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Is the Planet Full? Ian Goldin
2014-05-15 What are the impacts of population growth? Can our planet support the demands of the ten billion people anticipated to be the world's population by the middle of this century? While it is common to hear about the problems of overpopulation, might there be unexplored benefits of increasing numbers of people in the world? How can we both consider and harness the potential benefits brought by a healthier, wealthier and larger population? May more people mean more scientists to discover how our world works, more inventors and thinkers to help solve the world's problems, more skilled people to put these ideas into practice? In this book, leading academics with a wide range of

expertise in demography, philosophy, biology, climate science, economics and environmental sustainability explore the contexts, costs and benefits of a burgeoning population on our economic, social and environmental systems.

High-Performance Computational Solutions in Protein Bioinformatics

Dariusz Mrozek 2014-06-04 Recent developments in computer science enable algorithms previously perceived as too time-consuming to now be efficiently used for applications in bioinformatics and life sciences. This work focuses on proteins and their structures, protein structure similarity searching at main representation levels and various techniques that can be used to accelerate similarity searches. Divided into four parts,

the first part provides a formal model of 3D protein structures for functional genomics, comparative bioinformatics and molecular modeling. The second part focuses on the use of multithreading for efficient approximate searching on protein secondary structures. The third and fourth parts concentrate on finding 3D protein structure similarities with the support of GPUs and cloud computing. Parts three and four both describe the acceleration of different methods. The text will be of interest to researchers and software developers working in the field of structural bioinformatics and biomedical databases.

Issues in Science and Theology: Do Emotions Shape the World? Dirk Evers
2016-04-14 This volume examines emotions and emotional well-being

from a rich variety of theological, philosophical and scientific and therapeutic perspectives. To experience emotion is a part of being human; but what are emotions? How can theology, philosophy and the natural sciences unpack the nature and content of emotions? This volume is based on contributions to the 15th European Conference on Science and Theology held in Assisi, Italy. It brings together contributions from scholars of various academic backgrounds from around the world, whose individual insights are made all the richer by their juxtaposition with those from experts in other fields, leading to a unique exchange of ideas.

Immune system modeling and analysis
Ramit Mehr 2015-04-22 The rapid development of new methods for

immunological data collection – from multicolor flow cytometry, through single-cell imaging, to deep sequencing – presents us now, for the first time, with the ability to analyze and compare large amounts of immunological data in health, aging and disease. The exponential growth of these datasets, however, challenges the theoretical immunology community to develop methods for data organization and analysis. Furthermore, the need to test hypotheses regarding immune function, and generate predictions regarding the outcomes of medical interventions, necessitates the development of mathematical and computational models covering processes on multiple scales, from the genetic and molecular to the cellular and system scales. The last

few decades have seen the development of methods for presentation and analysis of clonal repertoires (those of T and B lymphocytes) and phenotypic (surface-marker based) repertoires of all lymphocyte types, and for modeling the intricate network of molecular and cellular interactions within the immune systems. This e-Book, which has first appeared as a 'Frontiers in Immunology' research topic, provides a comprehensive, online, open access snapshot of the current state of the art on immune system modeling and analysis.

Pharma Gerald Posner 2021-04-13
Award-winning journalist and New York Times bestselling author Gerald Posner reveals the heroes and villains of the trillion-dollar-a-year pharmaceutical industry and

delivers “a withering and encyclopedic indictment of a drug industry that often seems to prioritize profits over patients (The New York Times Book Review). Pharmaceutical breakthroughs such as antibiotics and vaccines rank among some of the greatest advancements in human history. Yet exorbitant prices for life-saving drugs, safety recalls affecting tens of millions of Americans, and soaring rates of addiction and overdose on prescription opioids have caused many to lose faith in drug companies. Now, Americans are demanding a national reckoning with a monolithic industry. “Gerald’s dogged reporting, sets Pharma apart from all books on this subject” (The Washington Standard) as we are introduced to brilliant scientists, incorruptible government

regulators, and brave whistleblowers facing off against company executives often blinded by greed. A business that profits from treating ills can create far deadlier problems than it cures. Addictive products are part of the industry’s DNA, from the days when corner drugstores sold morphine, heroin, and cocaine, to the past two decades of dangerously overprescribed opioids. Pharma also uncovers the real story of the Sacklers, the family that became one of America’s wealthiest from the success of OxyContin, their blockbuster narcotic painkiller at the center of the opioid crisis. Relying on thousands of pages of government and corporate archives, dozens of hours of interviews with insiders, and previously classified FBI files, Posner exposes the secrets of the

Sacklers' rise to power—revelations that have long been buried under a byzantine web of interlocking companies with ever-changing names and hidden owners. The unexpected twists and turns of the Sackler family saga are told against the startling chronicle of a powerful industry that sits at the intersection of public health and profits. “Explosively, even addictively, readable” (Booklist, starred review), *Pharma* reveals how and why American drug companies have put earnings ahead of patients.

Programming HPA-axis by early life experience: Mechanisms of stress susceptibility and adaptation Rachel Yehuda 2015-03-16 Experiences during early life program the central nervous- and endocrine-systems with consequences for susceptibility to

physical and mental disorders. These programming effects depend on genetic and epigenetic factors, and their outcome leads to an adaptive or maladaptive phenotype to a given later environmental context. This Research Topic focused on the hypothalamus-pituitary-adrenal (HPA)-axis and stress-related phenotypes, and on how HPA-axis programming by the environment precisely occurs. We included original research, mini-review and review papers on a broad range of topics related to HPA-axis programming.

Marvels of Medicine Yarí Pérez Marín 2020 *Marvels of Medicine* makes a compelling case for including sixteenth century medical and surgical writing in the critical frameworks we now use to think about a genealogy of cultural expression in

Latin America. Focusing on a small group of practitioners who differed in their levels of training, but who shared the common experience of having left Spain to join colonial societies in the making, this book analyses the paths their texts charted to attitudes and political positions that would come to characterize a criollo mode of enunciation. Unlike the accounts of first explorers, which sought to amaze audiences back in Europe with descriptions of strange and astonishing lands, these texts instead engaged the marvellous in an effort to supersede it, stressing the value of sensorial experience and of verifying information thorough repetition and demonstration. Vernacular medical writing became an unlikely early platform for a new

form of regionally-anchored discourse that demanded participation in a global intellectual conversation, yet found itself increasingly relegated to the margins. In responding to that challenge, anatomical treatises, natural histories and surgical manuals exceeded the bounds set by earlier templates becoming rich, hybrid narratives that were as concerned with science as with portraying the lives and sensibilities of women and men in early colonial Mexico.

Metabolism and Behavior in the Corticotropin-Releasing Factor Family of Peptides James A. Carr 2015-08-03
Nothing provided

Rankings and the Reshaping of Higher Education Ellen Hazelkorn 2015-03-23
University rankings have gained popularity around the world and are

now a significant factor shaping reputation. This second edition updates Ellen Hazelkorn's first comprehensive study of rankings from a global perspective, drawing in new original research and extensive analysis. It is essential reading for policymakers, managers and scholars. *The State of Mediterranean and Black Sea Fisheries 2020* Food and Agriculture Organization of the United Nations 2020-12-14 This third edition of the State of Mediterranean and Black Sea Fisheries provides a comprehensive overview of the status of fisheries in the region, looking at their main features and trends, in order to better inform their management and better examine current and future challenges that they will face in the near future. The aim of this report is to produce a document

that could provide useful analysis and direction for decision-making and future action. In this respect, this publication also represents a convenient source of information for the FAO Committee on Fisheries and offers a practical complement to the data provided in the State of World Fisheries and Aquaculture published by the FAO Fisheries and Aquaculture Department. This volume includes seven chapters divided into two sections: a first part on the status and trends of different aspects of Mediterranean and Black Sea fisheries, including fleet, catches, socio-economic variables and bycatch, and a second part that focuses on the management of Mediterranean and Black Sea fisheries, including an overview on small-scale fisheries. This report is based to a large extent on the

most up-to-date data available submitted by GFCM contracting and cooperating non-contracting parties, including information on stock status, national catches, fleet and socio-economic information up to 2018. It is also complemented with information from other sources.

Nature of Investing Katherine Collins
2016-10-21 We are all investors. We invest our time, our energy, our money. We invest every single day, as citizens, as consumers, as businesspeople. At its core, investing involves connection, exchange, and mutual benefit. Lately, however, the primary, beneficial function of investing has been overshadowed by ever-more mechanized iterations of finance. We have created funds of funds, securitizations of securitizations,

and entire firms whose business is based on harvesting the advantage of microseconds of trading speed. The Nature of Investing calls for a transformation of the investment process from the roots up. Drawing on the author's twenty-plus years of leadership experience in top investment firms, the book connects real-world finance with the field of biomimicry. Citing real-life examples and discussing principles from the natural world, The Nature of Investing shows how we can create an investment framework that is different from the mechanized one currently employed. Readers will discover an approach that re-aligns investing with the world it was originally meant to serve. An approach that values resiliency over rigidity and elegant simplicity over

synthetic complexity. This is the true nature of investing.

Cambridge International AS and A Level Biology C. J. Clegg 2015-01-30

This title covers the entire syllabus for Cambridge International Examinations' International AS and A Level Biology (9700). It is divided into separate sections for AS and A Level making it ideal for students studying both the AS and the A Level and also those taking the AS examinations at the end of their first year. - Explains difficult concepts using language that is appropriate for students around the world - Provides practice throughout the course with carefully selected past paper questions at the end of each chapter We are working with Cambridge International Examinations to gain endorsement for this title.

Forests, Business and Sustainability

Rajat Panwar 2015-12-14

Forests are under tremendous pressure from human uses of all kinds, and one of the most significant threats to their sustainability comes from commercial interests. This book presents a comprehensive examination of the interactions between the forest products sector and the sustainability of forests. It captures the most current sustainability concerns within the forestry sector and various sustainability-oriented initiatives to address these. Experts from around the world analyze interconnected topics including market mechanisms, regulatory mechanisms, voluntary actions, and governance, and outline their effectiveness, potential, and limitations. By presenting a novel

overview of the burgeoning field of business sustainability within the forestry sector, this book paves a way forward in understanding what is working, what is not working, and what could potentially work to ensure sustainable business practices within the forestry sector,

What Girls Need Marisa Porges, PhD
2021-08-03 "A powerful book about how we can raise girls to become bold, ambitious women." --Adam Grant What do girls really need to succeed? Children today face an uncertain future, and parents and teachers can't fully predict what's in store for their daughter and sons. But one thing is clear: Our kids need a new set of skills to succeed. Girls, in particular, must nurture essential traits to fully flourish. Students hit the ground running today,

entering a school system that carries high expectations on their way to a college application process that is more demanding than ever. After school, young women enter a competitive job market, still complicated by sexism and the possibility of harassment. But the ways we define leadership are also changing, and the women stepping into those roles are mapping new paths to inhabiting traits like grit, resilience, audacity, and self-confidence. What Girls Need shows how parents and educators can foster these critical twenty-first-century skills in our girls and help them to recognize and nurture their inherent strengths—to not just thrive but also find joy and purpose as they come of age in our ever-evolving world. As a student at the all-girls Baldwin

School outside of Philadelphia, Marisa Porges grew up in a community designed to produce strong, independent women. After graduating from Harvard, she fulfilled her childhood dream of flying jets off aircraft carriers for the U.S. Navy and served as a counterterrorism expert in Afghanistan and a cybersecurity advisor in the Obama White House. Then in 2016, in an unexpected move for someone whose ambitions had taken her so far from home, Porges returned to head the Baldwin School. In doing so, she saw how small moments in her early education gave her the tools she needed to excel in a "man's world." Combining compelling research, personal stories, and practical advice on timely questions, Porges delves into hot-button subjects like

how to harness girls' voices and boost girls' self-esteem, and shows how little things have a big impact when nurturing vital skills like competitiveness, collaboration, empathy, and adaptability. What Girls Need empowers us to support the next generation of women so they can confidently hold their own no matter what the future has in store.

Writing and the Body in Motion Cheryl Pallant 2018-04-11 Based upon the author's lifetime practices as a dancer, poet and teacher, this innovative approach to developing body awareness focuses on achieving self-discovery and well-being through movement, mindfulness and writing. Written from a holistic (rather than dualistic) view of the mind-body duality, discussion and exercises draw on dance, psychology,

neuroscience and meditation to guide personal exploration and creative expression.

Quantitative Assessment and Validation of Network Inference Methods in Bioinformatics Benjamin Haibe-Kains 2015-04-14 Scientists today have access to an unprecedented arsenal of high-tech tools that can be used to thoroughly characterize biological systems of interest. High-throughput “omics” technologies enable to generate enormous quantities of data at the DNA, RNA, epigenetic and proteomic levels. One of the major challenges of the post-genomic era is to extract functional information by integrating such heterogeneous high-throughput genomic data. This is not a trivial task as we are increasingly coming to understand that it is not individual

genes, but rather biological pathways and networks that drive an organism’s response to environmental factors and the development of its particular phenotype. In order to fully understand the way in which these networks interact (or fail to do so) in specific states (disease for instance), we must learn both, the structure of the underlying networks and the rules that govern their behavior. In recent years there has been an increasing interest in methods that aim to infer biological networks. These methods enable the opportunity for better understanding the interactions between genomic features and the overall structure and behavior of the underlying networks. So far, such network models have been mainly used to identify and validate new interactions between

genes of interest. But ultimately, one could use these networks to predict large-scale effects of perturbations, such as treatment by multiple targeted drugs. However, currently, we are still at an early stage of comprehending methods and approaches providing a robust statistical framework to quantitatively assess the quality of network inference and its predictive potential. The scope of this Research Topic in Bioinformatics and Computational Biology aims at addressing these issues by investigating the various, complementary approaches to quantify the quality of network models. These “validation” techniques could focus on assessing quality of specific interactions, global and local structures, and predictive ability of

network models. These methods could rely exclusively on in silico evaluation procedures or they could be coupled with novel experimental designs to generate the biological data necessary to properly validate inferred networks.

Specialised membrane domains of plasmodesmata, plant intercellular nanopores Jens Tilsner 2014-12-17
Plasmodesmata (PD) are plant-specific intercellular nanopores defined by specialised domains of the plasma membrane (PM) and the endoplasmic reticulum (ER), both of which contain unique proteins, and probably different lipid compositions than the surrounding bulk membranes. The PD membranes form concentric tubules with a minimal outer diameter of only 50 nm, and the central ER strand constricted to ~10-15 nm,

representing one of the narrowest stable membrane tubules in nature. This unique membrane architecture poses many biophysical, structural and functional questions. PM continuity across PD raises the question as to how a locally confined membrane site is established and maintained at PD. There is increasing evidence that the PM within PD may be enriched in membrane 'rafts' or TET web domains. Lipid rafts often function as signalling platforms, in line with the emerging view of PD as central players in plant defense responses. Lipid-lipid immiscibility could also provide a mechanism for membrane sub-compartmentalisation at PD. Intricate connections of the PM to the wall and the underlying cytoskeleton and ER may anchor the specialised domains locally. The ER

within PD is even more strongly modified. Its extreme curvature suggests that it is stabilised by densely packed proteins, potentially members of the reticulon family that tubulate the cortical ER. The diameter of the constricted ER within PD is similar to membrane stalks in dynamin-mediated membrane fission during endocytosis and may need to be stabilised against spontaneous rupture. The function of this extreme membrane constriction, and the reasons why the ER is connected between plant cells remain unknown. Whilst the technically challenging search for the protein components of PD is ongoing, there has been significant recent progress in research on biological membranes that could benefit our understanding of PD function. With this Research Topic,

we therefore aim to bring together researchers in the PD field and those in related areas, such as membrane biophysics, membrane composition and fluidity, protein-lipid interactions, lateral membrane heterogeneity, lipid rafts, membrane curvature, and membrane fusion/fission. We wish to address questions such as: - What mechanisms restrict lateral mobility of proteins and lipids along the PD membranes? - How can specific proteins be targeted to and turned over from membrane domains with restricted lateral access? - What elements (lipids, proteins, membrane curvature, packing order, thickness etc.) may contribute to the identity of PD membranes? - How do the structural and functional features of PD compare to other ER-PM contact sites? - How is the high curvature of

the PD ER stabilised and what are possible functions of such a tightly constricted membrane tubule? - Do PD need to be prevented from spontaneous collapse and sealing? - What technologies are available to address these questions that can underpin PD research? We welcome interested individuals to contribute their expertise and develop new hypotheses on the particular biological and biophysical questions posed by PD. We are particularly looking for articles (Original Research Articles, Technical Advances and State-of-the-Art reviews) that would expand on or challenge current perceptions of PD and stimulate discussion.

Addressing the Challenges in Communicating Climate Change Across Various Audiences Walter Leal Filho
2018-10-02 This book offers a

concrete contribution towards a better understanding of climate change communication. It ultimately helps to catalyse the sort of cross-sectoral action needed to address the phenomenon of climate change and its many consequences. There is a perceived need to foster a better understanding of what climate change is, and to identify approaches, processes, methods and tools which may help to better communicate it. There is also a need for successful examples showing how communication can take place across society and stakeholders. Addressing the challenges in communicating to various audiences and providing a platform for reflections, it showcases lessons learnt from research, field projects and best practices in various settings in

various different countries. The acquired knowledge can be adapted and applied to other situations.

The Leading Edge of Early Childhood Education Nonie K. Lesaux 2021-02-23
The Leading Edge of Early Childhood Education aims to support the effort to simultaneously scale up and improve the quality of early childhood education by bringing together relevant insights from emerging research to provide guidance for this critical, fledgling field. It reflects the growing recognition that early childhood experiences have a powerful effect on children's later academic achievement and long-term life outcomes. Editors Nonie K. Lesaux and Stephanie M. Jones bring together an impressive array of scholarly contributors. Topics include: · creating learning

environments that support children's cognitive and emotional development; · identifying and addressing early risk factors; · using data to guide educators' practice; and · capitalizing on the use of technology. Recent years have seen a surge of local, state, and national initiatives aimed at expanding and improving early childhood initiatives, particularly regarding access to preK programs. The Leading Edge of Early Childhood Education promises to be a valuable resource for those charged with enacting the next level of work in this critical area.

Interoperability in Healthcare Information Systems: Standards, Management, and Technology Sicilia, Miguel Ángel 2013-06-30 Although the standards in electronic health

records and general healthcare services continue to evolve, many organizations push to connect interoperability with public service and basic citizenship rights. This poses significant technical and organizational challenges that are the focus of many research and standardization efforts. *Interoperability in Healthcare Information Systems: Standards, Management and Technology* provides a comprehensive collection on the overview of electronic health records and health services interoperability and the different aspects representing its outlook in a framework that is useful for practitioners, researchers, and decision-makers.

Geocomputation Chris Brunsdon 2015-01-22 Geocomputation is the use

of software and computing power to solve complex spatial problems. It is gaining increasing importance in the era of the 'big data' revolution, of 'smart cities', of crowdsourced data, and of associated applications for viewing and managing data geographically - like Google Maps. This student focused book: Provides a selection of practical examples of geocomputational techniques and 'hot topics' written by world leading practitioners. Integrates supporting materials in each chapter, such as code and data, enabling readers to work through the examples themselves. Chapters provide highly applied and practical discussions of:

- Visualisation and exploratory spatial data analysis
- Space time modelling
- Spatial algorithms
- Spatial regression and statistics
- Enabling interactions

through the use of neogeography All chapters are uniform in design and each includes an introduction, case studies, conclusions - drawing together the generalities of the introduction and specific findings from the case study application – and guidance for further reading. This accessible text has been specifically designed for those readers who are new to Geocomputation as an area of research, showing how complex real-world problems can be solved through the integration of technology, data, and geocomputational methods. This is the applied primer for Geocomputation in the social sciences.

Regenerative Biology of the Eye Alice Pébay 2014-05-23 This text is a comprehensive look at the current knowledge on stem cell application for vision loss, showcasing different

types of stem cells (adult, embryonic, iPSCs) for diseases of the front and the back of the eye. It also highlights data obtained in various models from fish to human, as well as from the bionic eye project for vision regeneration. This volume in the Stem Cell Biology and Regenerative Medicine series is essential reading for stem cell biologists, ophthalmologists, advanced and graduate students, in addition to academics and medical staff who work in these disciplines. Emotional Agility Susan David
2016-09-06 #1 Wall Street Journal Best Seller USA Today Best Seller Amazon Best Book of the Year TED Talk sensation - over 3 million views! The counterintuitive approach to achieving your true potential, heralded by the Harvard Business

Review as a groundbreaking idea of the year. The path to personal and professional fulfillment is rarely straight. Ask anyone who has achieved his or her biggest goals or whose relationships thrive and you'll hear stories of many unexpected detours along the way. What separates those who master these challenges and those who get derailed? The answer is agility—emotional agility. Emotional agility is a revolutionary, science-based approach that allows us to navigate life's twists and turns with self-acceptance, clear-sightedness, and an open mind. Renowned psychologist Susan David developed this concept after studying emotions, happiness, and achievement for more than twenty years. She found that no matter how intelligent or creative people are, or what type of

personality they have, it is how they navigate their inner world—their thoughts, feelings, and self-talk—that ultimately determines how successful they will become. The way we respond to these internal experiences drives our actions, careers, relationships, happiness, health—everything that matters in our lives. As humans, we are all prone to common hooks—things like self-doubt, shame, sadness, fear, or anger—that can too easily steer us in the wrong direction. Emotionally agile people are not immune to stresses and setbacks. The key difference is that they know how to adapt, aligning their actions with their values and making small but powerful changes that lead to a lifetime of growth. Emotional agility is not about ignoring difficult emotions and

thoughts; it's about holding them loosely, facing them courageously and compassionately, and then moving past them to bring the best of yourself forward. Drawing on her deep research, decades of international consulting, and her own experience overcoming adversity after losing her father at a young age, David shows how anyone can thrive in an uncertain world by becoming more emotionally agile. To guide us, she shares four key concepts that allow us to acknowledge uncomfortable experiences while simultaneously detaching from them, thereby allowing us to embrace our core values and adjust our actions so they can move us where we truly want to go. Written with authority, wit, and empathy, Emotional Agility serves as a road map for real behavioral change—a new

way of acting that will help you reach your full potential, whoever you are and whatever you face.

Routledge Handbook of Global Health Security Simon Rushton 2014-08-07

This new Handbook presents an overview of cutting-edge research in the growing field of global health security. Over the past decade, the study of global health and its interconnection with security has become a prominent and rapidly growing field of research. Ongoing debates question whether health and security should be linked; which (if any) health issues should be treated as security threats; what should be done to address health security threats; and the positive and negative consequences of 'securitizing' health. In academic and policy terms, the health security

field is a timely and dynamic one and this handbook will be the first work comprehensively to address this agenda. Bringing together the leading experts and commentators on health security issues from across the world, the volume comprises original and cutting-edge essays addressing the key issues in the field and also highlighting currently neglected avenues for future research. The book intends to provide an accessible yet sophisticated introduction to the key topics and debates and is organised into four key parts: Health Securities: the fundamental conceptual issues, historical links between health and security and the various ways of conceptualising health as a security issue Threats: those health issues which have been most frequently discussed in security

terms Responses: the wide range of contemporary security-driven responses to health threats
Controversies: the securitization of health, its impact on rights and justice and the potential distortion of the global health agenda This book will be of great interest to students of global health security, public health, critical security studies, and International Relations in general.

Frontiers of Land and Water

Governance in Urban Areas Thomas Hartmann 2017-10-02 A society that intensifies and expands the use of land and water in urban areas needs to search for solutions to manage the frontiers between these two essential elements for urban living. Sustainable governance of land and water is one of the major challenges

of our times. Managing retention areas for floods and droughts, designing resilient urban waterfronts, implementing floating homes, or managing wastewater in shrinking cities are just a few examples where spatial planning steps into the governance arena of water management and vice versa. However, water management and spatial planning pursue different modes of governance, and therefore the frontiers between the two disciplines require developing approaches for setting up governance schemes for sustainable cities of the future. What are the particularities of the governance of land and water? What is the role of regional and local spatial planning? What institutional barriers may arise? This book focuses on questions such as these, and covers groundwater

governance, water supply and wastewater treatment, urban riverscapes, urban flooding, flood risk management, and concepts of resilience. The project resulted from a Summer School by the German Academy for Spatial Research and Planning (ARL) organized by the editors at Utrecht University in 2013. This book was published as a special issue of Water International.

Model organisms in inflammation and cancer Yiorgos Apidianakis 2014-12-17
A link between inflammation and cancer was initially made by Rudolf Virchow back in the 19th century. Nowadays many cancers are considered dependent on inflammatory responses to microbial and damaged-self stimuli and both arms of immunity, innate and adaptive, are playing a role in promoting cancer. Moreover, besides

environmental factors, opportunistic pathogens contribute to inflammation and cancer. Nevertheless, microbial influence on chronic disease is sometimes difficult to discern, especially in the context of polymicrobial communities, such as those found in the digestive tract. In this light, model organisms provide important insights into immune and growth signals that promote cancer, and suggest therapies that will selectively target potentially harmful microbes or modulate host responses. A number of review and opinion articles in this series address novel aspects and paradigms of the interactions between the microbiota and the host in relation to inflammation and cancer.
An Essay on the Principle of Sustainable Population Toshihiko Hara

2020-05-23 This book focuses on the future of the global population and proposes revising Malthus' Law. The United Nations estimates that the global population will top 11 billion by 2100, at which point its growth will be near an end: it will find a new equilibrium in a long demographic transition from high birth and death rates to low ones. However, the author reviews the fertility developments reported in the World Population Prospects 2017, which are near or below the replacement level in most regions, with the important exception of Sub-Saharan Africa, and warns of a possible scenario of the extinction of human society. Returning to Malthus, his Essay on the Principle of Population is critically reconsidered. Simple simulations show

that exponential growth and decay are unsustainable beyond the narrow ranges of the net reproduction rate. In addition, the length of reproduction periods, which depends on women's lifespans, plays a pivotal role. The limits of growth are given in any case, to the extent that time and space will permit. From this perspective, teleological conditions such as instinct, passion, or even natural reproductive tendencies are irrelevant and unnecessary. When the population deviates too far from the replacement level, either its shrinking or massive growth will overshoot the limits of its existence. This principle of sustainable population indicates that the demographic transition must follow a logistic curve. Using a system dynamics approach, the author

constructs a simulation model based on four major loops: fertility, reproduction timing, social capital accumulation, and lifespan. Using only endogenous variables, this model successfully reproduces the historical process of the demographic transition in Japan. Thereby, it shows that the timing and periods of reproduction, maximum fertility, and maximum lifespan hold the key to sustainability. Based on these findings, the author subsequently discusses recovering replacement fertility, extending lifespans, and the demographic future of the human race.

The International Conference on Health Informatics Yuan-Ting Zhang
2013-11-20 This volume presents the proceedings of the International Conference on Health Informatics

(ICHI). The conference was a new special topic conference initiative by the International Federation of Medical and Biological Engineering (IFMBE), held in Vilamoura, Portugal on 7-9 November, 2013. The main theme of the ICHI2013 was “Integrating Information and Communication Technologies with Biomedicine for Global Health”. The proceedings offer a unique forum to examine enabling technologies of sensors, devices and systems that optimize the acquisition, transmission, processing, storage, retrieval of biomedical and health information as well as to report novel clinical applications of health information systems and the deployment of m-Health, e-Health, u-Health, p-Health and Telemedicine.

Intelligent Computing Kohei Arai This

book is a comprehensive collection of chapters focusing on the core areas of computing and their further applications in the real world. Each chapter is a paper presented at the Computing Conference 2021 held on 15-16 July 2021. Computing 2021 attracted a total of 638 submissions which underwent a double-blind peer review process. Of those 638 submissions, 235 submissions have been selected to be included in this book. The goal of this conference is to give a platform to researchers with fundamental contributions and to be a premier venue for academic and industry practitioners to share new ideas and development experiences. We hope that readers find this volume interesting and valuable as it provides the state-of-the-art intelligent methods and techniques

for solving real-world problems. We also expect that the conference and its publications is a trigger for further related research and technology improvements in this important subject. .
Mountain Hazards and Disaster Risk Reduction Hari Krishna Nibanupudi 2014-12-01 The Hindu Kush Himalayan (HKH) region is highly vulnerable to earthquakes and water-induced disasters. This fragile mountain region is under tremendous stress from climate change and land-use degradation that has accelerated flash floods, river-line floods, erosion, and wet mass movements during the monsoon period and drought in the non-monsoon period. Against the backdrop of intensifying disasters and in the absence of a focused documentation of disaster

risk reduction issues in the HKH region, this volume presents a comprehensive body of knowledge. The main purpose and objective of this publication is to connect existing data, research, conceptual work, and practical cases on risk, resilience, and risk reduction from the HKH region under a common analytical umbrella. The result is a contribution to advancing disaster resilience and risk reduction in the HKH region. The book will be of special interest to policy makers, donors, and researchers concerned with the disaster issues in the region.

Assessing the Societal Implications of Emerging Technologies Evan S. Michelson 2016-05-12 A growing problem of interest in the field of science and technology policy is that

the next generation of innovations is arriving at an accelerating rate, and the governance system is struggling to catch up. Current approaches and institutions for effective technology assessment are ill suited and poorly designed to proactively address the multidimensional, interconnected societal impacts of science and technology advancements that are already taking place and expected to continue over the course of the 21st century. This book offers tangible insights into the strategies deployed by well-known, high-profile organizations involved in anticipating the various societal and policy implications of nanotechnology and synthetic biology. It focuses predominantly on an examination of the practices adopted by the often-cited and uniquely positioned Project

on Emerging Nanotechnologies in the United States, as well as being informed by comparisons with a range of institutions also interested in embedding forward-looking perspectives in their respective area of innovation. The book lays out one of the first actionable roadmaps that other interested stakeholders can follow when working toward institutionalizing anticipatory governance practices throughout the policymaking process.

An Unworthy Future Joseph Toomey
2014-11-07 Written from an economic perspective, this current affairs book presents an appraisal of why President Obama's green energy program is unaffordable and destined to fail.

Research and Applications in Global Supercomputing Segall, Richard S.

2015-01-31 Rapidly generating and processing large amounts of data, supercomputers are currently at the leading edge of computing technologies. Supercomputers are employed in many different fields, establishing them as an integral part of the computational sciences. Research and Applications in Global Supercomputing investigates current and emerging research in the field, as well as the application of this technology to a variety of areas. Highlighting a broad range of concepts, this publication is a comprehensive reference source for professionals, researchers, students, and practitioners interested in the various topics pertaining to supercomputing and how this technology can be applied to solve problems in a multitude of

disciplines.

The Carbon Crunch Dieter Helm
2015-01-01 In a new edition of his hard-hitting book on climate change, economist Dieter Helm looks at how and why we have failed to tackle the issue of global warming and argues for a new, pragmatic rethinking of energy policy. "An optimistically levelheaded book about actually dealing with global warming."—Kirkus Reviews, starred review "[Dieter Helm] has turned his agile mind to one of the great problems of our age: why the world's efforts to curb the carbon dioxide emissions behind global warming have gone so wrong, and how it can do better."—Pilita Clark, Financial Times
Why Race and Gender Still Matter
Maeve M O'Donovan 2015-10-06
Intersectionality, the attempt to

bring theories on race, gender, disability and sexuality together, has existed for decades as a theoretical framework. The essays in this volume explore how intersectionality can be applied to modern philosophy, as well as looking at other disciplines.

Life Cycle Assessment in the Agri-food Sector Bruno Notarnicola
2015-01-06 The book presents an overview of the International practices and state-of-the-art of LCA studies in the agri-food sector, both in terms of adopted methodologies and application to particular products; the final purpose is to characterise and put order within the methodological issues connected to some important agri-food products (wine, olive oil, cereals and derived products, meat and fruit) and also

defining practical guidelines for the implementation of LCAs in this particular sector. The first chapter entails an overview of the application of LCA to the food sector, the role of the different actors of the food supply chain and the methodological issues at a general level. The other chapters, each with a particular reference to the main foods of the five sectors under study, have a common structure which entails the review of LCA case studies of such agri-food products, the methodological issues, the ways with which they have been faced and the suggestion of practical guidelines.

Formal Methods for the Quantitative Evaluation of Collective Adaptive Systems Marco Bernardo 2016-06-10

This book presents 8 tutorial

lectures given by leading researchers at the 16th edition of the International School on Formal Methods for the Design of Computer, Communication and Software Systems, SFM 2016, held in Bertinoro, Italy, in June 2016. SFM 2016 was devoted to the Quantitative Evaluation of Collective Adaptive Systems and covered topics such as self-organization in distributed systems, scalable quantitative analysis, spatio-temporal models, and aggregate programming.

Routledge Handbook of Sustainability and Fashion Kate Fletcher 2014-08-21
The clothing industry employs 25 million people globally contributing to many livelihoods and the prosperity of communities, to women's independence, and the establishment of significant infrastructures in

poorer countries. Yet the fashion industry is also a significant contributor to the degradation of natural systems, with the associated environmental footprint of clothing high in comparison with other products. Routledge Handbook of Sustainability and Fashion recognizes the complexity of aligning fashion with sustainability. It explores fashion and sustainability at the levels of products, processes, and paradigms and takes a truly multi-disciplinary approach to critically question and suggest creative responses to issues of: • Fashion in a post-growth society • Fashion, diversity and equity • Fashion, fluidity and balance across natural, social and economic systems This handbook is a unique resource for a wide range of scholars and students

in the social sciences, arts and humanities interested in sustainability and fashion. **Introduction to Sustainability for Engineers** Toolseeram Ramjeawon 2020-02-13 Introduction to Sustainability for Engineers aims to incorporate sustainability into curricula for undergraduate engineering students. The book starts with an introduction to the concept of sustainability, outlining core principles for sustainable development to guide engineering practice and decision making, including key tools aimed at enabling, measuring and communicating sustainability. It also describes concepts as life cycle assessment, environmental economics, related institutional architecture and policy framework, business context of

sustainability, and sustainable buildings and infrastructure. Appendices at the end of the book presents a summary of key concepts, strategies and tools introduced in the main text. Five Key Benefits: A comprehensive textbook for engineering students to develop competency in sustainability. Presents a framework for engineers to put sustainability into practice. Presents the link between sustainability and the design process. It shows the application of a sustainable engineering design process for putting sustainability into practice. There are well woven

case studies and links to websites for learning in various engineering disciplines. Includes challenging exercises at the end of each chapter that will inspire students and stimulate discussion in the class. **Media, Environment and the Network Society** A. Anderson 2014-09-18 The news media has become a key arena for staging environmental conflicts. Through a range of illuminating examples ranging from climate change to oil spills, Media, Environment and the Network Society provides a timely and far-reaching analysis of the media politics of contemporary environmental debates.