertension (HTN) and diabetes mellitus (DM). The risk factors of the lifestyle induced NCDs are measurable and largely modifiable. So, continuous surveillance on the levels and patterns of risk factors is of fundamental importance to control NCDs. Chapter 1 focuses on this and conducted a study on 1216 male individuals of different socio-economic status residing at Kolkata, West Bengal.

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was initiated in India in 2006 with a view to creating more wage employment in rural areas thereby ameliorating rural poverty. But after the completion of more than a decade, the effects and roles of the scheme are found to be manifold. Particularly, if we consider the impact of women. Chapter 2 looks at how the role of women have changed, especially in the family, and how that impacts society.

In chapter 3, the authors performed a study to assess age trends in anthropometric measures and nutritional status among adult Mahali females. It was a community-based cross-sectional study, carried out in selected four villages of Bankura district, West Bengal, India.
Afghanistan: Terrorist Groups, the Presidential Election and International Relations

Tim Meier

In series: Politics and Economics of the Middle East
Publication Date: 07/06/2021
348 pp.
Hardcover: 978-1-53619-841-6. $230.00
e-book: 978-1-53619-885-0. $230.00

Afghanistan’s geography, complex ethnic composition, and recent history of conflict and instability have created space for numerous regional armed groups. Chapter 1 outlines major terrorist groups affiliated and allied with Al Qaeda (AQ) and the Islamic State (IS, also known as ISIS, ISIL, or by the Arabic acronym Da’esh) and the convoluted, often shifting relations between them and various other state and non-state actors. Chapter 2 examines the phenomenon of insurgent fragmentation within Afghanistan’s Taliban and implications for the Afghan peace process. Chapter 3 reports on eight district-level studies on how the Taliban deliver services in areas of Afghanistan where they have control or dominance. Chapter 4 is based on firsthand research into the rise of Salafi-jihadism in urban areas of Afghanistan, a phenomenon that has supplied the Kabul cells of the Islamic State Khorasan Province (ISKP) with abundant recruits. Chapter 5 examines whether displaced persons in Afghanistan are more vulnerable to radicalization and mobilization to violence than groups that have not experienced displacement. On September 12, 2020, Afghan government and Taliban representatives officially met to begin inaugural direct peace negotiations in Doha, Qatar, a significant moment with potentially dramatic implications for the course of the Afghan conflict as reported in chapter 6. Chapter 7 analyzes the September 2019 Afghan presidential election, focusing on questions related to access to the elections, the counting and vote invalidation process, and political trends compared to the 2018 parliamentary and 2014 presidential elections. Chapter 8 explores the dynamics underpinning the India-Pakistan rivalry in Afghanistan. The interests, fears, and strategies of New Delhi and Islamabad are situated within the context of the Afghan war, developments in Kashmir, terrorism, and proxy violence. Chapter 9 analyzes the special immigrant visa (SIV) classifications for Iraqis and Afghans within the context of both the larger Immigration and Nationality Act (INA) special immigrant category and selected other permanent admissions categories.

Afghanistan: The Afghan Papers, Troop Levels and Lessons Learned

Michael J. Wilson

In series: Politics and Economics of the Middle East
Publication Date: 07/22/2021
346 pp.
Hardcover: 978-1-53619-789-1. $230.00

The United States has been in Afghanistan for almost 19 years. It is the longest war in the history of the United States. The mission of U.S. forces in Afghanistan has evolved considerably since 2001, when the United States initiated military action against Al Qaeda and the Afghan Taliban government that harbored and supported it. The United States needs to decide whether to continue America’s longest war and what the mission in Afghanistan is today.

Afghanistan: The Pathway to Peace

Nathaniel G. Myrick

In series: Politics and Economics of the Middle East
Publication Date: 06/11/2021
345 pp.
Hardcover: 978-1-53619-745-7. $230.00
e-book: 978-1-53619-808-9. $230.00

Afghanistan emerged as a significant U.S. foreign policy concern in 2001, when the United States, in response to the terrorist attacks of September 11, 2001, led a military campaign against Al Qaeda and the Afghan Taliban government that harbored and supported it. In the intervening 19 years, the United States has suffered over 22,000 military casualties (including around 2,400 fatalities) in Afghanistan and Congress has appropriated approximately $143 billion for reconstruction and security forces there. In that time, an elected Afghan government has replaced the Taliban; improvement in most measures of human development is limited; and future prospects of gains remain mixed. This book
provides a framework for how to make a post-settlement Afghan state more effective in delivering equitable development and sustaining peace.

Conflict and Crisis in Syria
Christopher A. Arnett
In series: Politics and Economics of the Middle East
Publication Date: 07/14/2021
337 pp.
Hardcover: 978-1-53619-786-0. $230.00
e-book: 978-1-53619-883-6. $230.00
As of 2020, Syria faces growing economic instability and pockets of renewed political unrest, amid ongoing interventions by outside states and new public health challenges posed by the spread of the coronavirus (COVID-19).

Lebanon, Turkey, Saudia Arabia and Jordan: U.S. Relations and Key Issues
Selam T. Lauritsen
In series: Politics and Economics of the Middle East
Publication Date: 08/11/2021
399 pp.
Hardcover: 978-1-53619-963-5. $230.00
e-book: 978-1-68507-031-1. $230.00
This book is a compilation of reports on Lebanon, Turkey, Saudia Arabia and Jordan.

Syria, the Desert and the Sown
Gertrude Margaret Lowthian Bell
In series:
Publication Date: 01/27/2021
344 pp.
Hardcover: 978-1-53619-138-7. $230.00
e-book: 978-1-53619-170-7. $230.00
Syria, The Desert and the Sown covers Gertrude Margaret Lowthian Bell’s travels through Palestine and Syria. The book contains a valuable firsthand account of Syrian life and customs.

The Middle East: U.S. Policy, Foreign Assistance and Key Issues
Joachim Postema
In series: Politics and Economics of the Middle East
Publication Date: 07/22/2021
307 pp.
Hardcover: 978-1-53619-750-1. $230.00
e-book: 978-1-53619-833-1. $230.00
The Middle East in 2021 faces continued political instability, civil wars, terrorist threats, economic crises, the proliferation of unconventional weapons, external military intervention, and the ongoing spread of the Coronavirus Disease 2019 (COVID-19). It remains to be seen whether the territorial defeat of the Islamic State (IS) organization and the recent diplomatic normalization agreements brokered by the Trump Administration between Israel and several Arab states augur improved regional stability. U.S. stated policy goals have remained broadly consistent across Administrations: deter interstate conflict, counter terrorism, ensure the global flow of energy resources, and preserve U.S. influence in the face of rival power competition.
Politics of Europe

Armenia and Azerbaijan: Countries in Crisis
William Mitchell
In series: Europe: Past, Present and Future
Publication Date: 01/20/2021
323 pp.
Hardcover: 978-1-53619-008-3. $230.00
e-book: 978-1-53619-095-3. $230.00
Armenia and Azerbaijan both used to be part of the Soviet Union, but since that crumbled, ethnic tensions between Armenians and Azerbaijanis increased in the Nagorno-Karabakh region. Nagorno-Karabakh is recognized as part of Azerbaijan, but is predominantly populated by ethnic Armenians. The long-simmering conflict has been escalating in recent months. This book looks at the background and upheaval in these two countries.

World War II: Background, Aftermath and Impact
Allison L. Palmadessa, Ph.D (Associate Professor of History, Director of Supplemental Instruction, School of Humanities, Greensboro College, Greensboro, North Carolina, USA)
In series: Political Science and History
Publication Date: 04/08/2021
212 pp.
Hardcover: 978-1-53619-441-8. $160.00
This edited collection exhibits research that considers economic, educational, technological, and strategic planning that contributed to nations’ involvement in and the lasting impact of engagement in World War II. Written by historians and social scientists from around the world, each chapter offers an insight into the experiences and implications of those involved in the war – as leaders, civilians, politicians – and the continued strains resulting from diplomatic relationships and the casualties on and off the battlefield. The Second World War devastated the world – not equally in all areas or nations, but it altered the course of human history. These works contribute to the ability to make sense of this brutal war and in doing so, offer readers an opportunity to learn about some lesser-understood implications and results of the Second World War.

Special Topics

A Focus on Human Rights
Christiane Baasch
In series: Human Rights: Contemporary Issues and Perspectives
Publication Date: 03/04/2021
340 pp.
Hardcover: 978-1-53619-339-8. $230.00
e-book: 978-1-53619-364-0. $230.00
Congress has guided and shaped the U.S role in the current international human rights architecture, which grew out of the atrocities and destruction of World War II. The United Nations (U.N.) Charter, signed in 1945, included broad expressions of support for human rights and fundamental freedoms. This book addresses human rights issues.
Encyclopedia of Elections (7 Volume Set)

*Bryan Martin and Peter Morris*

In series: Political Science and History

Publication Date: 02/10/2021


Hardcover: 978-1-53619-061-8, $1,250.00
e-book: 978-1-53619-167-7, $1,250.00

Encyclopedia of Elections organizes researchers from around the world in political studies and related disciplines and maintains an up-to-date reference work for readers worldwide. Please review the Table of Contents for more in-depth information.

Geopolitics in the Twenty-First Century: Territories, Identities, and Foreign Policies

*Nuno Morgado, Ph.D (Corvinus Institute for Advanced Studies and GEO Department, Corvinus University of Budapest, Hungary; Institute of Political Studies, Charles University, Prague)*

In series: Defense, Security and Strategies

Publication Date: 01/27/2021

236 pp.

Hardcover: 978-1-53619-035-9, $195.00
e-book: 978-1-53619-123-3, $195.00

This book is dedicated to geopolitics in the 21st century. Several scholars from slightly different backgrounds (geopolitics, international relations, history, and political science) have come together to develop the geopolitical research program as an approach to international relations. This book includes research on the great powers that have permanent seats on the UN security council, as well as Japan and Brazil, as regional powers that may increase in influence in the 21st century international arena. Despite the methodological richness of the individual contributions, all chapters address the core(s) of geopolitical thought – the territorial and identity-based realities that shape politics, foreign policies, and grand strategies – thereby adding value to the research agenda of geopolitical studies.


*Rodolfo Apreda, PhD (Independent Scholar, Buenos Aires, Argentina)*

In series: Political Science and History

Publication Date: 06/10/2021

256 pp.

Softcover: 978-1-53619-599-6, $89.00

Capitalism and the liberal approach to markets have been assailed for long, and from several quarters as well, on the grounds of an extensive swathe of topics stretching from globalization through wealth distribution, infighting among groups of interest, unemployment, wide-ranging poverty, class struggles, imperialism and the like. There is no denying that time runs out for both capitalism and liberal markets in representative democracies. On the other hand, authoritarian or populist regimes are intensely trying other political and economic roads by putting on impressive performances as the one China has claimed for the last decades. This book, however, sets forth another standpoint, asserting that capitalism and economic liberalism have fostered and empowered a triad comprising organized crime, corruption and ecocide to an extent not witnessed before in human history. This partnership stemmed from the internal dynamics of capitalism and economic liberalism that failed in strengthening the institutions of representative democracies and neglected the most basic social issues. To add insult to injury, the triad took advantage of the same tool kit of organizational skills and technologies that allowed praiseworthy companies to thrive and develop, but without displaying any moral constraint and with dire contempt of the law instead. In contrast with the conventional approach, this book connects the dots between the bad politics and worse governance that organizations in the triad extensively have carried out so far. For the first time in the literature, the threads of organized
crime, corruption and ecocide are borne to light by showing how rotten politics and criminal governances have been intertwined in the end. If capitalism and the liberal economics are doomed to failure, the trappings of the triad put both ideologies on the slippery slope and will bring them to account at last. It is the author’s contention that to redress the balance in representative democracies, their underlying political systems must work their way through post capitalism by means of social democracy and social markets, which amounts to a new governance and a better politics. The broad and innovative scope of the book can be surveyed through the titles of its seven chapters: governance and politics; how accountability and transparency become social learning processes; political conflict-systems and dual governance; dysfunctional governance, the capture of the state, and corruption; the governance and politics of organized crime and ecocide; the day of reckoning for capitalism and the liberal market system; social democracy, social markets, and the welfare state will stand for post capitalism.

Nationalism: Past as Prologue
Bruce Elliott Johansen (School of Communication, University of Nebraska at Omaha, Omaha, Nebraska, USA) and Adebowale Akande (IR GLOBE Cross-Cultural, Vancouver, BC, Canada)

In series: Political Science and History
Publication Date: 03/09/2021
351 pp.
Hardcover: 978-1-53619-231-5. $230.00

The “mother” discipline of organizational behavior has deep roots in psychology, particularly industrial and organizational psychology. It comes as no surprise, therefore, that new and theoretically incommensurate findings involving human moral behavior have been met with calls for a more psychologically informed investigation of ethical behavior in organizational contexts (DeCremer and Tenbrunsel, 2012; Reynolds and Ceranic, 2009). This project, aimed at a fuller understanding of the psychology of ethical behavior, typically falls under the label of Organizational Ethical Behavior (OEB).
The Myth of the West

Enrico Ferri (Philosophy of Law and History of Islamic Countries, University “Niccolò Cusano” (UNICUSANO), Rome, Italy)

In series: Political Science and History
Publication Date: 01/13/2021
294 pp.
Hardcover: 978-1-53618-868-4. $195.00
e-book: 978-1-53618-894-3. $195.00

The Myth of Western Civilization: The West as an Ideological Category and a Political Myth has set for itself two different but complementary targets. The first is to show that...
what is commonly taken as a historical given, “Western Civilization”, is actually an ideological construction that has come to absorb the most disparate of contents. It is a common acceptance to intend Western Civilization as the liberal-democratic way of life and capitalist economy that apply in Euro-America. Many among those who believe in the existence and paramountcy of Western Civilization at the same time sustain that Western Civilization can be traced back at the very dawn of Europe and that, depending on who makes the claim, it can be linked to the birth of Greece and Rome and, successively, to Christianity and democracy, often establishing relationships between these varying cultures. While showing the difficulty of considering them instances of the same historical event, The Myth of the West highlights the essential contribution by civilizations like the Phoenician and the Arab to the development of the classical world and modern Europe.

Venezuela: Political, Economic and Humanitarian Issues
Dennis L. Kristoffersen
In series: Latin American Political, Economic, and Security Issues
Publication Date: 03/24/2021
343 pp.
Hardcover: 978-1-53619-408-1. $230.00
Venezuela remains in a deep crisis under the authoritarian rule of Nicolás Maduro of the United Socialist Party of Venezuela. Maduro, narrowly elected in 2013, began a second term on January 10, 2019 that is widely considered illegitimate. The United States and 57 other countries recognize Guaidó as interim president, but he has been unable to harness that diplomatic support to wrest Maduro from power. Venezuela’s economy has collapsed. The country is plagued by hyperinflation, severe shortages of food and medicine, and a dire humanitarian crisis that has further deteriorated in 2020 as a result of gasoline shortages, an outbreak of Coronavirus Disease 2019 (COVID-19), and strengthened U.S. sanctions.

Adolescence and Youth
Adolescence: International Aspects of Psychological Stress
Supa Pengpid, MPH, DrPH, MBA (Professor at ASEAN Institute for Health Development, Mahidol University Thailand), Karl Peltzer, PhD (Department of Research Administration and Development, University of Limpopo, South Africa) and Joav Merrick, MD, MMedSci, DMSc (Professor of Pediatrics at the Division of Pediatrics, Hadassah Hebrew University Medical Center, Mt Scopus Campus, Jerusalem, Israel, Kentucky Children’s Hospital, University of Kentucky, Lexington, United States and Professor of Public Health at the Center for Healthy Development, School of Public Health, Georgia State University, Atlanta, United States, the Former Medical Director of the Division for Intellectual and Developmental Disabilities, Ministry of Social Affairs and Social Services, Jerusalem and the Founder and Director of the National Institute of Child Health and Human Development in Israel)
In series: Pediatrics, Child and Adolescent Health
Publication Date: 06/25/2021
254 pp.
Hardcover: 978-1-53619-341-1. $160.00
e-book: 978-1-53619-652-8. $160.00
Psychological distress is a set of painful mental and physical symptoms that are associated with normal fluctuations of mood. In some cases, however, psychological distress may indicate the beginning of major depressive disorder, anxiety disorder, schizophrenia, somatization disorder, or a variety of other clinical conditions. In this book, the prevalence and correlates of psychological distress, including issues in relation to bullying victimization, poly-victimization, obesogenic behavior, ideal
cardiovascular health behavior, and HIV status, were studied in 19 countries. The results will inform researchers and readers of the relevance of school and youth mental health programs and related policies targeting psychological well-being in the adolescent population.

**Emerging Adults and Adulthood**

*Ashley Demoura*

Publication Date: 03/11/2021

108 pp.

Softcover: 978-1-53619-279-7. $82.00
e-book: 978-1-53619-415-9. $82.00

This book comprises three chapters that each approach the subject of emerging adults from a different perspective. Chapter One examines the impact that parental involvement has on the personal development of emerging adults in China, with a specific focus on mental health, romantic involvement, and peer relationships. Chapter Two discusses the challenges faced by East Asian American girls and emerging adults and the protective factors that help mediate the core challenges this population faces. Lastly, Chapter Three provides a comprehensive literature review from a cross-cultural comparative perspective of the complicated pathways emerging adults face today and identifies key protective buffers and predictors that promote mental health, self-competence and identify achievements that lead to a more successful emergence into early adulthood.

**Anthropology**

**The Evolution of Man**

*Ernst Haeckel*

In series: *Human Evolution, Biological and Cultural Domains*

Publication Date: 01/20/2021

503 pp.

Hardcover: 978-1-53619-029-8. $310.00
e-book: 978-1-53619-146-2. $310.00

The Evolution of Man provides a perspective on how life can start and evolve from a simple elemental form. This book will be of interest to those interested in the history and development of evolutionary science.

**The Homo within the Sapiens**

*Jorge A. Colombo (Principal Investigator (retired) (CONICET), Director Emeritus (U.N.A., CEMIC-CONICET), National Research Council (CONICET) (Argentina))*

In series: *Human Evolution, Biological and Cultural Domains*

Publication Date: 01/08/2021

188 pp.

Softcover: 978-1-53618-938-4. $95.00
e-book: 978-1-53618-373-3. $95.00

While creativity and solidarity form the main constructive profile for our species, the primal animal drive for dominance involving basal brain circuits places our future at risk. This bipolar nature distorts the global perspective of our collective future and ecological conditions. Our species’ behavioral construction has its roots in ancestral habits and survival drives that were crystallized in basic neurobehavioral circuits over millennia, be it as predators or potential prey. Its expression acquired further complexity through the development of social/cultural cues, and was kept-in-check by conditional inhibitory processes. How much of our current drive – individually and as a global community – is caused by those inherited traits imprinted in our animal condition? This book analyzes the increasing bipolar construction in terms of dominant groups affecting critical access to current knowledge and information, a profound gap among populations concerning a modern humane quality of life, and present trends pertaining to our ecological habitat. These dynamic processes seem to be in a free-running mode, only conditioned by the prevalence of power concentration in the hands of worldwide minority groups. This worldwide disjointed perspective is further distorted by diverse cultural profiles and interests accessing information and its impact on lifestyles.
Our species’ true nature has highly conserved remnants of our animal origin expressed as animal drives embodied before and during the evolutionary process as Homo and under inhibitory social control. These involve territorial, survival, and dominant cues on top of which sapiens’ cultural development profiles have taken place; that is, the hidden ancestral human nature. Competition to control and prevail in those domains has unveiled a long-lived struggle for dominance in political and financial (corporate- or state-bound) prevalence. Below this stratum of power-seekers, a large proportion of the service-bound and marginal populations crawl for their survival, often approaching inhuman conditions. Fundamentalist beliefs, the disregard of environmental abuse, belligerence to resolve discrepancies, personal and group-centered greed, growing inequalities, disinformation from dominant carriers, and intolerance to alternative viewpoints describe our species’ developmentally immature collective behavior.

If not just an evolutionary stage, then we in fact belong to the “wrong species” (Colombo, 2010), and are on a path toward our demise or a bipolar evolution of our species, but not necessarily a collective, cooperative, shared development that respects various cultural profiles. The increasing speed of knowledge development widens the gap among populations with different cultural values and those that are underdeveloped or living in subhuman conditions. Since we exited the period of egalitarian-prone hunter gatherers, we have been conditioned by elite or institutionalized dominant powers and given limited access to information, which is used as a means for domination. Hence, our future depends not only on our social, political, and financial decision-makers but also on the degree of our permissive, functional absence from such a scenario.

### Archaeology

**Characterization of Archaeological Materials by the Use of Light**

*Dorota Bartusik-Aebisher (Professor, Medical College of The University of Rzeszow, Poland) and David Aebisher (Professor, Medical College of The University of Rzeszow, Poland)*

In series: *Archaeology - Discoveries of the Past*

Publication Date: 03/26/2021

147 pp.

Softcover: 978-1-53619-343-5. $95.00

e-book: 978-1-53619-439-5. $95.00

In this book Characterization of Archaeological Materials by the Use of Light the authors tried to demonstrate the high degree of technology used in laser scanning for archaeological sites. The data collection and review were obtained thanks to the conscious, proprietary data processing and individual knowledge of lidar products, by using the developed especially for archaeological analytical tools, visualization methods data and algorithms processing the point cloud, numerical models and their derivatives. The authors form an interdisciplinary team, they are both archaeologists and laser physicists. This book has four chapters titled: Aerial Laser Scanning, Laser in the conservation of archaeological monuments, Laser analysis of the chemical composition of ceramics and Laser applications to study various solid materials. We presents Airborne Laser Scanning (ALS) such as an advanced method of archaeological prospection. Inthe last few years an increasing number of applications of Light Detection and Ranging (LiDAR) data within World archaeology was noticed. At the same time, ALS is an extremely useful method for conservation purposes. On the other hand, carrying out successive measurements allows for monitoring of facilities, sites and landscapes over time. Along with the growing interest in the method and the growing number of its applications in archeology, it is worth paying attention to the efficiency of using the ALS and LiDAR.

### Communication and Media Studies

**Paradigm Shifts within the Communication World**

*Enes Emre Başar. PhD (Associate Professor, Anadolu University, Faculty of Business Administration, Marketing Department, Turkey)*

In series: *Media and Communications - Technologies, Policies and Challenges*

Publication Date: 06/11/2021

347 pp.

Hardcover: 978-1-53619-672-6. $230.00

e-book: 978-1-53619-695-5. $230.00

This collection of essays emphasizes new and emerging research paradigms in the communication world. The aim of this book is to provide researchers and practitioners with new paradigms in the form of ideas, concepts, trends, values and practices in the communication realm. This book will examine current, emerging, and cutting-edge approaches to communication in the broadest sense. The focus of this book is to draw in-depth understanding on the phenomenon of continuous and rapid growth of new
communication means, shifting from the traditional unidirectional sharing of information to multidirectional sharing channels.

The chapters take the reader on a journey through new paradigms and emerging domains in which communication is expected to play a greater role. Readers of this book will be inspired by these new paradigms in communication and seek to push the boundaries even further to keep up with the breathtaking speed of the digital era. Perhaps the most significant take-home message from this book is the demonstration of how practices map onto paradigms.

This collection presents 18 high quality chapters from a multi-disciplinary collection of internationally leading and emerging scholars. These chapters provide students, scholars, and practitioners alike with readable, engaging and innovative ways to think critically about communication.

Social Media in the 21st Century: Perspectives, Influences and Effects on Well-Being

Walter J. Kahn

In series: Media and Communications - Technologies, Policies and Challenges
Publication Date: 06/28/2021
156 pp.
Softcover: 978-1-53619-787-7. $95.00
e-book: 978-1-53619-826-3. $95.00

There can be no doubt that social media has fundamentally transformed how people relate to each other and navigate the social environment of the contemporary era. While social media makes it easier than ever before for people to connect, it can also lead to negative effects on mental health and well-being, as it facilitates social comparison which, ironically, can leave people feeling more isolated and detached. Chapter One of this book explores how social movement actors utilize Instagram to deliver complex political messages and discusses the importance of understanding the possibilities and dangers of social media’s influence on political reality. Chapter Two analyses online social comparison from a social psychological perspective and highlights the differences between its occurrence in face-to-face and social media contexts, as well as the implications for mental health. Chapter Three focuses on the influence of Instagram upon millennials’ purchase intention via celebrity endorsement and other Instagram visuals, particularly in connection with the use of color and the visual attractiveness of celebrities. Lastly, Chapter Four addresses the semiotic aspects of Instagram by comparing a typical semiotic communication model to Instagram’s communication model and explaining design aspects of Instagram’s model.

Community Studies

Building a More Peaceful Society through Positive Intergroup Contact: An Ecologically Sustainable Approach to Community Wellness

August John Hoffman (Psychology Professor, Metropolitan State University, St. Paul, MN, USA)

In series: Community Studies
Publication Date: 03/30/2021
215 pp.
Hardcover: 978-1-53619-174-5. $160.00
e-book: 978-1-53619-216-2. $160.00

Currently our society is experiencing unprecedented conflict and violence from many different types of situations and causes. As our society is becoming increasingly more diverse, it has become more apparent that we need to rely on more environmentally sustainable mechanisms and cooperative behaviors to help address and reverse this trend. Political extremism, ethnocentric ideology and recent authoritarian leadership has resulted in an increasingly divided and polarized community. This book attempts to address the problems of violence and extremism through our evolutionary history in the need for all groups of individuals to work cooperatively and contribute to a healthier and more productive community where all individuals are afforded opportunities to share their skills in a more holistic, organic and collaborative process, what Ervin Staub (2013) refers to as the “constructive social process.” This book examines how natural and ecologically sustainable (i.e., “green space”) environments can help to promote more cooperative and prosocial behaviors within our communities and address the serious problems involving violence and ethnocentric ideologies.
A Closer Look at Cultural Values: The Case of French Guests and Vietnamese Hosts
Dr Thuy-Huong Truong (Lecturer & Research Fellow, Victoria University Business School, Victoria University, Melbourne, Australia)

In series: Cultural Studies in the Third Millennium
Publication Date: 02/26/2021
168 pp.
Softcover: 978-1-53619-209-4. $95.00
e-book: 978-1-53619-257-5. $95.00

With a history of attracting French tourists since the 19th century and particularly during the colonial period, Vietnam has re-emerged as one of the most popular Asian destinations for the French. A number of factors augur well for a further increase in visitation. As a former colony, Vietnam has nostalgic appeal for many French visitors. After the release of the films L’Indochine, L’amant, Le Cyclo, Papaye Vert, and the documentary-drama Dien Bien Phu in 1993, France became the main tourism source market for Vietnam. As the ethnic composition of France has changed, the French are interested in learning about cultures generally and Asian cultures, in particular. The prospect of discovering new destinations and cultures encourages them to travel long-haul. They are quality conscious and culture loving, and prefer to use their own language when traveling overseas, favouring their own cuisine even though they do enjoy the cuisine of the host countries. Travel to Vietnam offers the prospect of fulfilling a number of their preferences. Another attraction for French tourists is that Vietnam is a member of the Francophone Community. Since 1988, the French legacy has experienced a resurgence with the renovation of colonial-style properties and restaurants. Tourists have been impressed by the French-style architecture, accommodation and cuisine that is available.

Despite Vietnam’s long history of contact with France, Vietnamese service providers are relatively ignorant about Western countries, their people and their values. Up to now Vietnam’s tourism authorities have paid little attention to the role of cultural understanding in the tourism development process and Vietnam’s overseas tourism promotions have given minimal acknowledgement of the cultural characteristics of source markets including those conducted in France. Servicing French tourists is likely to be a challenge for Vietnamese service providers because of the substantial differences between the respective host and guest cultures and rules of behaviour.

International tourism generally involves a cross-cultural component, particularly in the case of encounters between tourists and service providers. If it is accepted that the cultural values of Western travellers are different, it seems reasonable to conclude that the Vietnamese service providers need to consider the effect of this cultural dissimilarity on tourist–host mutual perceptions and social interaction in the intercultural service encounters. An understanding of areas of potential tourist dissatisfaction may assist the service providers to anticipate prospective negative perceptions and to address them, thereby contributing to overall holiday satisfaction, and improve the prospects of repeat visitation.

It is common for destinations to attract visitation from different source countries and cultures. Nonetheless, consumer behaviour literature on cross-cultural perceptions and interaction have been largely limited to homogeneous sample populations from Western countries. Furthermore, until now there are no published studies have specifically examined tourist–host service encounters interaction and mutual perceptions in the context of Vietnam as a holiday destination. Consequently, this research has both practical and academic significances. From the theoretical perspectives, this study provides an augmented comprehension on Argyle’s, Rokeach and SERVQUAL models. From the practical standpoints, this study offers service managers and marketers a heightened understanding of cross-cultural awareness for improving customer satisfaction. It acclaims an evidence base that can guide provision to meet the needs of international tourists with particular reference to the impact of rules of behaviour on tourist–host service encounters interaction. It accentuates the effect of cultural backgrounds on tourists’ perceptions towards and satisfaction with service quality. By this means, it applies the empirically based models to development related challenges confronting the tourism sector in the cross-cultural settings for designing appropriate strategies with the aim of gaining a competitive advantage.

Keywords: French Guests, Vietnamese Hosts, Cultural Values, Rules of Behaviour, Interactions, Satisfaction, Service Attributes and Performances.
Ecuador: Perspectives of the Past, Present and Future: A Multi-Criteria Approach to Social Evolution
Marco Avila Calle and Guillermo Casado López
In series: Cultural Studies in the Third Millennium
Publication Date: 05/05/2021
257 pp.
Hardcover: 978-1-53619-373-2. $195.00
e-book: 978-1-53619-533-0. $195.00
Ecuador is a diverse and multicultural country which has resisted the historical processes of homogenization and globalization. In it different peoples and ancestral nationalities coexist, as well as the heirs of the colonial process, appearing as strong contrasts in customs, languages and cultural expressions, arising syncretism, miscegenation and fusion. There is a fascinating natural diversity, which, despite being contained in a small fragment of world territory, gives an immeasurable environmental value to the country, America, and the world. However, this cultural and environmental wealth is sometimes overshadowed by phenomena of exclusion, by social gaps, by gender inequality and by environmental degradation. These realities, which affect all of Latin America, have vernacular peculiarities, intrinsic to Ecuador as a country. Within this context, this publication aims to generate an investigative space from different perspectives and disciplines, contributing to the construction of a more inclusive and sustainable Ecuador. Therefore, the philosophy and motivation in which the editorial spirit is inscribed is focused through the concepts of identity, culture, humanism, the environment and interculturality.
This work also presents the main results of research carried out by various universities in Ecuador, highlighting the contribution of the research project promoted by the postgraduate program of the Catholic University of Cuenca called “Sustainable Architecture Through Adequate Recycling of Plastic,” which has allowed the correct articulation of the themes exposed in this work.
We hope that this book, beyond becoming a useful instrument in academia and within research, may have an expansive and positive effect on the inhabitants of Ecuador, especially those most disadvantaged.

African American Studies

African American Women in Academia: Intersectionality of Race and Gender
Charnetta Gadling-Cole (Chair and OUD/SUD Certificate Project Director, Department of Social Work and Child Life, Concordia University Wisconsin and Ann Arbor)
In series: African American Women
Publication Date: 01/29/2021
148 pp.
Softcover: 978-1-53618-832-5. $82.00
e-book: 978-1-53619-087-8. $82.00
African American Women face a variety of issues in the academy, community and society. The strength of this group often lies in sisterhood, as to many, the saying “you are your sister’s keeper” rings true. This series addition addresses the concerns of African American Women in academia at the micro, mezzo and macro levels that can be used as the foundation for developing policies and intervention strategies to assist on their journey. Theoretical perspectives and practices that have impacted African American women in academia related to their individual and collective experiences are also explored. The literature provides a clear understanding of the intersectionality of being Black and a Woman.
African American women employed in academia must balance perceived roles related to being Black and a woman. This is a difficult balancing act for many due to the systemic racism and gender bias that exist within the institutions, along with those that exist in society as a whole. The authors describe a variety of circumstances that have impacted their perceptions related to academic experiences. It is imperative that African American women learn how to successfully navigate systems and uncomfortable situations that occur within the academy. It is the responsibility of those who understand the academic process and have been successful in addressing issues that arise to reach back and assist those that will follow. They must continue to lift as they climb!
When we focus on children and adolescents younger than 18 years, we have an opportunity to intervene through policy and practice aimed at improving the quality of life and opportunities to thrive. Through evidence-informed decisions and interventions we have the opportunity to shift a generation of children and adolescents, and transform a society. Children living on the African continent tend to live within diverse, and often challenging environments. These community and familial environments in which children and adolescents come from, are also the context and environments which fosters growth and development. This book, Child in Africa: Opportunities and Challenges, presents studies of children living on the African continent, covering various developmental stages which include children in their early years of life, middle childhood and adolescence – all living in different environments on the African continent. Using mixed methods approaches and backed by rigorous methods the book covers topics such as child and adolescent mental health, parenting, children and disability, parenting in adversity, the impact of dental caries on early childhood development, adolescent identity in post-apartheid South Africa, hookah pipe use and relational aspects to families, young fathers, and intervening in adolescent health risk behaviour. The book presents interesting debates and discussions focused on the child in Africa, aimed to inform both policy and practice.

**Gender Equality: Past, Present and Future Perspectives**

*Henri Morel*

In series: *Gender Issues and Challenges*
Publication Date: 08/11/2021
327 pp.
Hardcover: 978-1-53619-334-3. $230.00  
e-book: 978-1-53619-394-7. $230.00

While much work has been done over the past few decades to ensure that men and women receive equal treatment in societies around the world, much more work must be done before the ideal of egalitarianism can be fully realized. This book examines the history and current status of gender equality in a variety of social contexts and proposes visions of potential future outcomes that address the systemic problems related to gender. Chapter One addresses work-care conflicts in post-industrialized societies and their effects on men, women, and children. Chapter Two includes an in-depth examination of various studies revealing biases, prejudiced thinking, cultural barriers, and the challenges that lie ahead as the global workplace evolves. Chapter Three discusses the difference between gender equality and gender equity, the policies that aim at gender equity and equality in Latin America, and the importance of policies that consider gender, race, and social class from the perspective of decolonial feminism. Chapter Four describes progressive Islamic thought related to gender justice, specifically in connection with the work done by Sa’diyya Shaikh, a professor of religious studies. Chapter Five applies the sociology of social problems to elucidate the seemingly intractable character of men’s sexual harassment of women. Chapter Six explores the status of gender mainstreaming implementation in university teaching in Greek physical education and sport science faculties. Chapter Seven emphasizes the need for integrating sustainability competencies for gender equality into teacher education programs. Finally,
Chapter Eight highlights the difficulties faced by adolescents who in some countries are expected to make career decisions at as young as 14 years old, and how insecurities and gender stereotypes factor into these children’s decisions.

**Discrimination and Race Relations**

**A Look at Religious-Based Hate Crimes**

*Brigitte Mann*

In series: *Safety and Risk in Society*

Publication Date: 03/17/2021
285 pp.
Hardcover: 978-1-53619-324-4. $195.00

On average, 205,000 U.S. residents report being victims of hate crimes every year, according to DOJ officials. Hate crimes, including those motivated by bias against an actual or perceived religion, can have a broader effect than other kinds of violent crimes because they target both the victim and the group the victim represents.

Chapter 1 examines the role of religious actors in hate crimes. Chapter 2 reviews the prevalence of religious-based hate crimes and bias incidents on college campuses; what steps colleges are taking to address them; and the extent to which Education and DOJ help colleges, campus law enforcement, and other stakeholders monitor and address these crimes and bias incidents. Chapter 3 looks at the rise of anti-Semitism.

**Family and Relationships**

**Family Violence: Prevalence, Risk Factors and Perspectives**

*Nicolette V. Roman, PhD (Professor, SARChI: Human Capabilities, Social Cohesion and the Family, Child and Family Studies, Faculty of Community and Health Sciences, Centre for Interdisciplinary Studies of Children, University of the Western Cape, South Africa) and Jill Ryan, PhD (Senior Scientist, The South Africa Research Council, Cochrane, South Africa; Centre for Interdisciplinary Studies of Children, Family, and Society, University of the Western Cape; South Africa)*

In series: *Family Issues in the 21st Century*

Publication Date: 05/05/2021
361 pp.
Hardcover: 978-1-53619-524-8. $230.00

Violence threatens the sense of cohesion in any environment but especially within the family. It is within the family that the first relationships of trust should develop. It is within the family that we are cared for, provided for and where we find our strength and comfort. When the family purports violence, everything shifts because the family environment becomes one of hostility, a threat of harm or death to the mind and body and general well-being, creating distrust, feelings of fear and overall disequilibrium within the family. This book, Family Violence: Prevalence, Risk Factors and Perspectives, uses a family-centered approach to explore the evidence regarding violence in the family because when there is any type of violence, be it child abuse, intimate partner violence, sibling abuse, child-on-parent abuse or elder abuse, everyone in the family is affected and all family members should be included in the intervention. This book includes perspectives of family violence in different contexts and explores family violence risks.
Intimate Partner Violence: Assessment, Treatment and Prevention
Richard Evans

In series: Domestic Violence and Abuse
Publication Date: 06/11/2021
216 pp.
Hardcover: 978-1-53619-627-6. $160.00
e-book: 978-1-53619-774-7. $160.00

Intimate partner violence (IPV) is a serious social problem affecting both men and women worldwide that can lead to a variety of negative mental and physical health effects. This book contains nine chapters that address the problem of IPV, exploring methods of preventing IPV as well as treatment for victims of IPV. Chapter One centers on the issue of blame, reviewing current research on the associations between self-blaming attributions and psychological outcomes among survivors of IPV. Chapter Two proposes a theoretical reflection on the phenomenon of domestic violence based on its understanding as a problem sustained by cultural beliefs and discourses and which can be tackled through education and the promotion of public debate, by means of institutional advertisements. Chapter Three highlights the importance of capacity building Brazilian police forces to tackle cases of IPV as well as to protect and enable victims to fully exercise their rights. Chapter Four argues that the Domestic Violence Risk instrument used by Portuguese police to assess IPV cases should be reworked, as it tends to assign a medium level of risk in cases that the scientific community would likely associate with high risk. Chapter Five discusses the relationship between IPV and academic stress. Chapter Six reviews research on factors affecting women’s treatment engagement in the aftermath of IPV, including characteristics of the violence/violent relationship, types of mental health problems following IPV, and individual differences in personality and demographics. Chapter Seven deals with the coping mechanisms available to women living with HIV/AIDS in Tanzania who experience IPV. Chapter Eight details the relevance of methodological and ethical aspects of studies on violence involving children and how these requirements may affect research validity in this domain. Finally, Chapter Nine presents a study of violence against women media campaigns that use graphic imagery and how they impact fears of behaving assertively and of victimization, safety self-efficacy, and collective female self-esteem.

Bullying

Peer Victimization: Theory, Research and Practice
Zina T. McGee, PhD (Professor, Department of Sociology, Hampton University, Hampton, VA, USA)

In series: Bullying and Victimization
Publication Date: 02/17/2021
118 pp.
Softcover: 978-1-53619-259-9. $82.00
e-book: 978-1-53619-305-3. $82.00

This book provides key empirical findings from a study measuring the degree of perceived victimization and/or actual attack experienced by a sample of minority adolescents in an urban setting. The project uses a systematic sociological approach to examine the effects of violence on these adolescents by including measures of adjustment outcomes resulting from the stress experienced in these harsh environments. Central to the analysis is the discovery of the linkages between risk factors relating to peer-, community-, and school-level victimization and patterns of coping among youth. To further develop the study, the project determines the perceived level of fear and exposure to violence among urban, minority adolescents across levels of adjustment outcomes. While the significance of this work is the determination of the relationships between victimization, adjustment outcomes, and coping strategies in urban, minority adolescents in environments at higher risk for violence, the greatest implication of this research is to provide an understanding of the role of particular risk factors and coping strategies used to explain differences in delinquent and anti-social behavior among socially vulnerable youth, many of whom are victimized, and influenced, by delinquent peers. These understandings will provide an empirical basis on which to dismantle structural inequality, develop mental health interventions, reinforce societal- and community-level change, and promote coping behaviors to offset the detrimental impact of violence on the lives of marginalized youth in many communities. Youth victimization and violence are not solely public health problems, but remain severe health disparities, as many neighborhoods and families plagued with elevated violence and systemic poverty need further support to help youth flourish.
Child Abuse

Preventing Child Abuse: Critical Roles and Multiple Perspectives
Vincent J Palusci, MD, MS (New York University Grossman School of Medicine, New York, New York, United States of America), Frank E Vandervort, JD, (Child Advocacy Law Clinic and Juvenile Justice Law Clinic, University of Michigan Law School, Ann Arbor, Michigan, United States of America), Donald E Greydanus, MD, DrHC (Athens) (Department of Pediatric and Adolescent Medicine, Western Michigan University Homer, Stryker MD School of Medicine, Kalamazoo, Michigan, United States of America) and Joav Merrick, MD, MMedSci, DMSc (National Institute of Child Health and Human Development, Jerusalem, Israel; Department of Pediatrics, Mt Scopus Campus, Hadassah Hebrew University Medical Center, Jerusalem, Israel; Kentucky Children's Hospital, University of Kentucky, Lexington, Kentucky; United States of America and Center for Healthy Development, School of Public Health, Georgia State University, Atlanta, Georgia, United States of America)

In series: Pediatrics, Child and Adolescent Health
Publication Date: 06/11/2021
429 pp.
Hardcover: 978-1-53619-268-1. $230.00
e-book: 978-1-53619-696-2. $230.00

When we think of child abuse, we imagine several different forms of harmful parenting and injuries to children. Most are not visible to the naked eye, but can be seen if you look more deeply. X-rays can detect fractures and other imaging can find internal injury and bleeding, but most maltreated children have more long-lasting harm that reveals itself through behavioral and emotional maladjustment, developmental delay, sadness, and other destructive behaviors later in childhood, adolescence and into adulthood. These injuries to their personality, sense of self, relationship to society and mental health change the trajectory of their lives and dim their potential, with social and financial costs for safety, treatment and their lost personal growth. We think of these as affecting everybody’s children and that the responsibility lies with everyone to respond. This is why we put together this book: to address prevention from a number of perspectives and a variety of professions. We hope that it successfully brings together a number of disciplines and perspectives to address child abuse and neglect among the world’s families, governments and cultures. We hope that those reading these chapters will realize that there are replicable best practices that can be reliably implemented based on child and family experiences and needs rather than single approaches designed to attack single forms of maltreatment, and we look forward to the day that books like these are not needed.

Human Sexuality

Lived Experience of LGBTQ People: What Helps and What Hurts
Eileen Klein, PhD, LCSW, MSW, MS (Associate Professor of Social Work, Ramapo College, New Jersey, USA)

In series: Social Issues, Justice and Status
Publication Date: 06/25/2021
226 pp.
Hardcover: 978-1-53619-665-8. $160.00
e-book: 978-1-53619-818-8. $160.00

Lived Experiences of LGBTQ People: What Helps and What Hurts provides a comprehensive overview of the challenges encountered by Lesbian, Gay, Bisexual, Transgender and Queer/Questioning individuals in accessing services and obtaining education, employment, and housing. Family and community bias against this population results in significant negative outcomes including increased mental health problems, homelessness, and social isolation. In addition, societal stigma and discrimination lead to poor physical health, increased smoking, alcohol and substance use, and economic disparities. Helping professionals must better understand the negative effects of discrimination and barriers to care the LGBTQ community faces to provide affirming and competent services and improve their quality of life. This book can be used by social workers, psychologists, health professionals and instructors to help them understand the relevant issues to provide nondiscriminatory and culturally sensitive care to LGBTQ and gender nonconforming individuals.
This book summarizes the issues faced by this population to educate the reader on the history and effect of LGBTQ oppression, as well as victories that have led to current policies. Policies including the Affordable Care Act, the Religious Freedom Restoration Act, the Civil Rights Act and Title VII are examined for their impact on the LGBTQ individual. Discrimination policies regarding employment, schools, housing, HIV, and the military will be covered as well. The book includes chapters with a focus on social and family issues, physical health disparities, mental health concerns, substance use, economic and workplace challenges, and societal and legal issues that impact the LGBTQ community. A chapter on practical solutions and programmatic interventions for providing affirming and inclusive services will be instructive as to how to present a safe and welcoming space to clients.

This book offers information for service providers and instructors to adapt clinical interventions to help build relationships, make assessments, and deliver services that celebrate, rather than discriminate against LGBTQ clients. There is a theme of inclusion throughout the book so there can be no doubt that the service provider does not have to identify as part of the LGBTQ community to effectively work with this cohort. There are numerous case studies throughout the book, examples of how to use inclusive language in clinical interviews, a comprehensive glossary of terms, and useful websites.

### Law and Society

**A Book About Lawyers**  
*John Cordy Jeaffreson*  
In series: *Law, Crime and Law Enforcement*  
Publication Date: 03/09/2021  
319 pp.  
Hardcover: 978-1-53619-329-9. $230.00  
e-book: 978-1-53619-362-6. $230.00  
A Book About Lawyers provides a glimpse into the history of lawyers in London in the 19th century.

### Immigration Law

**Visas: Categories, Work Visas and the Visa Waiver Program**  
*Brian A. Shelton*  
In series: *Immigration in the 21st Century: Political, Social and Economic Issues*  
Publication Date: 08/11/2021  
279 pp.  
Hardcover: 978-1-53619-966-6. $195.00  
e-book: 978-1-68507-054-0. $195.00  
U.S. immigration policy is governed largely by the Immigration and Nationality Act (INA). The United States has long distinguished temporary immigration from permanent immigration. Temporary immigration occurs through the admission of visitors for specific purposes and limited periods of time. Permanent immigration occurs through family- and employer-sponsored categories, the diversity immigrant visa lottery, and refugee and asylee admissions. This book looks at key issues concerning visas.
Military and Veteran Issues

Cadet Life at West Point
*Hugh T. Reed*

In series: *Military and Veteran Issues*
Publication Date: 06/11/2021
237 pp.
Hardcover: 978-1-53619-663-4. $195.00
e-book: 978-1-53619-804-1. $195.00

This is a very interesting book full of valuable information of particular use to young men who are contemplating entering West Point. The book recalls many pleasant incidents of cadet life from the author’s own days at the academy.

Sexual Assault in the Military
*Diane C. Fultz*

In series: *Military and Veteran Issues*
Publication Date: 04/21/2021
343 pp.
Hardcover: 978-1-53619-495-1. $230.00
e-book: 978-1-53619-561-3. $230.00

Sexual assault prevention and response policies and programs in the Armed Forces are the most comprehensive and the most aggressive in the United States, yet after years of fighting this problem, we are still in the exact same place. Sexual assault in the military is still pervasive. It is still hurting military readiness. It is still causing thousands of service members to suffer. The trends and numbers are going in the wrong direction. This book examines the policies and results of sexual assault in the military.

Political Science

Conflict Resolution – Actors, Dynamics, and Cases
*Gilberto Carvalho de Oliveira, PhD (Assistant-Professor, Federal University of Rio de Janeiro, Brazil) and Ricardo Real P. de Sousa, PhD (Assistant-Professor, Universidade Autónoma de Lisboa, Portugal)*

In series: *Peace and Conflict Studies*
Publication Date: 05/05/2021
213 pp.
Hardcover: 978-1-53619-497-5. $160.00
e-book: 978-1-53619-587-3. $160.00

Conflict Resolution – Actors, Dynamics and Cases deals with multiple concepts and themes of the broad subject area of conflict resolution, seeking to highlight empirical studies that examine several topics from conflict prevention to peacebuilding, including conflict management, institution building, the role of formal and informal actors, the features of conflicts in different political contexts and the methods and strategies used for resolution or transformation (mediation, non-violence, reconciliation, transitional justice, second track diplomacy, peace education, post-conflict reconstruction, among others) in intra- and inter-state conflicts. The book is open to several methodological approaches, focusing on empirical studies that address several cases, including studies on Cyprus, the South Caucasus region, DR Congo, the Middle East region, Tunisia and Iraq, as well as on the role of regional organizations such as the European Union in peace-making and peacebuilding. Conceived this way, this edited volume on conflict resolution complements existing books on the theme, seeking not only to apply conflict resolution’s theoretical frameworks and concepts to contemporary case studies but also to contribute, based on these empirical studies, to advance the academic debate towards critical perspectives that guide the conflict resolution field to more pluralist, emancipatory and transformative approaches.
The Swedes did not have a real feudal system, since their lands were not fertile enough for the peasants to spare more than a small portion of their crops in order to maintain the wellbeing of the nobility. Swedish peasants were mostly free and, in 1434, gained real political status. In 1471 a dispute occurred in Sweden and peasants and citizens, led by a nobleman from Stockholm named Sten Sture, who desired a separate Swedish state. Sture and his comrades won the battle. Sture became a hero in the Swedish collective memory, ruled Sweden, and fought successfully against the Russians. In 1520 King Christian II of Denmark defeated and killed the Swedish King Sten Sture den Yngre (the Younger) and became king of Sweden, but the Swedish army, led by a nobleman named Gustav Vasa, drove Christian II from Sweden in 1523. At the time, the vast majority of Swedish lands were owned by peasants. Vasa and his descendants, who ruled the country and waged war on the Baltic shores and into European soil, gave the Swedish nobility and wealthy individuals a political status. These kings relied on the multiple wars’ outcomes to further their national enterprise and develop a Swedish national identity among strata of the wider population. That spirit of nationality, together with the cherished Swedish values of freedom and enterprise, enabled a successful campaign by King Gustavus Adolphus and his prime minister between 1626 and 1648. Yet after that war, when Sweden was accepted as a major European power, the Swedes understood that their resources would not allow them to play a central role in any future conflict, and they began to pursue a course of neutrality that continued throughout the two World Wars. During the years of Europe’s consolidation, the historical lessons learned by the Swedes culminated in a realization that they could not maintain an independent role in European “jungle politics” and that their attempts at neutrality could even prove dangerous. After much hesitation, they jumped into the European “swimming pool” and have remained floating there quite comfortably. The Swedes feel comfortable within the EU and would prefer to stay there in the future, adapting to the notion of a European nationality.

Psychology

Advances in Psychology Research. Volume 144
Alexandra M. Columbus

This compilation comprises six chapters, each detailing a recent advancement in psychology research. Chapter One presents theoretical and empirical arguments in support of the existence of a defense system against pathogens called the Behavioral Immune System, which the authors argue complements the biological immune system and is characterized by cognitive, emotional, motivational, and social aspects. Chapter Two explains how mental disorders impact executive functioning, and how future therapies can focus on eliminating this dysfunction in mental disorders. Chapter Three examines some of the factors that contribute to women’s perceptions of sexual harassment, including their decisions about whether to report such harassment, which remains one of the least reported social problems. Chapter Four concerns the impact of elevated lipid levels on executive function and sustained attention. Chapter Five explores the question of whether elevated use of social networking sites leads to problems like depression. Finally, Chapter Six deals with the development of body image in young adults, including factors like the quality of one’s relationship with one’s body, the influence of other people on body image, and mass media as conveyors of beauty ideals.
Advances in Psychology Research. Volume 145
Alexandra M. Columbus
In series: Advances in Psychology Research
Publication Date: 06/11/2021
213 pp.
Hardcover: 978-1-53619-751-8. $250.00
e-book: 978-1-53619-779-2. $250.00
This book includes eight chapters that detail recent advancements in psychology research. Chapter One aims to discuss the general identity concept and the specific concept of working identity through the lens of the tradition of the social psychology field and analyzes the limits and possibilities of conception constructions of these concepts in contemporary times, and also proposes portraits of the working identity constructions in the contemporary world. Chapter Two discusses the development of post-traumatic stress disorder following first-episode psychosis and involuntary hospitalization. Chapter Three explores the comorbidity of borderline personality disorder (BPD) and substance use disorders (SUD), identifying their epidemiological data and clarifying the functioning of borderline individuals, including their tendency to use substances. Chapter Four describes a type of cognitive behavioral therapy that is adapted to psychosis for treatment of schizophrenia. Chapter Five describes a group of patients with acute psychosis and their evolution over five years. Chapter Six provides an overview of jealousy as a function of Davis’ sexual property proposition, framed using Lewin’s Field Theory. Chapter Seven aims to explore the frequency and narrative of positive, neutral and negative perceptions of the accessibility, acceptability, and adequacy of the International Classification of Diseases 11th Revision depressive episode from the perspective of both those experiencing it and their primary relative caregivers. Lastly, Chapter Eight illustrates the discipline of social psychology through examples in the field of social influence, social norms and social representations.

Psychological Distress: Current Perspectives and Challenges
Egon Brauer
In series: Psychology of Emotions, Motivations and Actions
Publication Date: 05/05/2021
291 pp.
Hardcover: 978-1-53619-567-5. $195.00
e-book: 978-1-53619-584-2. $195.00
This monograph comprises nine chapters, each providing a different point of view concerning the problem of psychological distress. Chapter One describes alexithymia, a personality trait characterized by a person’s inability to identify and describe emotions experienced by themselves or others, and how this trait connects with psychological defense mechanisms. Chapter 2 also examines alexithymia, this time in the context of how artistic creativity can connect to psychological well-being or insanity. Chapter 3 examines some of the biological, developmental, and situational factors that appear to influence the formation and maintenance of one’s attachment style, which affects his or her capacity to form and maintain nurturing interpersonal relationships. Chapter 4 reports on the challenges that health professionals encounter when treating mental health problems associated with the stress of being diagnosed with cancer and undergoing treatment. Chapter 5 studies the connection between a mindfulness-based program for elite soccer athletes and these athletes’ self-compassion, self-criticism, flow and perceived performance. Chapter 6 studies the link between mental health literacy, fears of compassion, psychological flexibility and psychopathological symptoms in adolescent students. Chapter 7 explores the impact of school violence against teachers on teachers’ health, well-being, and job attitudes, and how emotional intelligence can mediate some of the negative impacts of school violence. Chapter 8 highlights the role of different strategies such as social support, self-efficacy and cognitive coping in reducing psychological distress in Pakistani infertile women. Finally, Chapter 9 collates available evidence and recommendations for supporting the mental health of healthcare workers, specifically in the context of additional workplace stress connected to the COVID-19 pandemic.
Understanding Emotional Intelligence

John T. Lanthem

In series: Psychology Research Progress
Publication Date: 03/17/2021
199 pp.
Hardcover: 978-1-53619-410-4. $160.00
e-book: 978-1-53619-427-2. $160.00

This book looks at the topic of emotional intelligence from a variety of perspectives, including adolescence, bullying, intimate relationships, and more. Chapter One describes the origin of the concept of emotional intelligence, the change and evolution of emotional intelligence throughout childhood and adolescence, and reviews published findings on the relationship of emotional intelligence with socio-emotional adjustment and bullying behavior. Chapter Two analyzes the role that emotional intelligence might play in establishing effective, stable, healthy, and happy intimate relationships. The third chapter provides a synthesized historical overview of the notion of emotions and the nature of their relationship to the rational mind and analyzes how concepts of “rational” and “emotional” can coexist. Following this, the fourth chapter explores how the research area of emotional intelligence can be leveraged to prevent bullying victimization and peer aggression. Chapter Five deals with the practical implications of emotional intelligence for work and health. Chapter Six details how levels of physical activity correlate with emotional intelligence in adolescents. Lastly, the final chapter addresses the question of whether self-compassion can predict future anxiety and depression.

Cognitive Load: Theory and Applications

Sarah P. Lewis

In series: Perspectives on Cognitive Psychology
Publication Date: 07/30/2021
105 pp.
Softcover: 978-1-53619-842-3. $82.00
e-book: 978-1-53619-877-5. $82.00

In psychology, cognitive load refers to the used amount of working memory resources. This book contains four chapters that each provide a unique perspective on the theory of cognitive load. Chapter One describes the use of multi-media software packages in an educational context and the impact of multi-modal teaching methods on cognitive load. Chapter Two presents the results of a study that sought to determine whether the inverse method is better than the balance method for learning to solve linear equations with a negative pronumeral within the framework of cognitive load theory. Chapter Three discusses how teaching writing skills could benefit from considering cognitive load effects and techniques with clear cognitive load implications when designing pedagogical practices. Chapter Four introduces human cognitive architecture as the basis of cognitive load theory and summarizes the cognitive load effects that apply in teaching mathematics.

Emotion Recognition: Patterns, Applications and Challenges

Robert D. Campbell

In series: Psychology of Emotions, Motivations and Actions
Publication Date: 07/27/2021
117 pp.
Softcover: 978-1-53619-766-2. $82.00
e-book: 978-1-53619-799-0. $82.00

The experience of emotion is a core element of human psychology, and the capacity to recognize emotions in others is an essential component of human social life. In some individuals, the ability to understand emotion in oneself and in others is compromised due to psychiatric disorders, which can have a substantial deleterious effect on one’s sense of well-being. This field has also been explored in the context of computer science, as artificial intelligence centered around emotion recognition has the potential to transform the nature of human-machine interaction. This book consists of three chapters that explore these concepts, granting students and researchers new insight on the nature of this necessary element of human life.
Psychotherapy and Counseling

Art Therapy in a Changing World: Creative Interdisciplinary Concepts and Methods for Group and Individual Development
Ronen Berger, Ph.D. (Nature Therapy Pioneer, Senior Lecturer, Drama Therapist, Head of the Drama Therapy MA Program at Ono College – The School for Arts and Social, Lectures at Tel-Hai College – Israel and Abroad)

In series: Expressive Arts Therapies
Publication Date: 06/11/2021
302 pp.
Hardcover: 978-1-53619-631-3. $230.00
This book presents fresh and practical interdisciplinary arts-based concepts and methods to support and improve therapists’ work assisting individuals and groups to develop coping, expressive, and communicative skills, broaden creativity and increase flexibility. It is written in a hands-on style combining theory, detailed protocols, and examples that the author brings together, offering an array of creative ways to work with different clients for a variety of aims. The book expands art therapy practice to additional dimensions, enriching and improving professionals’ work by presenting new knowledge in fields such as “performance-based therapy,” “nature therapy,” supervision and assessment, and mind-body connections. Berger’s creative and pioneering style extends to sharing with readers the thought processes that culminated in developing the methods he presents. This approach inspires and invites practitioners to develop and implement their own creative methods.
Ronen Berger, Ph.D., is a senior lecturer, drama therapist, and supervisor. Founder of Nature Therapy and former ecologist and dancer. He is head of the Drama Therapy MA Program at Ono College – The School for Arts and Social and Tel-Hai College, and teaches at Tel-Hai College and abroad. This is his 5th book.

Psychodrama: Advances in Psychotherapy and Psychoeducational Interventions
Dr. Jesús Maya

In series: Psychology Research Progress
Publication Date: 06/11/2021
229 pp.
Hardcover: 978-1-53619-683-2. $160.00
e-book: 978-1-53619-775-4. $160.00
It has been 100 years since the creation of psychodrama. This book aims to increase the evidence of psychodrama as a theoretical and practical model for its application in psychotherapy and in psychoeducational and social interventions. It is based on the international increase of scientific contributions about psychodrama in the past few years as a model of intervention with informed evidence. This book compiles different psychodramatic treatments for intervening in a wide diversity of profiles and settings: treatment of PTSD, adolescents with problem behavior, families, gender-based violence and prisons. Additionally, this book proposes several current techniques to be used in the psychotherapeutic and psychoeducational context: psychodramatic images, intermediary objects, masks and various role-playing methods.
In short, this book is a tool of special interest for researchers in psychodrama, psychotherapists, psychologists, psychiatrists, social educators and social workers. The reader can learn and enjoy the current contributions in psychodrama through the integration of research, theory and professional practice.
Today’s world is being shaped by migration and globalization at ever increasing rates. As these forces spread, more and more people with different cultural backgrounds and different personalities come into contact and interact with each other. Not only does this phenomenon pertain to how we work and do business together, but it also applies to the people we spend our leisure time with and trust with our private thoughts and feelings: our friends. Insights from cultural and personality psychology into friendship processes are therefore key to understanding and facilitating friendship processes in these current times of diversified multiculturalism and accentuated individuality.

The present book presents a selection of current international theoretical perspectives and new empirical insights from scholars in cultural and personality psychology on friendship. Apart from chapters that are primarily from cultural psychology or primarily from personality psychology, there are chapters that apply both perspectives simultaneously as well as two explicitly integrative chapters that integrate the book’s chapters into an overarching theoretical framework. The forty authors of the twenty-four chapters in this book come from twenty-nine locations in fifteen countries from around the world. The present book is therefore a paragon of internationality and diversity in and of itself and may be a stepping stone to future integrative research projects on the phenomenon that we refer to as “friendship” so collectively but that we experience so differently.

Human trafficking (also known as trafficking in persons) refers to the subjection of men, women, or children to exploitative conditions that may be tantamount to modern-day slavery. It imposes social and public health costs and undermines government authority. This book looks at human trafficking issues.

The prevalence of human trafficking, forced labor, and child sexual exploitation throughout the world is an urgent humanitarian issue with direct and far-reaching consequences on the United States. Within the United States, human trafficking and child sexual exploitation are grossly prevalent and affect diverse communities. These crimes threaten our physical and virtual borders, our immigration and customs systems, our prosperity, our national security, and are a direct attack on Americans’ personal safety and our country’s public safety. The International Labor Organization estimates that as of 2016 over 40 million people were victims of human trafficking around the world, 10 million of whom were children. Despite efforts by the United States, and steadfast and dedicated individuals and organizations, exploitation of the less powerful continues. This book looks at the long-term approach for combating these crimes.
Social Sciences

Precarious Lives of Maids, Nannies and Caregivers in Greece: Perceptions of Migrant Filipina Live-in Domestic Workers on Labour, Community Associations and Healthcare
Theodoros Fouskas, Ph.D. (Assistant Professor, Department of Public Health Policy, School of Public Health, University of West Attica, Greece)
In series: Social Issues, Justice and Status
Publication Date: 07/14/2021
289 pp.
Hardcover: 978-1-53619-632-0. $230.00
e-book: 978-1-53619-901-7. $230.00
Based on the case of migrant Filipina live-in domestic workers in Greece, this book focuses on the repercussions of precarious, low-status/low-wage occupations on their participation in primary and secondary groups of solidarity and on their representation in them, i.e., family and community, migrant community associations and trade unions, and their access to healthcare services.

Pregnant Women in Custody
Naomi G. Claudio
In series: Social Issues, Justice and Status
Publication Date: 06/25/2021
293 pp.
Hardcover: 978-1-53619-761-7. $195.00
e-book: 978-1-53619-805-8. $195.00
Chapter One examines what available data indicate about pregnant women detained or held in DHS facilities, DHS policies and standards that address the care of pregnant women, and what is known about the care provided to pregnant women in DHS facilities. Chapter Two analyzes what DOJ data indicate about pregnant women in USMS and BOP custody; the extent to which USMS and BOP policies align with national guidance on pregnancy-related care; and what is known about the care provided and the extent to which USMS and BOP track when pregnant women are placed in restrictive housing or restraints. Chapter Three contains the Protecting the Health and Wellness of Babies and Pregnant Women in Custody Act.

Crime and Criminal Justice

An Introduction to Criminological Theory, Penology and Crime Prevention
Ishmael Mugari (Lecturer, Department of Intelligence and Security Studies, Bindura University of Science Education, Bindura, Zimbabwe)
In series: Criminal Justice, Law Enforcement and Corrections
Publication Date: 01/13/2021
268 pp.
Hardcover: 978-1-53619-101-1. $195.00
e-book: 978-1-53619-106-6. $195.00
This book combines three key issues in the field of criminology: criminological theory, penology and crime prevention. Thus, the book addresses three fundamental criminological aspects, namely: explaining the causes of criminal/deviant behaviour, explaining the process of dealing with deviants/criminals, and articulating ways for preventing criminal activities. This is an essential book for researchers and students undertaking undergraduate and post-graduate programmes in criminology and criminal justice. The book is also essential for security and correctional practitioners such as police officers, correction officers, probation officers and private security players, as well as criminal crime control policy makers. As a lecturer in the field of criminology for some time, I discovered the challenges that most students face in comprehending various divergent aspects of criminological theory, as well as other issues in the areas of penology and crime prevention. However, this essential book logically presents the criminological theories, penology and crime prevention aspects in simple language, and anyone who reads it will find it easy to grasp all the various aspects it covers. To assist with comprehension, summaries of main issues and discussion questions are placed at the end of each chapter.
The book is comprised of eight chapters. Chapter one, the introductory chapter, explains key concepts such as criminology, crime, deviance, criminal justice and crime statistics. The chapter also gives a brief history of criminology and outlines the role of the criminologist, among other issues. Chapter two to chapter six cover criminological theories in classes as follows: chapter two covers the classical and neoclassical school of criminology; chapter three covers the positivist school of criminology; chapter four covers socio-structural theories; chapter five covers social process theories; and chapter six covers critical theories. Chapter seven covers white-collar criminology and, given that most of the pioneer criminologists mainly focused on street crime, the chapter looks at white-collar crime, which is even more harmful. Chapter eight focuses on penology, which is the study of punishment and the treatment of offenders. It covers areas such as theories of punishment, forms of punishment, the death penalty, rehabilitative justice and recidivism. Lastly, chapter nine focuses on crime control and prevention. The chapter starts by looking at two models of the criminal justice process, the crime control model and the due process model. The bulk of the chapter then looks at crime prevention, which entails any action designed to reduce the actual level of crime and/or the perceived fear of crime. Among others, the chapter looks at crime prevention through environmental design, situational crime prevention, crime prevention through social development, as well as various policing strategies for crime prevention.

Contemporary Issues in Criminology in Africa

Elijah Tukwariba Yin, PhD (Faculty of Law, University of Cape Coast, Cape Coast, Ghana) and Prof. Nelson F. Kofie, PhD (Professor of Sociology Northern Virginia Community College, VA USA)

In series: Criminal Justice, Law Enforcement and Corrections
Publication Date: 03/04/2021
213 pp.
Hardcover: 978-1-53619-109-7. $160.00
e-book: 978-1-53619-247-6. $160.00

This book is a collection of both empirical and theoretical chapters on some significant and enduring issues in Africa. The various chapter submissions are compelling and do make substantive contributions to the literature on criminology in Africa. The first chapter contends that crimes motivated by superstitious beliefs occur in wide-ranging contexts, and are often driven by socio-economic and political factors. Given the clandestine nature of superstitious induced crimes, it is imperative and relevant for government agencies in African countries to strategically collaborate with media and civil society organisations to launch massive public campaigns against all forms of superstition-driven crimes.

The second chapter highlights some ethical and administrative challenges that a researcher could encounter in his/her quest to study incarcerated offenders. The study concludes that, while it is crucial to conduct a prison-based study, the researcher would have to adapt to institutional constraints of the respondents, to undertake considerable impression management and negotiations with both staff and inmates, and factor in the heightened security concerns that may affect the quality of the study and the safety of the researcher.

The third chapter examines crimes against the state and the extent to which such issues are being tackled in Ghana. It concludes that the initiatives by various regimes to prosecute and to punish administrative crimes have yielded nominal outcomes.

The fourth chapter probes the prison condition in South Africa (SA). The author argues that the prison situation is no better than those in other African countries. However, its historical racist system sets it apart from other African countries. The chapter concludes that the post-apartheid regimes’ prison ideals have yet to be realized.

The fifth chapter explores roles played by education, civil society organisations, and state institutions in the democratization and strengthening of the Ghanaian Criminal Justice System. Since Ghana relaunched its democratization initiative in 1992, the country has sustained successful presidential and parliamentary elections. Marked improvements have been seen in terms of human rights observation, freedoms, political tolerance, and openness to the global socio-economic and political landscape, yet there is still more room for improvement.

The final chapter examines the lived experiences of students who have suffered crime on the University of Cape Coast campus. The analyzed data showed that factors such as negligence on the part of students, poor security services, and poor lighting systems on campus were the major contributing factors of crime (or conducive conditions for criminal activities). The study recommends that proper security measures such as the provision of tools and logistics and increasing the number of security personnel should be considered.

This book is relevant for academicians in criminology, criminal lawyers, civil society organizations, policy makers, and human rights advocates.
Reports of hate crimes have been steadily increasing over the past several years, particularly against certain groups; there were reports of 6,121 incidents in 2016 and 7,175 incidents in 2017 (a 17 percent increase). Hate crime experts are unsure if this increase reflects a rise in hate incidents, a willingness on the part of victims to report, or better reporting practices by law enforcement (or a combination of these factors); regardless, these crimes have lasting and far-reaching effects for victims, their communities, and for the nation.

This book pulls an array of voices together to understand the convoluted times of 2016 to 2021 and the unique times of COVID-19. The killing of George Floyd, Breanna Taylor, and the death of John Lewis are events that highlight a historical revival for numerous social justice issues. This book stresses the importance of sociologist W. I. Thomas’s work: “if you define a situation as real, it is real in its consequences” – otherwise termed the world of subjective reality. This helps explain what happened on January 6, 2021.

This monograph includes eight chapters that each discuss recent advancements in the field of sociology research. Chapter One explores immigrant youth’s contributions to U.S. culture and identifies potential influences on modern day and future generations. Chapter Two provides a review of the literature concerning the problem of sexual harassment in the hospitality industry. Chapter Three reflects upon the incomplete decolonization and democratization process in Latin America and Brazil. Chapter Four presents a synthesis of the evidence from literature on the implications of housing on social distancing effectiveness among people living in substandard housing units in Ghana. Chapter Five describes the Siberian Tatars, a unique indigenous people of Western Siberia. Chapter Six shows how the institutional norms and practices in orthopedics and surgery are gendered and create structures of inequalities for women doctors. Chapter Seven explores how empowerment and emancipation among high-risk marginalized populations can transpire in a practical context by examining a community-based peer outreach project among commercial sex workers in India called the Sonagachi Project. Finally, Chapter Eight focuses on the paths to women’s leadership in sustainable architecture education.
The notion of “justice for all” has been a noble ideal and a foundation of human relationships in enlightened society for millennia. The Greeks and Romans viewed justice as the basis for the rule of law that governed interactions and that served as the standard for determining rights and responsibilities. Today the notion of social justice permeates political dialogue and has become the justification for social unrest and discord.

The focus of this book is on the personal side of justice and its importance in individual lives. Although justice is a lofty concept and is often spoken of as if its meaning is clear to all, it is nonetheless a complex and often subjective standard with conflicting meanings. Though these meanings may not be universally clear, understood, or agreed upon, as a standard of human relations justice is nonetheless deeply important and profoundly personal in its impacts.

Like any metric, justice may be misused and manipulated by the self-justifying and the dishonest. However, properly understood, justice remains a noble ideal despite its complexity. Writing about justice has given us the opportunity to appreciate its significance and the nuances of its meanings. At its noblest, justice must ultimately be equated with wisdom, integrity, and love.

Improperly understood, justice can impede wisdom and purpose and become an excuse for self-serving behavior that is later regretted. Although justice is often accompanied by a set of defining rules, it is also intended to be both compassionate and fair – caring for those whose rights need to be protected, as well as those best served by forgiveness and help rather than punishment. Perhaps justice is at its pinnacle when it is accompanied by mercy.

Justice is far more than a mere set of rules, laws, or policies when it serves the purposes of enriching lives and benefiting those who need care and guidance. The study of justice affirms that its greatest value is in providing much more than order and consistency. We suggest that without forgiveness, mercy, and caring justice is simply insufficient. Perhaps, justice, when it enables individuals to learn from their mistakes and change their lives, actually fulfills its highest potential.

We invite readers to read and reflect on the importance of justice and its importance in their own lives. In this volume we provide guidelines, insights, and recommendations to assist others to more fully incorporate those principles and ideals of justice as they seek to become the best version of themselves.

Special Topics

Advances in Sociology Research. Volume 34

Jared A. Jaworski

In series: Advances in Sociology Research
Publication Date: 03/17/2021
217 pp.
Hardcover: 978-1-53619-406-7. $250.00

This compilation consists of seven chapters, each dealing with a particular recent advancement in the field of sociology. The first chapter looks at fashion and investigates three pre-modern empires to determine whether these societies incorporated a system of fashion or proto-fashion. The second chapter focuses on sexual harassment in the hospitality industry and attempts to explain the phenomenon as well as offer recommendations from experts for deterring the problem. The third chapter includes a study that examines how supportive parent-child attachment and at-risk status of female youths contribute to positive self-concept and delinquency. Chapter Four discusses the ramifications of the COVID-19 pandemic, with a specific focus on its impact on human development in developing countries. In Chapter Five, the authors compare the attitudes of students from China, Russia, India, and the United States regarding the issue of doping in sports. Chapter Six describes the development of distributive justice theories in the social sciences from the early 1960s until present times. Finally, Chapter Seven provides a systematic summary of the characteristics and key findings of social support research in online health communities.
Critical Humanity: Embodying Leadership in an Age of Compassion and Empathy

Dr. Peter T. Keo (Senior Research Fellow for the Center for Compassion and Altruism Research and Education, School of Medicine, Stanford University, California, USA)

In series: Racial Justice and Social Equity
Publication Date: 04/08/2021
190 pp.
Hardcover: 978-1-53619-424-1. $160.00
e-book: 978-1-53619-523-1. $160.00

Critical Humanity: Embodying Actionable Leadership in an Age of Compassion and Empathy is scientifically grounded and empirically rich. In this book, Dr. Peter T. Keo argues that critical humanity is compassion and empathy in action to improve the lives of the world’s suffering. However, leaders must close the gap between what they say and the actions they take.

Critical humanity has four key components. First, it favors action over passivity. Second, it favors collectivism over individualism alone. Third, critical humanity requires living in the space / tension between compassion and empathy. Fourth, it requires leaders to close the gap between what they say / believe and their actions, i.e., their espoused values and their action items, respectively. Dr. Keo refers to this gap throughout the book as the “values gap,” because natural dissonant tension between the “what I say / believe” and the “what I am actually doing” to truly impact the communities served. Public servants and public service leaders – for whom this book was primarily written – can have a deeper and more meaningful impact by embracing all four components in their service to humanity.

While the contents of this book are empirical in nature, at baseline, it is an expression of Dr. Keo’s personal truth, an epistemology that shares, in equal measures, the joy and pain of a life that is both hopeful and skeptical in humanity. It is an expression that recognizes the tremendous shortcomings and opportunities, again in equal measures, of leaders to properly and authentically serve historically marginalized populations. Dr. Keo had arrived at this realization after decades of embodying the life of a child of Cambodian genocide, war, systemic racism, and poverty. He has experienced life in disenfranchisement in two separate but related occasions, which have shaped his epistemology.

The stories that have formed the impetus for and, indeed, triggered the curiosity undergirding this book, is this: the entanglement of misery and joy is the very essence of life. It is the curiosity of this entanglement – and the need to drastically untangle them to improve the lives of the world’s suffering – that compelled Dr. Keo to write this book, and to develop this new idea: critical humanity.

First Responders: Communications, Support and Safety

Heath D. Knott

In series: Safety and Risk in Society
Publication Date: 01/13/2021
286 pp.
Hardcover: 978-1-53619-114-1. $195.00

Major natural disasters in the past 3 years, as well as the COVID-19 pandemic, have heightened attention to the nation’s ability to respond to these types of emergencies. Police officers, firefighters, and emergency medical service personnel are often the first to respond to a crisis or emergency. This book looks at issues faced by first responders.

Forced Migrations and Refugees in the Mediterranean Basin and the MENA Region

Laura Westra (University of Windsor, Faculty of Law, Windsor, Ontario, Canada)

Faculty of Jurisprudence, University of Salerno, Salerno, Italy

In series: Human Rights: Contemporary Issues and Perspectives
Publication Date: 03/26/2021
151 pp.
Softcover: 978-1-53619-421-0. $95.00
e-book: 978-1-53619-471-5. $95.00

In the past migrations opened the world to knowledge, science, and understanding among peoples, but increasingly migrants are viewed with disfavour and even hate, especially in the Mediterranean Basin and the MENA Region. I had published with two other scholars a book intended to promote the rights of migrants in 2015, but today the situation has become so much worse, particularly in our chosen area, that I believe the time has come to re-examine the situation.
A number of issues conspire to render the fate of migrants truly desperate, as they are forced to leave their lands that, due to the increasingly grave effects of climate change, can no longer feed and support them and their families, while the ongoing conflicts in the area render their situation truly unlivable. In addition, in the last few years, extreme right-wing political parties in Europe have conspired to treat people of different colour, ethnicity, or religion as unworthy of the respect due to all human beings.

In 2019 a further disaster struck the whole world, a pandemic that imposed particularly harsh conditions to migrants, who were clearly unable to practice social distance and who found themselves in situations where testing, medicines and even sufficient food and water were not available.

There are important aspects of this work that have global applications beyond the focus area we have chosen, such as the spread of racism, the fostering of conflicts to advance the interests of powerful countries, the dangerous spread of populism with fascist tendencies, and the spread of imperialism. Most of all, there is a lesson to be learned: walls to exclude and separate people provide no solutions for any of the grave problems we all face. Such problems can be solved all together or not at all; what is needed is a concentrated effort to acknowledge our need for each other, as only a belief in the true brotherhood of all can help.

Fostering Giftedness: Challenges and Opportunities
Senad Bećirović, PhD(Associate Professor, Faculty of Education and Humanities, International Burch University, Sarajevo, Bosnia and Herzegovina) and Edda Polz, PhD (Lecturer of English and Legal Consultant, University College of Teacher Education in Lower Austria, Baden, Austria)

In series: Giftedness: Identification, Assessment, Nurturing, and Treatment
Publication Date: 02/17/2021
234 pp.
Hardcover: 978-1-53619-098-4. $195.00
e-book: 978-1-53619-127-1. $195.00

This book contains two parts. The first part, Chapters 1 to 14 provide a systematic insight into key aspects of gifted students starting from different approaches to defining giftedness, then identifying the gifted, their role in the society, gender differences, socio-emotional development, mentoring gifted students, creating an optimal environment for their development, evaluating the work of the gifted, underachievement of the gifted, methods and programs of working with the gifted, use of modern technologies in teaching gifted students, and training of teachers to work with the gifted population.

The second part of the manuscript includes a case study, or empirical research on the development of students gifted in mathematics. The research method is explained first, including a description of the participants and data collection instruments. The research conducted is a case study showing the development of gifted mathematicians both in schools and in the family environment, from early childhood to higher education. The research includes many factors in the family environment such as: socio-economic and educational status of parents, learning conditions, number of children in the family, parents’ assistance with school obligations, parents’ reaction to children’s successes and failures, punishment, etc. The research also includes many in-school factors that could have a positive or negative, motivating or restraining effect on the development of the mathematical gift of the respondents. Some of these factors are: identification of the gifted, methods of working with them, rewards, punishments, programs of working with them, teacher-student relations, and the like. In addition to the development of respondents in the family and school environments, their motivation was also investigated. Based on the interviews conducted with the respondents, the factors that induced our respondents to develop into mathematically gifted students were presented. The development of students gifted in mathematics is also described on the basis of the analysis of their pedagogical documentation, through which their abilities outside mathematics were determined, along with whether there were any crucial moments that had a positive or negative effect on them, i.e. their mathematical development. Finally, the results of the research were summarized and the factors that could have contributed to the mathematical gift of the respondents were listed.

Moreover, certain recommendations are given to parents and teachers for more efficient work with the gifted population.

Sexual Harassment and Assault in Government Agencies
Margaret Brown
In series: Safety and Risk in Society
Publication Date: 05/05/2021
339 pp.
Hardcover: 978-1-53619-576-7. $230.00
e-book: 978-1-53619-591-0. $230.00

With nearly 900,000 federal civilian employees around the world, DOD has responsibilities for preventing and responding to sexual harassment and assault within its
workforce. Chapter 1 examines the extent to which DOD has visibility over such reported incidents and has developed and implemented policies and procedures to respond to and resolve these incidents.

The Department of Veterans Affairs (VA) has policies to prevent and address sexual harassment in the workplace, but some aspects of the policies and of the complaint processes may hinder those efforts. Chapters 2 and 3 address the extent to which VA has policies to prevent and address sexual harassment, how available data inform VA about sexual harassment, and the extent to which VA provides training to employees on preventing and addressing sexual harassment.

The Department of the Interior has a sexual harassment problem. For decades women and men in national parks, refuges, and other public lands and offices have not been given the protections they need to do their work free from harm as reported in chapter 4.

The Smithsonian Institution (Smithsonian) is the world’s largest museum, education, and research complex, with 19 museums and the National Zoo. An allegation of sexual harassment between two Smithsonian affiliated persons was made public and is discussed in chapter 5.

Chapters 6-8 look at how sexual harassment and assault has affected NOAA employees, and how NOAA is trying to address the issue.

**Sexual Harassment on Campus, at Work and in STEM Research**

*Jennifer Powell*

In series: *Safety and Risk in Society*

Publication Date: 05/05/2021

421 pp.

Hardcover: 978-1-53619-575-0. $230.00

e-book: 978-1-53619-590-3. $230.00

Sexual harassment is degrading and illegal. Studies show it has a negative effect on the ability of women to engage in research at the same level as men.

Sexual assault on college campuses is a critical concern for students, policy makers, college administrators, and parents of current and prospective students. Chapter 1 identifies the range and scope of policies and practices related to the investigation and adjudication of sexual assaults on college campuses in the U.S.

While many workers in the United States experience workplace sexual harassment—resulting in substantial costs to them and their employers—the extent of sexual harassment and the magnitude of its effects are not fully understood as discussed in Chapter 2.

Chapter 3 reviews federal science agency policies and procedures for addressing sexual harassment involving federally-funded STEM researchers and their trainees. The book will also explore lessons learned, enduring challenges, and future opportunities for preventing and mitigating the negative impact of sexual harassment in STEM studies and careers.

Chapter 4 is the full transcript of the “Combating Sexual Harassment in Science Act of 2019.”

Title IX prohibits discrimination on the basis of sex in education programs or activities that receive federal financial assistance. Chapter 5 examines some of the major changes established by the Title IX regulations, highlighting many of the most significant new requirements and noting where those obligations depart from prior ED guidance and the NPRM.

**The Men of the Merchant Service**

*Frank Thomas Bullen*

In series: *Historical Manuscripts*

Publication Date: 08/11/2021

261 pp.

Hardcover: 978-1-53619-886-7. $195.00

e-book: 978-1-68507-045-8. $195.00

Published in 1900, this book was written for anyone interested in going to sea or simply curious about the work of sailors. Drawing on his own experience and extensive research, the author outlines the duties, qualifications, and responsibilities of various members of the ship’s company, creating a portrait of a sailor’s life.
Sports

Applications of Traditional Wrestling in The World
Mehmet Turkmen, PhD (Traditional Sport and Games Research and Application Center, Kyrgyz-Turkish Manas University University, Bishkek / Kyrgyzstan) and Adem Kaya, PhD (Department of Sport Management, Bowie State University, Maryland, USA)

In series: Sports and Athletics Preparation, Performance, and Psychology
Publication Date: 04/15/2021
357 pp.
Hardcover: 978-1-53619-371-8, $230.00
e-book: 978-1-53619-455-5, $230.00

This book is about traditional wrestling which is one of the oldest sports in the world. It has been contributed to by a total of 26 contributors as scholars and experts from 16 countries with many popular traditional wrestling styles. This well-written book is a great resource for anybody such as teachers, athletes, coaches in traditional sports, scholars in sports science, sports historians, physical educators, people in sports ministries, and agencies.

The book not only covers traditional wrestling from a historical point of view but also provides guidance about culture, current application, and present rules and regulations that everybody in the field of traditional sports and games needs to learn.

The book has certainly accomplished the promise of being the single most comprehensive work on the subject matter to date, covering the broadest and most inclusive list of traditional wrestling styles and bringing together the collaboration of the leading scholars and experts from many countries under one publication. This book includes perspectives on traditional wrestling from all over the world, including Siberia, South Africa, Argentina, Scotland, Japan, the USA, Nigeria and Pakistan. As a result, this groundbreaking book will advance the understanding and enjoyment of the sacred sport of wrestling.

Editors and some of the contributors are among the best scientists in the scientific field of sports history and traditional sports and games. One of the editors, Dr. Mehmet Turkmen, is considered one of the best-known scholars in sports history in the world with many academic publications and awards.

Not only does this book educate and entertain, but it also gives the reader a connection on a personal level to all those who have come before him or her that are all united by this shared physical and cultural heritage. Wrestling is a powerful common denominator that has the singularly unique ability to unite all those involved in a brotherhood, giving readers a common link that will bridge the distance of language, location, and culture.

FIFA 2022: Qatar, The Legacy
M. Walid Qoronfleh, Ph.D., MBA (Executive Director, Q3CG Research Institute (QRI), Research and Policy Division, Ypsilanti, MI, USA) and M. Mohamed Essa, Ph.D., FRSB (UK), FLS (UK) (Department of Food Science and Nutrition, College of Agricultural and Marine Sciences, Sultan Qaboos University, Muscat, Oman; Ageing and Dementia Research Group, Sultan Qaboos University, Muscat, Oman)

In series: Sports and Athletics Preparation, Performance, and Psychology
Publication Date: 06/11/2021
345 pp.
Hardcover: 978-1-53619-682-5, $230.00
e-book: 978-1-53619-731-0, $230.00

This book is intended for a diverse audience including football fans from various parts of the world visiting Qatar for the first time. It is estimated that at least one million people will visit Qatar during the FIFA World Cup™ 2022. We planned this book to be informative, insightful and holistic. The book covers highly relevant subjects to football, from sport infrastructure, elite athletes’ performance, the sport’s role in health, media, and climate, to sport enthusiast experience.
Terrorism

The Fight against Terrorism
James M. Doan
In series: Terrorism, Hot Spots and Conflict-Related Issues
Publication Date: 02/24/2021
373 pp.
Hardcover: 978-1-53619-266-7. $230.00
Terrorism remains one of the most serious threats to international peace and security. As terrorist threats have multiplied in their scope and scale so has the efforts to prevent and combat terrorism, including addressing conditions that create fertile ground for terrorist groups to recruit. This book looks at the many different ways to prevent future terrorist attacks.

Urban Studies

Mobility Management in Urban Areas: Models and Perspectives
Anjali Awasthi (Professor, Concordia Institute for Information System Engineering (CIISE), Concordia University, Montreal, QC, Canada)
In series: Urban Development and Infrastructure
Publication Date: 03/09/2021
316 pp.
Hardcover: 978-1-53618-824-0. $230.00
Smart cities rely on information and communication technologies to enhance the quality of life of their citizens. This includes better use of transportation infrastructure, use of public transport, clean fuels, efficient utilization of parking spaces, and carsharing through the use of technologies such as internet of things, cloud computing, and blockchain while keeping in account environmental goals. Mobility management in urban areas is challenging yet critical. For the smooth transportation of goods and people, a detailed study of the city system elements from multiple perspectives is required. In this book, theoretical models, literature reviews and case studies to improve mobility in smart cities are provided. The key problems addressed are the allocation of pay and display parking machines, electric vehicle charging station location optimization, facility location planning under stochastic disruption, pedestrian safety planning using internet of things, assessing the environmental effect of airports on cities and populations, antecedents and outcomes of reverse supply chain and social sustainability practices, discrete event simulation for carsharing fleet management strategies, data mining models for road transport GHG emissions prediction, bibliometric analysis on smart city mobility, and blockchain for supply chain traceability application. Simulation, optimization, machine learning and qualitative methodologies are used. The book will serve as a very useful resource to academicians and practitioners working in the field.

Planning for City Regions: A Mediterranean Perspective
Adele Sateriano, PhD (Independent Researcher, Pontificia Universitas Lateranensis, Rome, Italy), Dr. Jesús Rodrigo-Comino, PhD (Physical Geography, Trier University, Trier, Germany; Soil Erosion and Degradation Research Group, Department of Geography, University of Valencia, Valencia, Spain) and Dr. Luca Salvati (Researcher, Department of Economics and Law, University of Macerata, Macerata, Italy)
In series: Urban Development and Infrastructure
Publication Date: 06/28/2021
143 pp.
Softcover: 978-1-53619-684-9. $82.00
e-book: 978-1-53619-694-8. $82.00
Renewed theoretical frameworks for planning, permanent monitoring and quantitative indicators based on official statistics, geographic information systems and remote sensing allow an inclusive and holistic representation of socioeconomic systems worldwide. By specifically focusing on metropolitan regions, this book offers a
comprehensive analysis and interpretation of socioeconomic and territorial processes hampering spatial planning in Southern Europe, offering a theoretical and practical overview of topics and problems of great interest in the urban debate. Cities in the most advanced economies are progressively abandoning spatially additive, radio-centric patterns of urban expansion. The notion of ‘city-regions’ is meaningful for the understanding of contemporary urban agglomerations and modern patterns of urban growth, adopting a specific, ‘Mediterranean’ perspective. Understanding the reasons and causes behind this transition provides for a better comprehension of economic dynamics in Europe. Addressing the role of sustainability and resilience for urban management, this book offers a thorough reflection on how to manage large city-regions and to support the planning practices and governing action of policy makers and stakeholders. Through practical examples and case studies, the book finally proposes new statistics, indicators, and interpretative approaches, stimulating a thorough reflection on interrelation and complexity of local development mechanisms from different disciplinary perspectives.

Urban Regeneration of Underused Industrial Sites in Albania
Boriana Golgota Vrusho, PhD (Head of Department of Applications Review, General Directorate of Territorial Planning and Development, Municipality of Tirana; Part Time Lecturer Marin Barleti University and Metropolitan University Tirana, Municipality of Tirana, Albania)

In series: Urban Development and Infrastructure
Publication Date: 03/04/2021
285 pp.
Hardcover: 978-1-53619-151-6. $230.00
e-book: 978-1-53619-193-6. $230.00

Industrial heritage can be considered a significant asset of modern civilization, predominately epitomizing the living patrimony of industrialization processes. Notwithstanding, it represents today under-valuated heritages, the result of massive industrial site closures due to political and economic changes through the years. This book focuses on the recognition of underused Albanian industrial sites, mostly built during the communist period, and proposals for potential regeneration models, based on successful international examples. The majority of Albanian degraded sites are deemed as an objective of high priority from central government and municipalities, taking in consideration their large areas and good possibilities of these “silent” assets redevelopment, having the opportunity to become the promoters of the development of cities. The book follows with a descriptive analysis of international positive cases, reflecting how these interventions can be appropriately applied for Albanian cases. Consistent reuse methodologies have been proposed based on three pillars: economic and urban, environmental and heritage. Finally, the book presents a general conclusion for practical applications of the above-mentioned methodologies, as a positive approach to promote sites revitalization and promotion at a national and international level.

UPCOMING PUBLICATIONS

Business and Economics

Business and Society

Emerging Trends in Global Organizational Science Phenomena: Critical Roles of Entrepreneurship, Cross-Cultural Issues, and Diversity
Dr. Gerald R. Ferris, Dr. Pamela L. Perrewé and Dr. Adebowale Akande

In series: Business Issues, Competition and Entrepreneurship
Expected Publication Date: 10/15/2021
Hardcover: 978-1-53619-493-7. $310.00
e-book: 978-1-68507-040-3. $310.00

This volume offers a worldwide array of the first truly integrated work reflecting the most up-to-date research and practice in global organizational science by 40 topmost experts (scientist-practitioners) from 25 nations. It is a well-blended international stew of epistemic knowledge on some of the hottest subject areas such as cross-cultural and cross-border issues of importance and challenge to organizations today, small and family business/entrepreneurship, diversity, individualism-collectivism, and modern technology. It is a valuable resource for scholars, practitioners, managers, decision makers, and students alike. This extraordinarily well-written and practically-crafted, culture-inclusive text could not be more relevant and timelier.
### Management

#### Emotional Intelligence and the Leader’s Role

*Cam Caldwell, PhD (Retired Professor, Business, American University of the Emirates; University of Illinois Springfield, Illinois, USA) and Verl Anderson, PhD (Professor of Management, College of Business, Dixie State University, St. George, UT, USA)*

In series: *Management Science - Theory and Applications*

Expected Publication Date: 08/31/2021

237 pp.

Hardcover: 978-1-68507-004-5. $160.00
e-book: 978-1-68507-065-6. $160.00

The message of this book, Emotional Intelligence and the Leader’s Role, confirms that a leader’s emotional intelligence is more important than how much he or she knows.

The challenge of this book to existing and would-be leaders is to look within and to recognize the power of emotional intelligence as an opportunity to honor the people who leaders are obligated to lead and serve. We believe that emotional intelligence asks leaders to genuinely love those with whom they labor and provides a basis for treating people so well that they become the best version of themselves.

### Humanities

#### History / U.S. History

#### Washington the Soldier

*Henry B. Carrington*

In series: *American History, Culture and Literature*

Expected Publication Date: 08/10/2021

396 pp.

Hardcover: 978-1-53619-815-7. $230.00
e-book: 978-1-53619-993-2. $230.00

Looking to the general trend of Washington’s military career, it is emphasized, throughout the volume, that the moral, religious, and patriotic motives that energized his life and shaped his character were so absolutely interwoven with the fibre of his professional experiences, that the soul of the Man magnified the greatness of the Soldier.

### Humanities

#### Linguistics / Phonetics and Phonology

#### The Emergence of Grammars. A Closer Look at Dialects between Phonology and Morphosyntax

*Michela Russo*

In series: *Languages and Linguistics*

Expected Publication Date: 09/30/2021

Hardcover: 978-1-53619-888-1. $230.00
e-book: 978-1-68507-022-9. $230.00

What is a grammar? What types of grammar are possible in natural languages? Why and to what extent do grammatical properties vary from one language to another?

This book gathers ten original contributions on the phonology and morphosyntax of various languages, which, from several complementary angles, contribute to the general debate on the genesis and structure of grammars. Their common thread is the logical relationship between general theory and particular grammar(s).

Basing their reflections on the careful study of various empirical materials (from Lithuanian, Gothic, Sanskrit, Nakanai, Bosnian, Croatian and Serbian, Finnic languages, Atlantic Languages, Proto-Western Arabic and Maltese, to Occitan, Medieval French, Medieval and Modern Italo-Romance), the general and common angle to these contributions is to describe and model variation in grammar.

The contributions help to show how grammar is structured at different levels of linguistic analysis and how syntactic, morphological and phonological theories are mutually enriched by work carried out at their interface.

The book, which combines theoretical linguistics with a great concern for detailed description, is intended for all general linguists interested in phonology, morphology, syntax and typological variation.
**Religion / Christianity**

**A Class-Book of Old Testament History**

*George Frederick Maclear*

In series: *Historical Manuscripts*

Expected Publication Date: 08/20/2021

424 pp.

Hardcover: 978-1-53619-940-6. $230.00

e-book: 978-1-68507-053-3. $230.00

A Class-Book of Old Testament History provides an overview of history as presented in the Bible, starting with the creation of the Earth and ending with the times of Ezra and Nehemiah.

**Politics**

**African Politics, Economics and Security**

**Mining and Community in the South African Platinum Belt: A Decade after Marikana**

*Lochner Marais (University of the Free State, Professor of Development Studies, Bloemfontein, Free State, Bloemfontein, South Africa), Malene Campbell (University of the Free State, Associate Professor of Urban and Regional Planning, Bloemfontein, Free State, Bloemfontein, South Africa), Stuart Denoon-Stevens (University of the Free State, Lecturer in the Urban and Regional Planning Department, Bloemfontein, Free State, Bloemfontein, South Africa) and Deidre van Rooyen (University of the Free State, Senior Lecturer in Development Studies, Bloemfontein, Free State, Bloemfontein, South Africa)*

In series: *Urban Development and Infrastructure*

Expected Publication Date: 10/15/2021

330 pp.

Online Book: 978-1-53619-894-2. $0.00

In August 2012, the South African police shot 34 mineworkers at Marikana outside Rustenburg. The mineworkers had been involved in a dispute with Lonmin about their wages, work environment and living conditions. It took this tragedy to focus the world’s attention on the intersection between the mines and the community in the South African platinum belt. It is now nearly a decade since the Marikana massacre. This book takes stock of the changes since then.

South Africa provides a concrete case for investigating global debates on mining and cities and the conflict that often arises in these cities. Though not now as big as it was in its heyday, South Africa’s mining sector nevertheless contributes 7% of GDP and provides 400,000 jobs (Chamber of Mines, 2017) to a country with an unemployment rate of 29.1% in 2019. South Africa provides about 80% of the world’s platinum, a large percentage of which is used in catalytic converters to reduce CO2 emission by petrol-driven vehicles.

The future of platinum mining in Rustenburg is under threat because of the rise of electric cars and the cost of underground mining in the area. Many of the new platinum mines to the north of Rustenburg are open cast mines where production is mechanised and cheaper. Other influences on Rustenburg are the increased global nature and neoliberal thinking in the mining industry. Labour practices have also changed. With mining increasingly dependent on shift work and contract work, outsourcing has changed the face of Rustenburg. The mining companies have transferred their historical responsibilities for housing and health to the government and the miners. Relationships between the mines and the community are in flux, with resulting social, environmental and health concerns. Most worryingly, in their engagement with communities the companies seldom consider the consequences of mine decline and closure.

This book investigates the consequences of the shifting social responsibilities, new inequalities and sustainability concerns created by this neoliberal phase and asks what will happen in the likely case of mine decline and closure and whether there have been improvements since Marikana.

**Middle Eastern Politics**

**Iran: U.S. Relations, Foreign Policies and Sanctions**

*Ditte H. Søndergaard*

In series: *Politics and Economics of the Middle East*

Expected Publication Date: 09/01/2021

372 pp.

Hardcover: 978-1-53619-961-1. $230.00

e-book: 978-1-68507-060-1. $230.00
Since May 2019, U.S.-Iran tensions have heightened significantly, and evolved into conflict after U.S. military forces killed Qasem Soleimani, the commander of the Iran’s Islamic Revolutionary Guard Corps-Quds Force (IRGC-QF) and one of Iran’s most important military commanders, in a U.S. airstrike in Baghdad on January 3, 2020. The United States and Iran have appeared to be on the brink of additional hostilities since, as attacks by Iran-backed groups on bases in Iraq inhabited by U.S. forces have continued. This book details U.S. policy options on Iran, Iran’s regional and defense policy, and Iran sanctions.

### Social and Behavioral Sciences

#### Human Sexuality

**Issues Concerning the LGBTQ+ Community**

Peter D. Parkinson

In series: *Human Sexuality*

Expected Publication Date: 08/20/2021

368 pp.

Hardcover: 978-1-53619-964-2. $230.00


This book looks at issues concerning the LGBTQ+ community including: a pride guide, the Trump administration’s assault on the LGBTQ community, discrimination in housing and lending, health outcomes for LGBT veterans and the juvenile justice system.

#### Psychology / Psychotherapy and Counseling

**Arts Therapy in a Changing World: Creative Interdisciplinary Concepts and Methods for Group and Individual Development**

Ronen Berger, Ph.D. (Nature Therapy Pioneer, Senior Lecturer, Drama Therapist, Head of the Drama Therapy MA Program at Ono College – The School for Arts and Social, Lectures at Tel-Hai College – Israel and Abroad)

In series: *Expressive Arts Therapies*

Expected Publication Date: 08/31/2021

302 pp.

Softcover: 978-1-68507-055-7. $79.00


This book presents fresh and practical interdisciplinary arts-based concepts and methods to support and improve therapists’ work assisting individuals and groups to develop coping, expressive, and communicative skills, broaden creativity and increase flexibility.

It is written in a hands-on style combining theory, detailed protocols, and examples that the author brings together, offering an array of creative ways to work with different clients for a variety of aims.

The book expands arts therapy practice to additional dimensions, enriching and improving professionals’ work by presenting new knowledge in fields such as “performance-based therapy,” “nature therapy,” supervision and assessment, and mind-body connections. Berger’s creative and pioneering style extends to sharing with readers the thought processes that culminated in developing the methods he presents. This approach inspires and invites practitioners to develop and implement their own creative methods.

Ronen Berger, Ph.D., is a senior lecturer, drama therapist, and supervisor. Founder of Nature Therapy and former ecologist and dancer. He is head of the Drama Therapy MA Program at Ono College – The School for Arts and Social and Tel-Hai College, and teaches at Tel-Hai College and abroad. This is his 5th book.

#### Security Issues

**The COVID-19 Disaster: Building the Next AI-Guided Pandemic Prevention and Response Plan**

Robert Irving Desourdis

In series: *Homeland Security and Safety*

Expected Publication Date: 09/30/2021

Hardcover: 978-1-53619-861-4. $310.00

e-book: 978-1-68507-024-3. $310.00

This book, *The COVID-19 Disaster. Volume 1: The Historic Lessons Learned and Benefits of Human Collaboration*, is an intentionally apolitical treatment of the many experiences at the heart of the disaster. It collects hands-on experience from
government preparedness and response work, including the impact on state IT systems, the heroic healthcare workers who directly faced the consequences of the disease each day, and the medical and insurance industries’ impact and response, and then builds recommendations for the solution-approach book entitled The COVID-19 Disaster Volume II: Pandemic Prevention and Response Using Artificial Intelligence.
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