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Symposium on Biomathematics Federal Register Varieties of Atheism in Science Biosimilarity Plant RNA Biology Handbook of Nanotoxicology, Nanomedicine and Stem Cell Use in Toxicology Why Science and Faith Need Each Other Wild Life Biology of Relaxin and Its Role in the Human Artificial Intelligence Applications In Human Pathology The Planetary Emergency Healthcare Ethics and Training: Concepts, Methodologies, Tools, and Applications Healthcare Policy and Reform: Concepts, Methodologies, Tools, and Applications Atlas of Knowledge Elements of Physical Oceanography Project-Based Writing in Science The Comprehensive Guide to Science and Faith Knowledge and Systems Engineering The New World of Transitioned Media Bio-Nanoparticles Biotechnology and Biological Sciences Routledge Handbook of Environmental Journalism Heavy Boron Nitride Nanotubes in Nanomedicine Interrogating the Anthropocene Computational and Experimental Biomedical Sciences: Methods and Applications Teaching Science Online The Engaged Sociologist Stem Cells in Regenerative Medicine Active Pursuit of Pregnancy Proceeding of International Conference on

Intelligent Communication, Control and Devices A Dangerous Master Knowledge and Systems Engineering Bio-Based Materials as Applicable, Accessible, and Affordable Healthcare Solutions Ecopsychology: Advances from the Intersection of Psychology and Environmental Protection [2 volumes] Data Analytics in Medicine: Concepts, Methodologies, Tools, and Applications Collateral Values Secret Diplomacy The African Mobile Story Oceanographic and Marine Cross-Domain Data Management for Sustainable Development

Summary: The focus of this book is on how the U.S. FDA will approve biosimilar drugs, as learned from recent approvals by the FDA. Understanding the limitations of the statutory limits and non-inferiority testing are presented as tools to obviate patient trials and minimize testing of immunogenicity. An in-depth scientific, mathematical and statistical view of the tools required to establish biosimilarity of biological drugs of different complexity -- a must for every developer of biosimilars. Features: First comprehensive analysis based on new guidelines and approval packages of several biosimilars Presents the first approach

to challenge FDA in reducing or eliminating any testing in patients. Provides a comprehensive understanding of the U.S. statutory requirements vis-a-vis the regulatory guidelines Provides model CQA and Analytical Similarity testing protocols for cytokines and monoclonal antibodies Allow creation of a fast-to-market pathway to develop biosimilars We live in an age of awesome technological potential. From nanotechnology to synthetic organisms, new technologies stand to revolutionize whole domains of human experience. But with awesome potential comes awesome risk: drones can deliver a bomb as readily as they can a new smartphone; makers and hackers can 3D-print guns as well as tools; and supercomputers can short-circuit Wall Street just as easily as they can manage your portfolio. One thing these technologies can't do is answer the profound moral issues they raise. Who should be held accountable when they go wrong? What responsibility do we, as creators and users, have for the technologies we build? In A Dangerous Master, ethicist Wendell Wallach tackles such difficult questions with hard-earned authority, imploring both producers and consumers to face the moral ambiguities

arising from our rapid technological growth. There is no doubt that scientific research and innovation are a source of promise and productivity, but, as Wallach, argues, technological development is at risk of becoming a juggernaut beyond human control. Examining the players, institutions, and values lobbying against meaningful regulation of everything from autonomous robots to designer drugs, *A Dangerous Master* proposes solutions for regaining control of our technological destiny. Wallach's nuanced study offers both stark warnings and hope, navigating both the fears and hype surrounding technological innovations. An engaging, masterful analysis of the elements we must manage in our quest to survive as a species, *A Dangerous Master* forces us to confront the practical -- and moral -- purposes of our creations. The media industry is undergoing an accelerated pace of change, driven in large part by the proliferation of digital platforms. In many cases, the speed of adoption has exceeded our ability to process the impact of these changes on individuals and society at large. This book provides a "behind-the-scenes" look at the media industry's transition into the digital era and examines its impact on marketing, advertising, innovation and other economic and social activities. The impact of digital technologies on traditional media sectors, such as advertising, video games, film and television is well-documented. Less understood is its effect on our perceptions, thought processes and inter-personal

relationships. Social media, for example, represents a fundamental change in the ways we interact with media, communicate with each other and even present ourselves to the world. This has shaped the way we communicate with institutions and brands. Similar to the first "Transitioned Media" book, *Transitioned Media: A Turning Point into the Digital Realm*, this book combines media industry leaders and academics to explore various transformative trends and issues. Themes include measuring cross-platform behaviour, artificial intelligence in journalism, the evolution of video games, digital media and physical space, the mobile use trends, social media and the corporate world, the changes in the television and newspaper business and the evolving relationship between advertisers and target audiences. The varied backgrounds of contributors and array of topics make for a unique and insightful point of view. Earth and its inhabitants face an unprecedented crisis--the human-caused destruction of the planet's life support systems. Deteriorating climate bringing super storms, mass forest fires, melting glaciers, droughts, extreme heat and rising seas, a decline in food production, soil loss, water pollution and declining fisheries all threaten the future of life on earth with a looming extinction event not seen for 60 million years. Beginning in the 17th century, we developed a civilization based on radical materialism, exploitation of natural resources and the myth of endless economic growth. For

all its technological wonders, this "hypercivilization" has proven unsustainable. This book explores ways we can create an "ecocivilization" compatible with the laws and limits of nature--a new way of living already developing, with new technologies, new forms of social organization and a new story about ourselves and the Earth. *Wild Life* documents a nuanced understanding of the wild versus captive divide in species conservation. It also documents the emerging understanding that all forms of wild nature--both in situ (on-site) and ex situ (in captivity)--may need to be managed in perpetuity. Providing a unique window into the high-stakes world of nature conservation, Irus Braverman describes the heroic efforts by conservationists to save wild life. Yet in the shadows of such dedication and persistence in saving the life of species, *Wild Life* also finds sacrifice and death. Such life and death stories outline the modern struggle to define what conservation should look like at a time when the long-established definitions of nature have collapsed. *Wild Life* begins with the plight of a tiny endangered snail, and ends with the rehabilitation of an entire island. Interwoven between its pages are stories about golden lion tamarins in Brazil, black-footed ferrets in the American Plains, Sumatran rhinos in Indonesia, Tasmanian devils in Australia, and many more creatures both human and nonhuman. Braverman draws on interviews with more than one hundred and twenty conservation biologists, zoologists, zoo professionals,

government officials, and wildlife managers to explore the various perspectives on in situ and ex situ conservation and the blurring of the lines between them. This fully updated edition of *The Engaged Sociologist* by Kathleen Odell Korgen carries the public sociology movement into the classroom, while at the same time providing an engaging overview of the entire field. It demonstrates how to think sociologically, to develop a sociological eye, and to use sociological tools to become effective participants in a democratic society. Perfect as a supplement for an introductory course, or as a main text for any course that has public sociology at its roots, this inspiring book will serve as a guidebook to any student who is passionate about applying sociological concepts to the world around them. The book presents high-quality research papers presented at the first international conference, ICICCD 2016, organised by the Department of Electronics, Instrumentation and Control Engineering of University of Petroleum and Energy Studies, Dehradun on 2nd and 3rd April, 2016. The book is broadly divided into three sections: Intelligent Communication, Intelligent Control and Intelligent Devices. The areas covered under these sections are wireless communication and radio technologies, optical communication, communication hardware evolution, machine-to-machine communication networks, routing techniques, network analytics, network applications and services, satellite and space communications,

technologies for e-communication, wireless Ad-Hoc and sensor networks, communications and information security, signal processing for communications, communication software, microwave informatics, robotics and automation, optimization techniques and algorithms, intelligent transport, mechatronics system, guidance and navigation, algorithms, linear/non-linear control, home automation, sensors, smart cities, control systems, high performance computing, cognition control, adaptive control, distributed control, prediction models, hybrid control system, control applications, power system, manufacturing, agriculture cyber physical system, network control system, genetic control based, wearable devices, nano devices, MEMS, bio-inspired computing, embedded and real-time software, VLSI and embedded systems, FPGA, digital system and logic design, image and video processing, machine vision, medical imaging, and reconfigurable computing systems. Why study atheism among scientists? -- "Tried and found wanting" : how atheist scientists explain religious transitions -- "I am not like Richard:" modernist atheist scientists -- Ties that bind : culturally religious atheists -- Spiritual atheist scientists -- What atheist scientists think about science -- How atheist scientists approach meaning and morality -- From rhetoric to reality : why religious believers should give atheist scientists a chance. This book explores the unanticipated benefits that may arise after wars and conflicts, showing how the preservation of

battlefields and the establishment of borderlands can create natural capital in the former landscapes of war. The editors call this Collateral Value, in contrast to the collateral damage that war inflicts upon infrastructure, natural capital, and human capital. The book includes case studies recounting successes and failures, opportunities and risks, and ambitious proposals. The book is organized in two sections. The first visits U.S., English, and French battlefield sites dating from medieval England to World War I. The second explores borderlands located on several continents, established to end or prevent conflict. Both of these can create value beyond their original purpose, by preserving natural areas and restoring biodiversity. Among the topics covered are: · Registering English Battlefields · Old forts and new amenities in the Southern Plains of the U.S. · Verdun, France, and the conservation of WWI cultural and natural heritage · Conservation lessons learned in the Cordillera del Condor Corridor of the Andes mountains · Korea's DMZ and its nature preserve · Wakhan National Park, a mountainous buffer area between Afghanistan and Pakistan The book examines state-of-the-art applications of landscape ecology, including methods for change detection, connectivity analysis, and the quantification of ecosystem services. Also included is a chapter on a creative proposal for "Guantánamo 2.0," which would transform the Gitmo detention facility into a peace park and ecological research

center. A concluding chapter appraises the past, present, and future of Collateral Values. Collateral Values: The Natural Capital Created by Landscapes of War benefits a broad audience of advanced undergraduate and graduate students, researchers, and practicing professionals. Africa and especially Sub-Saharan Africa has during the past decade witnessed one of the fastest growing markets in mobile communication. This growth is recognized to have played a pivotal role in Africa's socio-economic development. It has had a huge impact on residential living patterns; on business networks and models; and on government services and income sources. The mobile industry has contributed more to economic growth than in any other comparable region globally introducing innovative, broadly used applications. Technical topics discussed in the book include: • Mobile Development in Sub-Saharan Africa; • Telecom Liberalization in Africa; • Role of Mobile in Socio-economic Development; • Mobile Applications in specific sectors; • Security in African Mobile; • Role of Prepaid in Africa The field of Knowledge and Systems Engineering (KSE) has experienced rapid development and inspired many applications in the world of information technology during the last decade. The KSE conference aims at providing an open international forum for presentation, discussion and exchange of the latest advances and challenges in research of the field. These proceedings contain papers presented at the

Fifth International Conference on Knowledge and Systems Engineering (KSE 2013), which was held in Hanoi, Vietnam, during 17-19 October, 2013. Besides the main track of contributed papers, which are compiled into the first volume, the conference also featured several special sessions focusing on specific topics of interest as well as included one workshop, of which the papers form the second volume of these proceedings. The book gathers a total of 68 papers describing recent advances and development on various topics including knowledge discovery and data mining, natural language processing, expert systems, intelligent decision making, computational biology, computational modeling, optimization algorithms, and industrial applications. Nanoparticles are the building blocks for nanotechnology; they are better built, long lasting, cleaner, safer, and smarter products for use across industries, including communications, medicine, transportation, agriculture and other industries. Controlled size, shape, composition, crystallinity, and structure-dependent properties govern the unique properties of nanotechnology. Bio-Nanoparticles: Biosynthesis and Sustainable Biotechnological Implications explores both the basics of and advancements in nanoparticle biosynthesis. The text introduces the reader to a variety of microorganisms able to synthesize nanoparticles, provides an overview of the methodologies applied to biosynthesize nanoparticles for medical and commercial use,

and gives an overview of regulations governing their use. Authored by leaders in the field, Bio-Nanoparticles: Biosynthesis and Sustainable Biotechnological Implications bridges the gap between biology and technology, and is an invaluable resource for students and researchers alike. As human activity makes a greater impact on the environment, sustainability becomes an increasingly imperative goal. With the assistance of current technological innovations, environmental systems can be better preserved. Oceanographic and Marine Cross-Domain Data Management for Sustainable Development is a pivotal resource for the latest research on the collection of environmental data for sustainability initiatives and the associate challenges with this data acquisition. Highlighting various technological, scientific, semantic, and semiotic perspectives, this book is ideally designed for researchers, technology developers, practitioners, students, and professionals in the field of environmental science and technology. The field of Knowledge and Systems Engineering (KSE) has experienced rapid development and inspired many applications in the world of information technology during the last decade. The KSE conference aims at providing an open international forum for presentation, discussion and exchange of the latest advances and challenges in research of the field. These proceedings contain papers presented at the Fifth International Conference on Knowledge

and Systems Engineering (KSE 2013), which was held in Hanoi, Vietnam, during 17-19 October, 2013. Besides the main track of contributed papers, which are compiled into the first volume, the conference also featured several special sessions focusing on specific topics of interest as well as included one workshop, of which the papers form the second volume of these proceedings. The book gathers a total of 68 papers describing recent advances and development on various topics including knowledge discovery and data mining, natural language processing, expert systems, intelligent decision making, computational biology, computational modeling, optimization algorithms, and industrial applications. Turn your students into scientists who use their knowledge and creativity to solve real-world problems. Each lesson features a step-by-step guide; a summary of recent research; and handouts that are classroom-ready. Learn about the three levels of writing, from a Level 1 quickwrite to a formal, multi-part, Level 3 research paper. Each writing assignment—narrative, persuasive, and informative—includes a detailed rubric that makes grading easy. Students collaborate to contain an outbreak of avian flu, lead a group of people trying to survive under harsh conditions, battle drought in a densely-populated city in the American southwest, research the behavior of animals in the local region, and calculate their own speed, velocity, and momentum. Engaging and demanding, Project-Based Writing in

Science helps students to understand and improve the world. This book is a unique guide to emerging stem cell technologies and the opportunities for their commercialisation. It provides in-depth analyses of the science, business, legal, and financing fundamentals of stem cell technologies, offering a holistic assessment of this emerging and dynamic segment of the field of regenerative medicine. • Reviews the very latest advances in the technology and business of stem cells used for therapy, research, and diagnostics • Identifies key challenges to the commercialisation of stem cell technology and avenues to overcome problems in the pipeline • Written by an expert team with extensive experience in the business, basic and applied science of stem cell research This comprehensive volume is essential reading for researchers in cell biology, biotechnology, regenerative medicine, and tissue engineering, including scientists and professionals, looking to enter commercial biotechnology fields. Science and Faith Can—and Do—Support Each Other Science and Christianity are often presented as opposites, when in fact the order of the universe and the complexity of life powerfully testify to intelligent design. With this comprehensive resource that includes the latest research, you'll witness how the findings of scientists provide compelling reasons to acknowledge the mind and presence of a creator. Featuring more than 45 entries by top-caliber experts, you'll better understand... how scientific concepts like intelligent design are

supported by evidence the scientific findings that support the history and accounts found in the Bible the biases that lead to scientific information being presented as a challenge—rather than a complement—to Christianity Whether you're looking for answers to your own questions or seeking to explain the case for intelligent design to others, The Comprehensive Guide to Science and Faith is an invaluable apologetic tool that will help you explore and analyze the relevant facts, research, and theories in light of biblical truth. The current "obesity epidemic" has been at the top of the national and, increasingly, global public agenda for the last decade, the subject of extensive and intensive concern, scrutiny, and corrective efforts from various quarters. In the United States, much of this attention is predicated on the "official" discourse, or story, of obesity—that it is a matter of personal responsibility, specifically to the end of monitoring and ensuring appropriate caloric balance. However, even though it continues to have cultural presumption, that discourse does not resonate with the populace, which may explain why efforts of redress have been notoriously ineffective. In this book, Helene Shugart places obesity in cultural, political, and economic context, arguing that current anxieties regarding obesity reflect the contemporary crisis in neoliberalism, and that the failure of the official discourse of obesity mirrors the failure of neoliberalism more broadly: specifically, to account for

authenticity, a powerfully resonant cultural concept today. She chronicles a number of competing discourses of obesity that have arisen in response to the failed official discourse, examining and evaluating each in relation to the idea of authenticity; assessing the practical and behavioral implications of each discourse for both obesity incidence and redress; and establishing the significance of each discourse for negotiating neoliberalism in crisis more broadly. Boron Nitride Nanotubes in Nanomedicine compiles, for the first time in a single volume, all the information needed by researchers interested in this promising type of smart nanoparticles and their applications in biomedicine. Boron nitride nanotubes (BNNTs) represent an innovative and extremely intriguing class of nanomaterials. After introducing BNNTs and explaining their preparation and evaluation, the book shows how the physical, chemical, piezoelectric and biocompatibility properties of these nanotubes give rise to their potential uses in biomedicine. Evidence is offered (from both in vitro and in vivo investigations) for how BNNTs can be useful in biomedical and nanomedicine applications such as therapeutic applications, tissue regeneration, nanovectors for drug delivery, and intracellular nanotransducers. The power of mapping: principles for visualizing knowledge, illustrated by many stunning large-scale, full-color maps. Maps of physical spaces locate us in the world and help us navigate unfamiliar routes. Maps of topical

spaces help us visualize the extent and structure of our collective knowledge; they reveal bursts of activity, pathways of ideas, and borders that beg to be crossed. This book, from the author of Atlas of Science, describes the power of topical maps, providing readers with principles for visualizing knowledge and offering as examples forty large-scale and more than 100 small-scale full-color maps. Today, data literacy is becoming as important as language literacy. Well-designed visualizations can rescue us from a sea of data, helping us to make sense of information, connect ideas, and make better decisions in real time. In Atlas of Knowledge, leading visualization expert Katy Börner makes the case for a systems science approach to science and technology studies and explains different types and levels of analysis. Drawing on fifteen years of teaching and tool development, she introduces a theoretical framework meant to guide readers through user and task analysis; data preparation, analysis, and visualization; visualization deployment; and the interpretation of science maps. To exemplify the framework, the Atlas features striking and enlightening new maps from the popular "Places & Spaces: Mapping Science" exhibit that range from "Key Events in the Development of the Video Tape Recorder" to "Mobile Landscapes: Location Data from Cell Phones for Urban Analysis" to "Literary Empires: Mapping Temporal and Spatial Settings of Victorian Poetry" to "Seeing Standards: A Visualization of the Metadata

Universe." She also discusses the possible effect of science maps on the practice of science. Artificial Intelligence Applications in Human Pathology deals with the latest topics in biomedical research and clinical cancer diagnostics. With chapters provided by true international experts in the field, this book gives real examples of the implementation of AI and machine learning in human pathology. Advances in machine learning and AI in general have propelled computational and general pathology research. Today, computer systems approach the diagnostic levels achieved by humans for certain well-defined tasks in pathology. At the same time, pathologists are faced with an increased workload both quantitatively (numbers of cases) and qualitatively (the amount of work per case, with increasing treatment options and the type of data delivered by pathologists also expected to become more fine-grained). AI will support and leverage mathematical tools and implement data-driven methods as a center for data interpretation in modern tissue diagnosis and pathology. Digital or computational pathology will also foster the training of future computational pathologists, those with both pathology and non-pathology backgrounds, who will eventually decide that AI-based pathology will serve as an indispensable hub for data-related research in a global health care system. Some of the specific topics explored within include an introduction to DL as applied to Pathology, Standardized Tissue Sampling for

Automated Analysis, integrating Computational Pathology into Histopathology workflows. Readers will also find examples of specific techniques applied to specific diseases that will aid their research and treatments including but not limited to; Tissue Cartography for Colorectal Cancer, Ki-67 Measurements in Breast Cancer, and Light-Sheet Microscopy as applied to Virtual Histology. The key role for pathologists in tissue diagnostics will prevail and even expand through interdisciplinary work and the intuitive use of an advanced and interoperating (AI-supported) pathology workflow delivering novel and complex features that will serve the understanding of individual diseases and of course the patient. Science and faith are often seen as being in opposition. In this book, award-winning sociologist Elaine Howard Ecklund questions this assumption based on research she has conducted over the past 15 years. She highlights the ways these two spheres point to universal human values, showing readers they don't have to choose between science and Christianity. Breathing fresh air into debates that have consisted of more opinions than data, Ecklund offers insights uncovered by her research and shares her own story of personal challenges and lessons. In the areas most rife with conflict--the origin of the universe, evolution, climate change, and genetic technology--readers will find fascinating points of convergence in 8 virtues of human existence: curiosity, doubt, humility, creativity, healing, awe, shalom, and

gratitude. The book includes discussion questions for group use and to help pastors, small group leaders, and congregants broach controversial topics and bridge the science-faith divide. The Routledge Handbook of Environmental Journalism provides a thorough understanding of environmental journalism around the world. An increasing number of media platforms – from newspapers and television to Internet social media networks – are the major providers of indispensable information about the natural world and environmental risk. Despite the dramatic changes in the news industry that have tended to reduce the number of full-time newspaper reporters, environmental journalists remain key to bringing stories to light across the globe. With contributions from around the world broken down into five key regions – the United States of America, Europe and Russia, Asia and Australia, Africa and the Middle East, and South America – this book provides support for today's environment reporters, the providers of essential news in the 21st century. As a scholarly and journalistic work written by academics and the environmental reporters themselves, this volume is an essential text for students and scholars of environmental communication, journalism, and global environmental issues more generally, as well as professionals working in this vital area. Industry professionals, government officials, and the general public often agree that the modern healthcare system is in need of an

overhaul. With many organizations concerned with the long-term care of patients, new strategies, practices, and organizational tools must be developed to optimize the current healthcare system. Healthcare Policy and Reform: Concepts, Methodologies, Tools, and Applications is a comprehensive source of academic material on the importance of policy and policy reform initiatives in modern healthcare systems. Highlighting a range of topics such as public health, effective care delivery, and health information systems, this multi-volume book is designed for medical practitioners, medical administrators, professionals, academicians, and researchers interested in all aspects of healthcare policy and reform. This volume investigates secret diplomacy with the aim of understanding its role in shaping foreign policy. Recent events, including covert intelligence gathering operations, accusations of spying, and the leaking of sensitive government documents, have demonstrated that secrecy endures as a crucial, yet overlooked, aspect of international diplomacy. The book brings together different research programmes and views on secret diplomacy and integrates them into a coherent analytical framework, thereby filling an important gap in the literature. The aim is to stimulate, generate and direct the further development of theoretical understandings of secret diplomacy by highlighting 'gaps' in existing bodies of knowledge. To this end, the volume is structured around three distinct

themes: concepts, contexts and cases. The first section elaborates on the different meanings and manifestations of the concept; the second part examines basic contexts that underpin the practice of secret diplomacy; while the third section presents a series of empirical cases of particular relevance for contemporary diplomatic practice. While the fundamental conditions diplomacy seeks to overcome – alienation, estrangement and separation – are imbued with distrust and secrecy, this volume highlights that, if anything, secret diplomacy is a vital, if misunderstood and unfairly criticised, aspect of diplomacy. This book will be of much interest to students of diplomacy, intelligence studies, foreign policy and IR in general. This book contains the full papers presented at ICCEBS 2013 – the 1st International Conference on Computational and Experimental Biomedical Sciences, which was organized in Azores, in October 2013. The included papers present and discuss new trends in those fields, using several methods and techniques, including active shape models, constitutive models, isogeometric elements, genetic algorithms, level sets, material models, neural networks, optimization and the finite element method, in order to address more efficiently different and timely applications involving biofluids, computer simulation, computational biomechanics, image based diagnosis, image processing and analysis, image segmentation, image registration, scaffolds, simulation and surgical planning. The

main audience for this book consists of researchers, Ph.D students and graduate students with multidisciplinary interests related to the areas of artificial intelligence, bioengineering, biology, biomechanics, computational fluid dynamics, computational mechanics, computational vision, histology, human motion, imagiology, applied mathematics, medical image, medicine, orthopaedics, rehabilitation, speech production and tissue engineering. Advancements in data science have created opportunities to sort, manage, and analyze large amounts of data more effectively and efficiently. Applying these new technologies to the healthcare industry, which has vast quantities of patient and medical data and is increasingly becoming more data-reliant, is crucial for refining medical practices and patient care. *Data Analytics in Medicine: Concepts, Methodologies, Tools, and Applications* is a vital reference source that examines practical applications of healthcare analytics for improved patient care, resource allocation, and medical performance, as well as for diagnosing, predicting, and identifying at-risk populations. Highlighting a range of topics such as data security and privacy, health informatics, and predictive analytics, this multi-volume book is ideally designed for doctors, hospital administrators, nurses, medical professionals, IT specialists, computer engineers, information technologists, biomedical engineers, data-processing specialists, healthcare practitioners,

academicians, and researchers interested in current research on the connections between data analytics in the field of medicine. *Elements of Physical Oceanography* is a derivative of the *Encyclopedia of Ocean Sciences*, 2nd Edition and serves as an important reference on current physical oceanography knowledge and expertise in one convenient and accessible source. Its selection of articles—all written by experts in their field—focuses on ocean physics, air-sea transfers, waves, mixing, ice, and the processes of transfer of properties such as heat, salinity, momentum and dissolved gases, within and into the ocean. *Elements of Physical Oceanography* serves as an ideal reference for topical research. References related articles in physical oceanography to facilitate further research Richly illustrated with figures and tables that aid in understanding key concepts Includes an introductory overview and then explores each topic in detail, making it useful to experts and graduate-level researchers Topical arrangement makes it the perfect desk reference With the increasing focus on science education, growing attention is being paid to how science is taught. Educators in science and science-related disciplines are recognizing that distance delivery opens up new opportunities for delivering information, providing interactivity, collaborative opportunities and feedback, as well as for increasing access for students. This book presents the guidance of expert science educators from the US and from around the globe. They describe key concepts,



delivery modes and emerging technologies, and offer models of practice. The book places particular emphasis on experimentation, lab and field work as they are fundamentally part of the education in most scientific disciplines. Chapters include: \* Discipline methodology and teaching strategies in the specific areas of physics, biology, chemistry and earth sciences. \* An overview of the important and appropriate learning technologies (ICTs) for each major science. \* Best practices for establishing and maintaining a successful course online. \* Insights and tips for handling practical components like laboratories and field work. \* Coverage of breaking topics, including MOOCs, learning analytics, open educational resources and m-learning. \* Strategies for engaging your students online. A companion website presents videos of the contributors sharing additional guidance, virtual labs simulations and various additional resources. The application of Biotechnology dates back to the early era of civilization, when people first started to cultivate food crops. While the early applications are certainly still relevant, modern biotechnology is primarily associated with molecular biology, cloning and genetic engineering not only to increase the yield and to improve the quality of the crop but also its potential impact has touched upon virtually all domains of human interactions. Within the last 50 years, several key scientific discoveries revolutionized the biological sciences that facilitated the rapid growth of the

biotechnology industry. 'Biotechnology and Biological Sciences III' contains the contributions presented at the 3rd International Conference on Biotechnology and Biological Sciences (BIOSPECTRUM 2019, Kolkata, India, 8-10 August 2019). The papers discuss various aspects of Biotechnology such as: microbial biotechnology, bioinformatics and drug designing, innovations in pharmaceutical industries and food processing industries, bioremediation, nano-biotechnology, and molecular-genetics, and will be of interest to academics and professionals involved or interested in these subject areas. Discoveries from the past decades revealed that RNA molecules are much more than inert intermediates between the coding DNA sequences and their functional products, proteins. Today, RNAs are recognized as active regulatory molecules influencing gene expression, chromatin organization and genome stability, thus impacting all aspects of plant life including development, growth, reproduction and stress tolerance. Innovations in methodologies, the expanding application of next-generation sequencing technologies, and the creation of public datasets and databases have exposed a new universe of RNA-based mechanisms and led to the discovery of new families of non-coding RNAs, uncovered the large extent of alternative splicing events, and highlighted the potential roles of RNA modifications and RNA secondary structures. Furthermore, considerable advances have been

made in identifying RNA-binding and processing factors involved in the synthesis and maturation of different forms of RNA molecules as well as in RNA processing, biochemical modifications or degradation. This Research Topic showcases the broad biological significance of RNAs in plant systems and contains eight original research articles, one review and four mini-reviews, covering various RNA-based mechanisms in higher plants. Emerging new technologies and novel multidisciplinary approaches are empowering the scientific community and will expectedly bring novel insights into our understanding of the mechanisms through which RNA is regulated and regulates biological processes in plant cells. This volume weaves together a variety of perspectives aimed at confronting a spectrum of ethico-political global challenges arising in the Anthropocene which affect the future of life on planet earth. In this book, the authors offer a multi-faceted approach to address the consequences of its imaginary and projective directions. The chapters span the disciplines of political economy, cybernetics, environmentalism, bio-science, psychoanalysis, bioacoustics, documentary film, installation art, geoperformativity, and glitch aesthetics. The first section attempts to flesh out new aspects of current debates. Questions over the Capitalocene are explored via confluences of class and climate, revisiting the eco-Marxist analysis of capitalism, and the financial system that thrives on debt. The second section

explores the imaginary narratives that raise questions regarding non-human involvement. The third section addresses 'geoartistry,' the counter artistic responses to the specularization of climate disasters, questioning eco-documentaries, and what a post-anthropocentric art might look like. The last section addresses the pedagogical response to the Anthropocene. This anthology is a two-volume work that focuses on our relationship with the Earth and our future, examining the crossover between psychology and environmental studies in the emerging fields of ecopsychology and environmental psychology. Addresses the "hot topic" of today: how psychology and environmental studies intersect in the fields of ecopsychology and environmental psychology Presents a breadth of perspectives from authors with various fields of expertise, from scientists to interventionists, conquerors to caretakers, political leaders to grassroots activists—all of whom are needed to effect change Utilizes the knowledge of contributors from the fields of psychology, science, humanitarianism, environmental studies, business, United Nations, law, and policymaking Addresses the facts, feelings, needs, and possibilities that must be considered when planning for the future since the psychology of environmental messaging is just as important as its geology Offers a range of solutions—based on research and real implementations of programs around the world—for preserving our planet and caring for

our environment The application of proper ethical systems and education programs is a vital concern in the medical industry. When healthcare professionals are held to the highest moral and training standards, patient care is improved. Healthcare Ethics and Training: Concepts, Methodologies, Tools, and Applications is a comprehensive source of academic research material on methods and techniques for implementing ethical standards and effective education initiatives in clinical settings. Highlighting pivotal perspectives on topics such as e-health, organizational behavior, and patient rights, this multi-volume work is ideally designed for practitioners, upper-level students, professionals, researchers, and academics interested in the latest developments within the healthcare industry. The Handbook of Nanotoxicology, Nanomedicine and Stem Cell Use in Toxicology provides an insight into the current trends and future directions of research in these rapidly developing scientific fields. Written by leading scientists and experts, the Handbook will be of interest to various scientific disciplines including toxicology, medicine, and pharmacology, as well as food, drug, and other regulatory sciences. "What is ninkatsu? Who promotes and governs this "active pursuit of pregnancy?" Trying to answer these questions, this unprecedented publication exhibits how mass media, policymakers, and biomedical science-corporate capitalism govern the individual's reproductive choices in

contemporary Japan through gendered discourses of self-improvement, life planning, and biomedical technology. Analyzing a broad range of media, popular science, and government material, it links historical and social processes with an original theoretical framework on self-governance, neoliberalism, and postfeminism. While deeply engaging with Japanese sources, this rich scholarship takes the study of reproductive politics beyond Japan. This book is not only of interest for Japanese studies scholars but more broadly also those curious about neoliberal government strategies, gender, and biomedical capitalism"-- In this book, Nigeria, the most populous country in Africa and a region in the lowest income group per capita, is used to demonstrate the potential for healthcare reorganization and collaboration with the introduction of "successful" technologies centered around available, bio-compatible, and sustainable natural resources. Our book discusses three of the top killers of children under 5 years of age in Nigeria, pneumonia (20%), diarrheal diseases (15%), and traumatic injuries (4%). These conditions are used as examples to demonstrate the potential for improved pediatric outcomes with treatments engineered from sustainable and natural resources. Furthermore, this book outlines possible action items that can help drive economic growth, educational opportunities, collaborative outreach, and workforce productivity to build a healthy and sustainable community. Medical technology in

the industrialized world has seen rapid advancements leading to increased survival and greater patient outcomes. However, the development and implementation of these resources is not always applicable to regions in need of new and more basic ways to provide treatment. Moore's Law, a paradigm that considers advancement synonymous with increased digitization and optimization of

electronic processes, defines the history of technology. However, the functionality of advanced and "smart" technology is essentially useless in underdeveloped areas. These regions lack some of the basic requirements for innovative medical technologies to impact human health, such as electricity, access to spare parts, computer analysis tools, and network architecture. In addition, the poor

physical infrastructure, insufficient management, and lack of technical culture are barriers for entry and sustainability of these technologies. Rather than importing medical devices from industrialized countries, we propose that the mindset and research focus for under developed areas must be on "successful" technologies. Simply put, these areas need technology that "gets the job done."