### M Changes 2024

### Changes in T Cell Populations and Cytokine Production in SARS-CoV-2 Infected Individuals; Their Role in Prognosis

At the time of writing this call for papers for the special issue: "Changes in T cell populations and cytokine production in SARS-CoV-2 infected individuals; their role in prognosis" (June 10, 2022), over 534 million people have been infected with SARS-CoV-2 virus, of whom over 6.3 million have died. Early studies of COVID-19 reported that infection with SARS?CoV?2 results in dysregulation of the immune and hematopoietic systems, manifested by lymphopenia, increased numbers of hyperactivated neutrophils and NK cells, and the development of tolerogenic APCs that suppress T-cell-mediated immunity. In patients with COVID-19, lymphopenia, mainly due to depletion of effector T cells, with a concomitant decrease in regulatory T cells (Tregs), accompanied by significant upregulation of cytokines IL-1?, IL-6, TNF-?, IL-10, and chemokines MCP1, IP-10, MIP1A, MIP1B, have been associated with a poor outcome. The continued evolution of SARS-CoV-2, including the rapid accumulation of viral mutations to the point that new viral variants with different characteristics are emerging, has led to great concern about the ability of these variants to evade the immune response triggered by natural infection and/or vaccination. The recent wave of infection has been caused by the omicron variant (B.1.1.529), which has 5 sublineages (BA.1-5) that differ in the number of mutations in the spike protein, and by the emerging deltacron variant, which resulted from recombination of the omicron with the delta (B.1.617.2) variant. The rapid international spread of emerging variants with mutations associated with escape from vaccine-induced immunity poses a major challenge for pandemic control and prevention of COVID- 19. Important questions have been raised about the impact of SARS-CoV-2 variants on transmissibility, disease severity, the effectiveness of existing COVID-19 vaccines in preventing severe disease, humoral response, and the role of T-cell immunity in vaccinated individuals. Recent studies have shown that heavy mutations in the spike protein of the SARS-CoV-2 omicron and deltacron variants have resulted in their ability to evade spike-specific neutralizing antibodies; however, their effect on cellular immunity including cross-reactive T cells generated by vaccination or natural infection is less clear. Detailed studies linking humoral and cellular immunity to the COVID-19 outcome will be useful for uncovering prognostic biomarkers and developing future vaccines. We welcome research papers on immune system involvement in COVID-19 including, but not limited to, the following topics: - The role of immune cells and cytokines in COVID-19 - Immune biomarkers for COVID-19

### Changing Backgrounds and Groundbreaking Changes: Gynecological surgery in the third decade of the 21st century, volume II

This is a continuation of the Research Topic on Changing Backgrounds and Groundbreaking Changes: Gynecological surgery in the third decade of the 21st century. In the third decade of the 21st century, gynecological surgeons are faced with new technical developments but also with new expectations. The last decades have emphasized the role of individualized approaches to patients and treatments, an increasing role of the molecular diagnostics for previously genuine "surgical" decisions, as well as better awareness of the role of the surgeon (\"human factor\") for both - surgical successes and mishaps. These trends take place either as a reaction to the pitfalls of the modern surgery, e.g. not satisfying reduction of complication rates or the uncertainty about the oncological risks and long-term outcomes of minimally invasive approaches (e.g. following the LACC trial or the morcellation debate) and, independently, as a result of better understanding of surgeries and surgeons, e.g. due to increasing reflection about the role of education, training or nonsurgical skills. We invite submissions dealing with "changing backgrounds" and "groundbreaking changes" of the gynecologic surgery. We encourage the authors to submit original papers, review articles and case reports covering all aspects of gynecological surgery, including interdisciplinary themes relevant to

gynecology. The "changing backgrounds" are represented by (but not limited to) e.g.: - trends towards rediscovering and re-definition of surgical anatomy, - importance of predictable and verifiable surgical competence – role of national and international certifications, - new concepts of surgical education, by using virtual reality, surgical games and simulators, - increasing awareness of surgeon-related complications (roles of "human error", non-technical skills, fatigue, duty hours etc.), - impact of the surgery on the surgeon (surgical profession from the perspective of occupational medicine). The "groundbreaking changes" are represented by (but not limited to) e.g.: - differentiated surgical-oncological strategies in accordance with molecular tumor characteristics (e.g., new perspectives on surgical treatment of endometrial cancer according to molecular subtypes), - evolving role of the molecular biology in the treatment of rare gynecological tumors - increasing role of the robotic-assisted surgery including newest developments within robotics, - increasing surgical and oncological safety of the sentinel concept due to new (e.g. indocyanine green based) techniques, - controversies about and improvements of the tissue morcellation techniques, - re-definition and self-limitation of cervical cancer surgery after the LACC trial, - shift from vaginal to laparoscopic concepts in urogynecology, - self-limiting (less radical) trends within endometriosis surgery, - most recent developments in biomarker research.

### **Adult Development and Aging**

Presents an integrative, student-friendly approach to understanding the impact of biological, psychological and social processes on individuals throughout the aging process Acclaimed for its depth, currency, and easily accessible presentation, Adult Development and Aging, helps students understand the aging process both in themselves and in those around them, approaching the subject from the biopsychosocial perspective: a model of adult development that takes into account the influences and interactions of complex biological, psychological, and social processes. Authors Susan Krauss Whitbourne and Stacey B. Whitbourne explore the latest concepts and applications in this important discipline. Based on Susan's classroom experience teaching her Psychology of Aging course, this engaging textbook integrates current research, real-world data, detailed explanations, and relatable examples to provide a balanced and accessible examination of the subject. Now in its eighth edition, this fully updated and revised textbook offers inclusive coverage of recent advances in neuroscience and genetics, cognitive functions, vocational development, sociocultural influences, mental health issues, health and prevention, and much more. Adult Development and Aging: Biopsychosocial Perspectives, Eighth Edition, is an invaluable source of timely and relevant information for digital-native college learners and mature returning students alike, as well as for instructors and academic researchers in areas of adult aging and lifespan development. AN INTERACTIVE, MULTIMEDIA LEARNING EXPERIENCE This textbook includes access to an interactive, multimedia e-text. Icons throughout the print book signal corresponding digital content in the e-text. Two threads of video content in the enhanced e-text engage students more deeply with the material: Age Matters: Newly developed for the Eighth Edition, each chapter begins with an inviting video introduction to the chapter topic—outlining for students what they will read about, calling attention to key concepts, challenges, and pitfalls, and making connections with other chapters. Appearing with each chapter's summary, a longer and more personal Age Matters video lends real-world context to students' review of the chapter, with the authors offering insights drawn from their own work and life experience. Psychology Concepts: A series of videos offering brief overviews of topics in general psychology, such as understanding memory and understanding personality, that come to bear in the discussion of adult development and aging. Appearing throughout the enhanced etext, interactive figures, diagrams, and tables facilitate study and help students retain important information. Even many of the simplest figures are interactive to encourage online readers to pause and absorb the information they present before scrolling on to additional reading. Each chapter includes a self-scoring practice quizwith feedback at both question- and quiz-level to help students prepare for higher-stakes assessments and exams.

### **Digitalisation of the Greening Supply Chain**

This book includes in-depth discussions on practical aspects of digitalisation of a supply chains and covers a

vary array of actionable digitisation tools. The academic literature points to a serious lack of precision in the scope that the digitalisation of business processes should address. Studies on the digitalisation of businesses have pointed to the fragmented nature of their coverage and the lack of a comprehensive approach to the research conducted in this area. Digital transformation is described in academic and specialist literature as the integration of digital technology into all areas of business, which in turn is causing fundamental changes in the way a company delivers its services and business activities, cultural changes and a change from traditional business processes to new, innovative practices and solutions that are having an impact on the greening supply chains. It is important to note that digital transformation involves the introduction of innovation and new business models, incorporating the computerisation of resources, supply chain visibility and increasing the use of technology to improve the experience of employees, customers, suppliers, partners and supply chain stakeholders. Digitisation is a business trend that is becoming increasingly important. Books on this subject that have been published in recent years deal with the issue on a fragmented basis. It is not possible to find a publication that comprehensively presents opportunities for the digitisation of supply chains through the computerisation and standardisation of information flows, the integration of IT systems in supply chains and the application of modern technologies and innovations. Only the synergy of these three aspects allows for the full digitalisation of greening supply chains. The book is an excellent material for both theoreticians and practitioners. Theoreticians will find inspiring research results in a very narrow thematic scope, which is also dynamically developing.

### Remote Sensing of Land Cover and Land Use Changes in South and Southeast Asia, Volume 2

South and Southeast Asian countries are experiencing rapid land cover and land use changes (LCLUC) driven by urbanization, agricultural expansion, deforestation, and infrastructure development. These transformations have significant impacts on biodiversity, water resources, food security, and climate regulation. There is an urgent need to quantify LCLUC impacts to design effective management strategies that help understand, mitigate, and adapt to these changes. Remote sensing data plays a crucial role in providing diverse information essential for assessing land use patterns, quantifying changes, and evaluating both environmental and societal impacts. Volume 2 explores the complex and dynamic interactions between land use and the environment in the region. It brings together expertise from U.S. contributors of the NASAfunded Southeast Asia Research Initiative (SARI) and collaborators from South and Southeast Asian countries. Key Features: Presents case studies on LCLUC impacts related to food security, heat stress, urbanization, agricultural intensification, water scarcity, forest transitions, and ecosystem health. Demonstrates the use of novel machine learning and deep learning algorithms for quantifying LCLUC impacts. Explores how satellite remote sensing can reveal hidden patterns, track environmental degradation, and support resource management. Highlights the integration of very high-resolution data with midresolution satellite data for effective LCLUC impact mapping and monitoring. Adopts a multidisciplinary approach, emphasizing the integration of biophysical and socio-economic data to address LCLUC impacts. This book highlights the transformative power of remote sensing and geospatial technologies while calling researchers, policymakers, and practitioners to action. It offers valuable insights for scientists, geographers, ecologists, remote sensing specialists, and anyone interested in the intersection of land use, development, and environmental sustainability.

### Food and Nutrition for Athletics: Redefining the Role and Application

Food and nutrition play crucial roles in athletic performance and overall health. Traditionally, the focus has been on providing athletes with adequate energy and nutrients to support training and competition demands. However, recent advancements in sports science and nutrition research have led to a re-evaluation of the role and application of food and nutrition in athletics. This includes exploring innovative dietary strategies to optimize performance, enhance recovery, and mitigate the risk of injury and illness. Additionally, there is growing recognition of the individualized nature of nutrition requirements among athletes, considering factors such as training load, metabolic demands, and genetic predispositions. As such, redefining the role

and application of food and nutrition in athletics is essential for maximizing the potential of athletes and promoting long-term health and well-being.

### The Proceedings of the 11th Frontier Academic Forum of Electrical Engineering (FAFEE2024)

This book contains the original and refereed research papers presented at the 11th Frontier Academic Forum of Electrical Engineering (FAFEE 2024) held in Chongqing, China. Topics covered include: Power System and New Energy; Motors and Systems; Power Electronics and Electrical Drives; High Voltage and Discharge; Electrical Energy Storage and Application; New Electrical Materials; Advanced Electromagnetic Technology. The papers share the latest findings in the field of electrical engineering, making the book a valuable asset for researchers, engineers and university students, etc.

### **Achieving Business Excellence Through Triple Transformation**

In an era defined by rapid technological advancement and shifting societal expectations, businesses must evolve on multiple fronts to remain competitive and relevant. The integration of digital, cultural, and strategic transformation enables organizations to innovate, foster resilience, and respond effectively to market demands. By embracing this comprehensive approach, companies can drive long-term growth while promoting sustainability and social responsibility. This multifaceted transformation not only enhances operational efficiency and employee engagement but also strengthens stakeholder trust and positions businesses to thrive in an increasingly complex global landscape. Such forward-thinking strategies contribute to more adaptive, purpose-driven, and future-ready enterprises. Achieving Business Excellence Through Triple Transformation provides a structured and actionable framework that integrates digital, cultural, and strategic transformations as a pathway to sustained business excellence. It presents a comprehensive approach that ties together three critical domains, each of which is often treated in isolation. Covering topics such as business performance, organizational development, and social entrepreneurship, this book is an excellent resource for business leaders, entrepreneurs, researchers, academicians, and more.

### The New Face of Evaluation and Management

Physicians want to care for patients, not spend their time documenting in an electronic medical record. Physicians are always complaining about the amount of time they spend documenting patient care in support of medical billing through an evaluation and management coding system (E/M). New guidelines were created to lessen the time a physician/provider spends on documentation as many of the mandatory elements are no longer a requirement for calculating a code level. Previously an E/M (evaluation and management) note required documentation of history, exam, and medical decision-making with required elements in each component to support a level for payment. If an element was missing, the level of service was not supported; therefore, the code was lowered, resulting in a lower reimbursement for the physician/provider. The new guidelines eliminated the requirement of History and Exam as part of the calculation of a code level. Yes, an appropriate history and exam are required, this supports good patient care, but when it comes to reimbursement, they are no longer part of the picture. The overall system is not difficult, if time is taken to understand the elements and how they are applied in the documentation. Documentation is a "word game" always has been, the authors' focus is to show what words to use to lessen the time but still convey the complexity of the patient's condition, and how the physician/provider determines a treatment plan which includes the risk to the patient to satisfy the Coding guidelines initiated by Medicare and American Medical Association. This book evaluates the new guidelines and brings them into prospective so physicians/providers/coders can easily understand how to document and calculate the level of service for reimbursement. This is not a cumbersome book or complicated, but straight to the point. The main goal of the book is to educate physicians, nurses, and coders on what documentation is really required and what has just become habit over the last 30 years.

#### **M-Power**

Being menopause friendly is good for women, AND business Just at the point where they have most to offer your organization, many senior, experienced women face the challenges of menopause symptoms. Without the right support this can impact their participation, performance, progression and well-being. This is costly not only for the women themselves, but for the businesses that employ them. That cost increases – both financially and reputationally – when employers fail to act. 'Laura Haycock begins this book by saying that she hopes it 'will help organizations support women better in the future.' Well, I think she's knocked it out of the park! 'Professor Jo Brewis, co-author of the UK Government report The effects of menopause transition on women's economic participation in the UK (2017) 'Any organization who employs women should have ready access to this book.' Dr. Louise Newson, Founder of Newson Health Group and member of the UK Government's Menopause Taskforce Laura Haycock is a Chartered Psychologist and Associate Fellow of the British Psychological Society with over 30 years of consultancy experience across all aspects of talent management. Through her business, Brew People, Laura helps good leaders become great leaders by putting inclusion at the heart of everything they do to: identify true talent; empower high performance; connect diverse teams; and develop everyone's full potential. In this book she sets out the business case for supporting women through menopause and a simple, evidence-based framework for creating an effective Menopause Action Plan.

### **Navigating Brand Activism**

In a world where brands are no longer just selling but also taking a stand, Navigating Brand Activism, written by leading thinkers of the marketing world, is your guide to the fascinating, messy, and at times, head-shaking world of brand activism. This groundbreaking book delves into the motivations behind this movement, dissects potential pitfalls, and celebrates triumphs. This book is for anyone who wants to understand: Why some purpose-driven brands are winning hearts, minds, and market share How to differentiate your brand in a crowded marketplace through activism How to spot authentic activism from mere marketing ploys The future of brand activism and its potential to create a better world The potential downsides of brand activism, including political backlash, consumer boycotts, and brand dilution Most importantly, when and when not to engage in brand activism. Whether you're a business leader, a conscious consumer, or simply curious about this evolving landscape, this book will challenge, inspire, and empower you to navigate the world of woke washing and genuine advocacy.

### Accounting: Business Reporting for Decision Making, 9th Edition

Birt's Accounting: Business Reporting for Decision Making, 9th Edition is the market-leading text for core accounting units in business and commerce degrees, specifically designed for first-year students across all business disciplines, including marketing and HRM. What sets this text apart is its focus on the connection between accounting and business decision-making, presented from a management and stakeholder perspective rather than a technical accounting view.

### **Enzymes in Textile Processing: A Climate Changes Mitigation Approach**

The book offers a comprehensive overview of low-capital cost technologies for enzyme manufacture and utilization in the textile industry with sustainable bioenergy from effluent. Enzymes produced from renewable sources to replace potentially harmful chemicals in textile products have been outlined in making the textile industry greener and eco-friendly. The current book also addresses the strategies to achieve sustainable development goals (SDGs) and sustainability education in the textile sector. In particular, the use of green enzymes to convert by-products from textile effluents into bioenergy has been highlighted. This book outfits academic researchers, industrial practitioners, and policymakers for the engagement of green enzymes as a step toward sustainable development goals in the textile industry.

### Sustainable Energy Planning in Smart Grids

Sustainable Energy Planning in Smart Grids curates a diverse selection of innovative technological applications for problem-solving towards a sustainable smart grid. Through these examples, the reader will discover the flexibility and analytical skills required for the race towards reliable, resilient, renewable energy. This book's combination of real-world case studies allows students and researchers to understand the complex, interdisciplinary systems that impact potential solutions. Detailed analysis highlights the positives and drawbacks of a variety of options, modeling considerations, and criteria for success. Trials and testing include electric vehicle charging, public lighting, energy mapping, heating solutions, and a proposal for 100% renewable cities. With contributions from a global range of experts, this book builds the complex picture of integrated, systemic modern energy planning. - Collects case studies from experts around the world - Presents readers with insights into current technological applications and innovations for building a sustainable grid and energy system - Provides well-rounded, complex context to these interdisciplinary challenges

### Effect of Digital and Climate Changes in the Business Models of Companies

The aim of the monograph is to present a modern and original approach towards designing and implementation of effective solutions that ensure an induction towards positive climate change. The monograph presents the application of digital business models and strategies combining solutions of digital and climate transformation. The monograph presents a set of digital solutions that change the functioning of technical organizations in a multiple crisis environment. Applied technological management supported by elements of automation and robotics will shape the emergence of new climate services. The described mechanisms for implementing cybersecurity and safety principles will serve to reduce climate threats.

### Advances in Applied Nonlinear Dynamics, Vibration, and Control – 2024

This book aims to provide readers with the latest exciting advancements in applied and interdisciplinary engineering science and technologies, particularly in nonlinear dynamics, vibration analysis and control, control systems theory and methods, robotics, and their various engineering applications developed in recent years. The chapters, contributed by active scholars in these fields, cover advanced systems theory and methods, innovative technologies, benchmark experimental validations, and active engineering practices. Readers will benefit from this cutting-edge collection of applied nonlinear dynamics and control, as well as various stimulating engineering theories, methods, and technologies, finding inspiration for their ongoing R&D work. This book is intended for graduate students, research staff, and scholars in academics and also provides useful hand-up guidance for professionals and engineers in practical engineering missions.

### **Discovering Nutrition**

Incorporating the latest research and dietary guidelines, Discovering Nutrition, Seventh Edition introduces students to the fundamentals of nutrition with an engaging and personalized approach. Written with a diverse student population of nutrition majors and non-majors in mind, this text focuses on teaching behavior change and personal decision making with an emphasis on how our nutritional behaviors influence lifelong personal health and wellness, while also presenting up-to-date scientific concepts in several innovative ways. Thoroughly updated, the new seventh edition covers current nutrition topics of interest such as personalized nutrition, nutrigenomics, the obesogenic environment, gut health, microbiome, plant-based diet, functional foods, bioavailability, nutrition density, and gut microbiome. Feature boxes such as the new Lifestyle Medicine, Why Is This Important? Quick Bites, and more, ensure students learn practical nutrition information.

### Young People, Alcohol, and Risk

Young People, Alcohol, and Risk theorises the social, cultural and economic shifts that have underpinned significant declines in young people's drinking in high- income countries. Since the early 2000s, alcohol use among young people has declined significantly in most high- income countries. Situated within a theoretical framework of 'social generations' and 'risk', this book explores the key interrelated factors that have cumulatively shifted the social and cultural position of alcohol for young people in these countries. Drawing on interviews and survey data from the authors' research in Australia, Sweden and the UK, as well as the broader international literature, the book explores the importance of changes in attitudes to alcohol, shifting family and parenting practices, digital technology use and changes in leisure practices, neoliberalism and individualism, health and wellbeing, and gendered practices. These factors have made salient the notion of risk for young people, resulting in a culture of caution. This book will be of interest to students and scholars across the social sciences, in particular those studying substance use, youth sociology, cultural studies and public health. It will be of use to policy makers and practitioners working with young people.

### Sustainable Synergy: Harnessing Ecosystems for Climate Resilience

\"Sustainable Synergy: Harnessing Ecosystems for Climate Resilience\" will assemble a diverse collection of expert perspectives to explore the crucial relationship between ecosystems and climate resilience comprehensively. This groundbreaking volume will bring together leading voices from various disciplines to present a multifaceted examination of ecosystems' role in addressing the challenges posed by climate change. Divided into thematic sections, the edited volume will begin with a deep dive into the intricate dynamics of ecosystems, providing a foundation for understanding their inherent resilience mechanisms. Contributors, including renowned scientists, researchers, and practitioners, dissect the current climate crisis and elucidate how important ecosystems can be in mitigating its effects. The strength of this edited volume will lie in its synthesis of cutting-edge research, case studies, and innovative strategies for sustainable environmental management. Each chapter will contribute a unique perspective, exploring biodiversity conservation, ecosystem restoration, and integrating indigenous knowledge into climate resilience efforts. Beyond theoretical discussions, the book will strongly emphasise practical applications. Contributors share successful, real-world examples of ecosystem-based solutions, highlighting projects demonstrating tangible results in enhancing climate resilience. These case studies provide inspiration and guidance for policymakers, conservationists, and anyone committed to fostering a sustainable future. The interdisciplinary nature of \"Sustainable Synergy\" will foster a holistic understanding of the complex issues surrounding climate resilience. The edited volume will be formulated to be accessible to a broad audience, including academics, practitioners, policymakers, and students. Its structure will facilitate an engaging journey through ecology, climate science, and environmental policy, making it an invaluable resource for those seeking a comprehensive overview of the subject. As the global community grapples with the escalating impacts of climate change, \"Sustainable Synergy: Harnessing Ecosystems for Climate Resilience\" stands out as a seminal contribution. By bringing together diverse perspectives, this collection will serve as a dynamic resource that informs and inspires collective action toward a more resilient and sustainable future. In the face of unprecedented environmental challenges, this edited volume will emerge as a guiding light for those committed to leveraging the power of ecosystems for climate resilience.

### **Governance in Sport**

Governance in Sport: Analysis and Application, Second Edition, examines governance within sport organizations at all levels of sport and across industry sectors. Drawing from both analytical and applied perspectives, students will learn principles of good governance and ethical decision making.

### **Financial Reporting, 4th Edition**

The most authoritative financial reporting text for second and third-year courses, Loftus' Financial Reporting is back in a new fourth edition with updates to the Australian Accounting Standards (up to May 2022), making it the most current book on the market. New to this edition is an entire chapter on ethics, a

completely reworked sustainability chapter and an expanded integration of New Zealand standards and examples. The new edition encourages students to not only develop a conceptual understanding of the content, but to also apply it in a variety of practical contexts. Supported by a variety of digital resources like interactive worked problems and questions with immediate feedback, Financial Reporting is a textbook designed for an engaging, interactive learning experience.

### Remote Sensing of Land Cover and Land Use Changes in South and Southeast Asia, Volume 1

South and Southeast Asian countries are experiencing rapid land cover and land use changes (LCLUC) due to urbanization, agricultural expansion, deforestation, and infrastructure development. These changes have farreaching consequences for biodiversity, water resources, food security, and climate regulation, underscoring the urgent need for effective monitoring and management strategies. Remote sensing data is essential for mapping and monitoring these changes. A variety of remote sensing data, ranging from coarse to very high resolution, can be used to assess land use patterns, and quantify changes. Volume 1 showcases the practical utility of remote sensing data in various LCLUC studies. The book features contributions from the NASAfunded South/Southeast Asia Research Initiative and collaborators from multiple countries in South and Southeast Asia. Key Features: Explores the latest methodologies, from deep learning to novel data integrations, for mapping LCLUC. Demonstrates case studies to monitor and map land cover changes using very-high, medium, and coarse-resolution satellite data. Highlights the role of remote sensing in integrating biophysical and socioeconomic data. Provides case studies on urban expansion, deforestation, and agricultural intensification. Demonstrates advanced remote sensing methods for tracking land use changes. Offers insights into sustainable land management using remote sensing and geospatial technologies. This book serves as a cornerstone for advancing research and collaboration in the field of remote sensing and land use studies, particularly in South and Southeast Asia. It will be an invaluable resource for mapping and monitoring professionals, including remote sensing experts, geographers, environmental scientists, ecologists, and all others involved in land use/cover change research.

#### Lasers

The book starts with basic overview of physical phenomena on laser-matter interaction. Then it is followed by presentation of a number of laser applications in the nano-particles and thin films production, materials examination for industry, biological applications (in-vitro fertilization, tissue ablation) and long-range detection issues by LIDARs.

### Digital Tools and Data for Innovative Healthcare

Digital Tools and Data for Innovative Healthcare: A Vision for Healthier and More Inclusive Societies is an invaluable resource for addressing the critical needs of healthcare professionals and researchers. In 6 sections, it provides an in-depth exploration of digital health technologies, offering practical applications and ethical guidelines that are essential for the effective use of health data. By focusing on the integration of AI and machine learning in clinical environments, the book equips its audience with the knowledge necessary to enhance patient outcomes and optimise healthcare operations. This comprehensive approach ensures that readers are well-prepared to navigate and leverage the rapidly evolving landscape of digital healthcare. - Provides understanding to the potential of digital tools in the field of healthcare and how these tools can build stronger national health systems - Include cases with experiences of applications of health data, tools and services for the digital transformation of healthcare sector - Give views and insights for the transition towards stronger healthcare models and infrastructures

### **Introduction to Public Health and Research**

The book is a comprehensive text that will deal with the foundation and fundamental principles, including recent advancements, in the field of public health research. The book is designed to equip researchers, health care professionals, policymakers and students with knowledge and tools necessary to effectively address both the current and emerging public health challenges. The book covers a wide range of topics including epidemiology, statistics, economic assessment and research methodologies, all emphasizing a global perspective on promoting health and well-being. A unique feature of this publication is its focus on Oral Health research in Southeast Asia, with each chapter concluding with relevant research examples from the region. This makes it the first book of its kind dedicated to this area of study.

#### **Research Handbook on Inflation**

This Research Handbook provides a comprehensive overview of the multifaceted landscape of inflation studies, policy, and practice. Analysing theoretical and empirical literature on measuring inflation and on the drivers of inflation dynamics, it sheds light on developments in monetary policy over the past two decades.

### **Advanced Applications in Heat Exchanger Technologies**

Advanced Applications in Heat Exchanger Technologies presents the most recent developments in enhancing heat exchanger performance, reliability, and resilience, including the implementation of Artificial Intelligence, Machine Learning, and Additive Manufacturing. Covering the essential parts of many commercial endeavors, ranging from aerospace to marine applications to oil-and-gas, the book discusses various heat exchanger types and interdisciplinary industry applications. It encompasses several different techniques, such as nanofluids, microchannel heat exchangers, computer modeling, advanced manufacturing, and optimization. The book addresses real-world concerns that impact long-term heat exchanger performance and dependability such as fouling, corrosion prevention, and maintenance measures. This book is intended for researchers and graduate students who are interested in heat exchangers R&D and the diverse range of industrial applications of heat exchanger technologies in contemporary practice.

#### **Essentials of Public Health**

Essentials of Public Health, Fifth Edition is a thorough introduction to the field of public health, blending public health practice concepts, government public health, and careers in public health. Using the concept of Public Health 3.0 (a set of aspirational goal to move the public health system into the future), the first section delves into foundational public health principles, governmental structures, healthcare relationships, and pandemic preparedness, offering a thorough understanding of the field. The second section uniquely highlights various public health occupations and careers, equipping readers with an understanding of the diverse roles within the public health workforce. Covers the latest trends and concepts including the 10 Essential Public Health Services (EPHS), Health People 2030, health equity, and more. Offers a new chapter (6) entitled Pandemic and All-Hazards Public Health Preparedness which emphasizes the critical lessons learned from the COVID-19 pandemic and highlights the essential role of public health in safeguarding community health during emergencies. Uniquely explores public health careers, offering 6 job-specific chapters covering careers in Public Health Administration, Environmental & Occupational Health; Public Health Nursing; Epidemiology & Statistics and more. Features updated tables, figures, and weblinks throughout the text illustrate key concepts and provide useful resources. Includes revised and expanded \"Outside-the-book\" thinking exercises as well as discussion questions to engage students further. Introductory Public Health courses in Public Health, Nursing, and other health disciplines. © 2026 | 350 pages

### Perspectives and Practices of Education for Sustainable Development

Informed by theory and full of practical advice, this key title offers a clear route to education for sustainable development (ESD) whilst questioning how we reconcile participatory, inclusive processes and the urgency

of global crises. This handbook provides guidance for those with an interest in the purpose and direction of learning and the principles and practices of sustainability in universities in the UK and beyond. With critical analysis and useful case studies and recommendations, the book covers key topics such as: The need for sustainable development and the role that universities can play in this Showing how ESD should be part of a whole institution approach Development of relevant curricula with innovative and inspiring pedagogies to support sustainability competencies Transdisciplinary learning and pioneering forms of knowledge production Graduate futures and emerging priorities in the field of ESD Through detailed case studies from experts in the field, this book demonstrates how ESD enables a critical interrogation of our world and strengthens the capacities of our universities to nurture future thinking leaders. This is essential reading for all those interested in beginning or widening ESD in programmes, universities and the wider sector, including academic staff, university senior managers and support staff, students, policy makers, employers, and community leaders.

### The Routledge Handbook of Artificial Intelligence and International Relations

The Routledge Handbook of Artificial Intelligence and International Relations examines how machines, algorithms, and data are reshaping the way nations interact, negotiate, and navigate global politics. In the 21st century, artificial intelligence (AI) has transformed from a theoretical wonder to a real force, and with it the race to dominate new technologies is proving to be a key geopolitical concern. This book looks at both the ways in which AI is transforming the landscape of international relations and the challenges this brings. The book includes discussions on: The need for regulations and oversight to make sure that AI is used in an ethical way AI's role in conflict resolution and peacekeeping and its influence on economic alliances The ethical and moral dilemmas posed by autonomous systems making life-or-death decisions Frameworks that ensure responsible and accountable use of AI How the choices we make today will define the contours of global equilibrium for generations to come With a variety contributions from policy analysts, philosophers, government officials, scientists, researchers, and business representatives, this book appeals to students and researchers of political science, international relations, computer science, and ethics. It also holds interest for professionals in government organizations and NGOs at national and international levels.

#### **Precarious Motherhood**

Precarious Motherhood explores the experiences of racially minoritised mothers living with insecure immigration status and financial hardship in London, UK. It exposes the impact of hostile immigration policies and precarity on mothers' interpersonal relationships and access to support. The author draws attention to how mothers manage the constraints they face and enact belonging. She then explores the impact on mothers' couple relationships, friendships, adult kin relationships and faith-based networks. The book underlines the vital role of personal relationships in providing access to resources and support, but also demonstrates how precariously positioned mothers must carefully navigate relational tensions in their everyday lives. It highlights how social infrastructure facilitates relational practices, helping mothers to sustain their children's wellbeing and their own. Praise for Precarious Motherhood 'Rachel Benchekroun shows how mothers living without citizenship in a migrant community in Britain navigate kin networks to guard against immigration policies designed to undermine their social connections...This book deftly analyses alternative avenues to community well-being in a context of state violence.' Ruth Gomberg, Critical Urban Anthropology Association 'This beautifully written and meticulously researched ethnography captures vividly and with deep humanity the richness and complexities of migrant mothers' lives as they navigate the violence of hostile immigration policies. Profoundly social, intimate and relational yet never losing sight of powerful exclusionary structures, Precarious Motherhood is accessible, thoughtful and illuminating.' Cecilia Menjívar, University of California, Los Angeles 'Precarious Motherhood brilliantly captures the resilience of migrant mothers as they engage in \"strategic mothering\" – crafting networks of care and belonging against the backdrop of hostile immigration policies.' Jessica Potter, Patients Not Passports Campaign 'In this book, drawing on the powerful narratives of 22 mothers, Rachel Benchekroun offers a searing analysis of the reality of being a migrant without recourse to public funds in twenty-first century Britain.' Louise Ryan,

London Metropolitan University 'This invaluable research show how hostile environment policies, high fees and prolonged temporary immigration status have damaged the lives of migrant mothers and their children.' Colin Yeo, barrister and author

### **Climate Changes Impacts on Aquatic Environment**

This book provides a detailed and a clear picture about the impact of climate changes on all aspects of our lives. The book will shed some lights on the challenges and obstacles that agricultural development in different countries are going through regarding the dimensions of food security due to climate change. The vulnerability of agricultural system will be discussed and the methods to adapt to some impacts of climate change will be projected. Some authors will focus on how Global Climate change may directly or indirectly affect the water cycle and, consequently, the quantity and quality of water resources needed to meet human and environmental demands. It can lead to recurrent floods and droughts, rising sea water levels with serious effect on coastal aquifers, and extreme water temperatures that can exacerbate many forms of water pollution. Water supply reliability, health, agriculture, energy, biodiversity and aquatic ecosystems will all suffer the impact of such challenges. The demand for water to meet these needs is also affected by climate change. Evidently, adopting a holistic water-energy-food nexus approach, while promoting the use of nonconventional water resources, can better support a transition to sustainability, a fact that should appeal to national interest and encourage governments, the private sector and civil society to engage. The results of the Climate changes conference; COP 27 that held in Sharm El-Sheikh in 2022, will be discussed in some chapters to illustrate the several efforts that have been taken by some countries to adapt to climate changes, including continuous breeding program to produce crops adapted to higher temperature, salinity, shorter in life cycle, and better in post-harvest and shelf life. The efforts to improve on farm water management and reduce water consumption in agriculture to increase water productivity will be discussed. Saving water from agriculture will be associated with saving fertilizers to control GHG emissions and could allow allocating water for land reclamation. Some Chapters aim at highlighting the impact of climate change on water resources depending on a clear understanding of how climate, fresh water, and biophysical and socioeconomic systems are interconnected at the global and regional scales, meanwhile presenting state-of-the-art technologies and innovative/holistic solutions for adaptation and mitigation measures, and increasing the resilience of vulnerable communities to climate change, with the ultimate goal of achieving sustainable development towards "the future we want" while "leaving no one behind.

# Artificial Intelligence in Education. Posters and Late Breaking Results, Workshops and Tutorials, Industry and Innovation Tracks, Practitioners, Doctoral Consortium, Blue Sky, and WideAIED

This three-volume set CCIS 2590-2592 constitutes poster papers and late breaking results, workshops and tutorials, practitioners, industry and policy track, doctoral consortium, blue sky and wideAIED papers presented at the 26th International Conference on Artificial Intelligence in Education, AIED 2025, held in Palermo, Italy, during July 22–26, 2025. The 72 full papers and 73 short papers (72 of them presented as posters) presented in this book were carefully reviewed and selected from 296 submissions. They are organized in topical sections as follows: Part I: BlueSky; Practitioners, Industry and Policy; WideAIED; Doctoral Consortium. Part II: Late Breaking Results; Part III: Late Breaking Results; Workshops and Tutorials.

### **Climate Change Impacts and Adaptation Strategies in Japan**

This open access book presents the latest Japanese research for the projection of climate change impacts and the evaluation of adaptation policies, with a particular focus on the S-18 Project—a nationwide, interdisciplinary research initiative involving experts from various fields. Readers can get a comprehensive view of the latest knowledge and strategies to combat climate change impacts in Japan. The topics span the

research framework and future scenarios for climatic and socio-economic changes, and impacts and adaptation measures in major sectors at both national and local levels. Target sectors include agriculture, forestry and fisheries, natural ecosystems, natural disasters and coastal zones, water resources, urban infrastructure, and transportation, quality of life and human health, and economic analysis of the impacts. The book features high-resolution spatial distribution of impacts, changes in vulnerability with localities, effects of mitigation and adaptation measures, and implications of climate change policies on society. As the world experiences increased extreme weather events, this comprehensive book is a timely reference for similar studies in other countries through the presentation of research results and lessons obtained in Japan. Researchers, policymakers, and academics in environmental science, climate policy, and related fields will find this book invaluable for understanding and addressing the multifaceted challenges of climate change adaptation and mitigation. Some chapters were written originally in Japanese. The English translation was facilitated by artificial intelligence. The authors later revised the content for accuracy.

### **Brain-Body Connections**

This book offers a broad exploration of the intricate networks that facilitate communication between the brain and various systems in the body. At the heart of this volume is the examination of how these connections influence both physiological and pathological outcomes. The first two chapters of the book describe the Blood Brain Barrier (BBB) and the interaction of the brain with the peripheral nervous system. The following chapters delve into the reciprocal communication of the brain and the circulatory, immune, metabolic and digestive systems and discuss the impact of these communication mechanisms on human health and disease. Contributions from leading experts provide a detailed analysis of these complex interactions, making this book a must-read for anyone interested in the molecular underpinnings of brain-body communication. Researchers, scholars, and students in neuroscience, physiology, and related fields will find this book invaluable. It not only enhances understanding of the brain's role in regulating bodily functions but also offers insights into potential therapeutic targets for various disorders. This volume is an essential addition to any scientific library.

#### **Nutrition, Fitness, and Mindfulness**

This book presents an approach to the integration of healthy behaviors in clinical practice based on cutting edge science. It has been authored and edited by a select group of national and international experts in their respective fields who have developed these concepts for application in routine practice. This second edition of Nutrition, Fitness, and Mindfulness uses three major categories to discuss healthy behavior: healthy eating, active living, and mindfulness. All chapters are formatted to provide key learning points and summarized conclusions for easy reference. Eighteen chapters of the first edition have been updated in this new edition and cover such topics as the DASH diet, plant-based nutrition, the Mediterranean diet, beneficial herbs and spices, fitness, spirituality, meditation, healthy sleep, and disease prevention. 7 new chapters have been added, covering ultra-processed foods, food as medicine, integrating dietary patterns into the cultural preference, multicompartment exercise strategies for improving health in older adults with comorbidities, as well as chapters on evidence-based lifestyle interventions in risk of genitourinary cancer, diabetes, and barriers to a healthy lifestyle. Nutrition, Fitness, and Mindfulness: An Evidence-based Guide for Clinicians is a comprehensive guide aimed at all clinicians and healthcare professionals encouraging patients to make more thoughtful and healthy lifestyle choices.

## Proceedings of the Seventh International Symposium on Oxide Films on Metals and Alloys

The conference proceeding presents state of the art papers related to asphalt materials and asphalt pavements. The different thematic areas of the conference are: Accelerated pavement testing, Advanced Pavement Materials and Technologies, Effect of environmental changes on materials properties, In-situ property evaluation using non-destructive techniques, Instrumentation and monitoring of asphalt pavements,

Interaction of the material with the environment during production, construction, use and demolition, Life cycle analysis (LCA) in asphalt pavements, Numerical modeling of materials and pavement structures, Pavement Management System, Pavement roughness and friction measurement, Pavement sustainability, Performance testing and performance - based specifications, Perpetual pavements, and Recycling and Use of marginal materials in asphalt.

### 14th International Conference on Asphalt Pavements ISAP2024 Montreal

This book offers a comprehensive exploration of the history and development of power reactors worldwide, from their inception to the present day. It provides an in-depth analysis of light water reactors and their global technology, while also delving into the evolution of gas-cooled, heavy water, liquid metal-cooled, aerospace, and nuclear fusion reactors. By examining past advancements, this book equips readers with the insights necessary to apply lessons learned to future reactor development and utilization. Key concepts include the dominance of light water reactors in the global market, the progression of nuclear fuel cycle technologies, and the economic and political aspects of plutonium utilization. The book also addresses critical questions such as the potential depletion of uranium resources and the characteristics of Generation III and IV reactors. With contributions from government agencies and international organizations, this work is a must-read for those seeking a thorough understanding of nuclear reactor history and future challenges. Intended for graduate students, university faculty, researchers, industry professionals, and anyone with a keen interest in nuclear power, this book serves as a vital resource for understanding the complexities of nuclear reactor development and the broader implications for society. The translation was done with the help of artificial intelligence. A subsequent human revision was done primarily in terms of content.

### **Key Success Factors of Cross-border Acquisitions of Polish Firms**

### Nuclear Power Reactor Development

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