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Representation and Reality in Humans, Other Living Organisms and Intelligent Machines Gordana Dodig-Crnkovic 2017-08-29 This book enriches our views on representation and deepens our understanding of its different aspects. It arises out of several years of dialog between the editors and the authors, an interdisciplinary team of highly experienced researchers, and it reflects the best contemporary view of representation and reality in humans, other living beings, and intelligent machines. Structured into parts on the cognitive, computational, natural sciences, philosophical, logical, and machine perspectives, a theme of the field and the book is building and presenting networks, and the editors hope that the contributed chapters will spur understanding and collaboration between researchers in domains such as computer science, philosophy, logic, systems theory,

engineering, psychology, sociology, anthropology, neuroscience, linguistics, and synthetic biology.

Cardiovascular Computing—Methodologies and Clinical Applications Spyretta Golemati 2019-02-12 This book provides a comprehensive guide to the state-of-the-art in cardiovascular computing and highlights novel directions and challenges in this constantly evolving multidisciplinary field. The topics covered span a wide range of methods and clinical applications of cardiovascular computing, including advanced technologies for the acquisition and analysis of signals and images, cardiovascular informatics, and mathematical and computational modeling.

International Classification of Functioning, Disability, and Health World Health Organization 2007 This publication is a derived version of the International Classification of Functioning, Disability and Health (ICF, WHO, 2001) designed to record characteristics of the developing child and the influence of environments surrounding the child. This derived version of the ICF can be used by providers, consumers and all those concerned with the health, education, and well being of children and youth. It provides a common and universal language for clinical, public health, and research applications to facilitate the documentation and measurement of health and disability in child and youth populations.--Publisher's description.

Nanostructures and Nanomaterials Guozhong Cao 2011 This text focuses on the synthesis, properties and applications of nanostructures and nanomaterials, particularly inorganic nanomaterials. It provides coverage of the fundamentals and processing techniques with regard to synthesis, properties, characterization and applications of nanostructures and nanomaterials.

Physical Activity and Cancer Kerry S. Courneya 2010-11-26 This book explores in depth the relation between physical activity and cancer control, including primary prevention, coping with treatments, recovery after treatments, long-term survivorship, secondary prevention, and survival. The first part of the book presents the most recent research on the impact of physical activity in preventing a range of cancers. In the second part, the association between physical activity and cancer survivorship is addressed. The effects of physical activity on supportive care endpoints (e.g., quality of life, fatigue, physical functioning) and disease endpoints (e.g., biomarkers, recurrence, survival) are carefully analyzed. In addition, the determinants of physical activity in cancer survivors are discussed, and behavior change strategies for increasing physical activity in cancer

survivors are appraised. The final part of the book is devoted to special topics, including the relation of physical activity to pediatric cancer survivorship and to palliative cancer care.

8th European Medical and Biological Engineering Conference Tomaz Jarm 2020-11-29 This book aims at informing on new trends, challenges and solutions, in the multidisciplinary field of biomedical engineering. It covers traditional biomedical engineering topics, as well as innovative applications such as artificial intelligence in health care, tissue engineering, neurotechnology and wearable devices. Further topics include mobile health and electroporation-based technologies, as well as new treatments in medicine. Gathering the proceedings of the 8th European Medical and Biological Engineering Conference (EMBEC 2020), held on November 29 - December 3, 2020, in Portorož, Slovenia, this book bridges fundamental and clinically-oriented research, emphasizing the role of education, translational research and commercialization of new ideas in biomedical engineering. It aims at inspiring and fostering communication and collaboration between engineers, physicists, biologists, physicians and other professionals dealing with cutting-edge themes in and advanced technologies serving the broad field of biomedical engineering.

Essentials in Nanoscience and Nanotechnology Narendra Kumar 2016-04-11 This book describes various aspects of nanoscience and nanotechnology. It begins with an introduction to nanoscience and nanotechnology and includes a historical prospective, nanotechnology working in nature, man-made nanomaterial and impact of nanotechnology illustrated with examples. It goes on to describe general synthetic approaches and strategies and also deals with the characterization of nanomaterial using modern tools and techniques to give basic understanding to those interested in learning this emerging area. It then deals with different kinds of nanomaterial such as inorganics, carbon based-, nanocomposites and self-assembled/supramolecular nano structures in terms of their varieties, synthesis, properties etc. In addition, it contains chapters devoted to unique properties with mathematical treatment wherever applicable and the novel applications dealing with information technology, pollution control (environment, water), energy, nanomedicine, healthcare, consumer goods etc.

Personalized Anaesthesia Pedro L. Gambús 2020-01-31 Presents a modern vision of anaesthesia, integrating technology and knowledge, to change how anaesthesia is taught and practised.

Methods of Behavior Analysis in Neuroscience Jerry J. Buccafusco 2000-08-29 Using the most well-studied

behavioral analyses of animal subjects to promote a better understanding of the effects of disease and the effects of new therapeutic treatments on human cognition, *Methods of Behavior Analysis in Neuroscience* provides a reference manual for molecular and cellular research scientists in both academia and the pharmaceutical

Genetic Algorithms in Search, Optimization, and Machine Learning David Edward Goldberg 1989 A gentle introduction to genetic algorithms. Genetic algorithms revisited: mathematical foundations. Computer implementation of a genetic algorithm. Some applications of genetic algorithms. Advanced operators and techniques in genetic search. Introduction to genetics-based machine learning. Applications of genetics-based machine learning. A look back, a glance ahead. A review of combinatorics and elementary probability. Pascal with random number generation for fortran, basic, and cobol programmers. A simple genetic algorithm (SGA) in pascal. A simple classifier system(SCS) in pascal. Partition coefficient transforms for problem-coding analysis. *Optical and Laser Remote Sensing* D.K. Killinger 2013-06-29 The field of optical and laser remote sensing has grown rapidly in recent years. This dynamic growth has been stimulated not only by technological advances in lasers, detectors, and optical system design, but also by the potential application of remote sensing systems to a wide variety of atmospheric measurements. Optical and laser remote sensing can allow single ended measurement capability not offered by conventional point-detection techniques. While many past measurements have been associated with laboratory research, practical systems have recently been developed which are capable of remotely detecting, measuring, and tracking a wide range of molecular and atomic species in the atmosphere with concentrations of parts per billion and at ranges over 100 km. This book is a compilation of papers which represent an overview of the present state of development of optical and laser remote sensing technology. The subjects covered include both passive and active remote sensing techniques in the UV, visible, and IR spectral regions, related laser and detector technology, and atmospheric propagation and system analysis considerations. While the papers do not constitute an exhaustive treatment of the excellent research being conducted in this field, they are representative of the wide diversity of present efforts. It is hoped that the reader will gain a general understanding of the current research in optical and laser remote sensing as well as an

overview of current systems development.

Merriam-Webster's Vocabulary Builder Mary W. Cornog 1998 The ideal book for people who want to increase their word power. Thorough coverage of 1,200 words and 240 roots while introducing 2,300 words. The Vocabulary Builder is organized by Greek and Latin roots for effective study with nearly 250 new words and roots. Includes quizzes after each root discussion to test progress. A great study aid for students preparing to take standardized tests.

Applications of Networks, Sensors and Autonomous Systems Analytics Jyotsna Kumar Mandal 2021-11-27 This book presents high-quality research papers presented at International Conference on Applications of Networks, Sensors and Autonomous Systems Analytics (ICANSAA 2020), held during December, 11 – 12, 2020, at JIS College of Engineering, Kalyani, West Bengal, India. The major topics covered are cyber-physical systems and sensor networks, data analytics and autonomous systems and MEMS and NEMS with applications in biomedical devices. It includes novel and innovative work from experts, practitioners, scientists, and decision-makers from academia and industry.

Antibiotic Resistance Institute of Medicine 2011-01-10 Years of using, misusing, and overusing antibiotics and other antimicrobial drugs has led to the emergence of multidrug-resistant 'superbugs.' The IOM's Forum on Microbial Threats held a public workshop April 6-7 to discuss the nature and sources of drug-resistant pathogens, the implications for global health, and the strategies to lessen the current and future impact of these superbugs.

Atmospheric Aerosols Olivier Boucher 2015-05-18 This textbook aims to be a one stop shop for those interested in aerosols and their impact on the climate system. It starts with some fundamentals on atmospheric aerosols, atmospheric radiation and cloud physics, then goes into techniques used for in-situ and remote sensing measurements of aerosols, data assimilation, and discusses aerosol-radiation interactions, aerosol-cloud interactions and the multiple impacts of aerosols on the climate system. The book aims to engage those interested in aerosols and their impacts on the climate system: graduate and PhD students, but also post-doctorate fellows who are new to the field or would like to broaden their knowledge. The book includes exercises at the end of most chapters. Atmospheric aerosols are small (microscopic) particles in suspension in the

atmosphere, which play multiple roles in the climate system. They interact with the energy budget through scattering and absorption of solar and terrestrial radiation. They also serve as cloud condensation and ice nuclei with impacts on the formation, evolution and properties of clouds. Finally aerosols also interact with some biogeochemical cycles. Anthropogenic emissions of aerosols are responsible for a cooling effect that has masked part of the warming due to the increased greenhouse effect since pre-industrial time. Natural aerosols also respond to climate changes as shown by observations of past climates and modelling of the future climate.

Nordic Nutrition Recommendations 2012 Nordic Council of Ministers 2014-03-06 The Nordic countries have collaborated in setting guidelines for dietary composition and recommended intakes of nutrients for several decades through the joint publication of the Nordic Nutrition Recommendations (NNR). This 5th edition, the NNR 2012, gives Dietary Reference Values (DRVs) for nutrients, and compared with earlier editions more emphasis has been put on evaluating the scientific evidence for the role of food and food patterns contributing to the prevention of the major diet-related chronic diseases. Recommendations on physical activity are included and interaction with physical activity has been taken into account for the individual nutrient recommendations wherever appropriate. A chapter on sustainable food consumption has been added. A Nordic perspective has been accounted for in setting the reference values. The NNR 2012 has used an evidence-based and transparent approach in assessing associations between nutrients and foods and certain health outcomes. Systematic reviews form the basis for the recommendations of several nutrients and topics, while a less stringent update has been done for others. The systematic reviews and individual chapters have been peer reviewed and the systematic reviews are published in the Food & Nutrition Research journal. The draft chapters were subject to an open public consultation. Recommendations have been changed only when sufficient scientific evidence has evolved since the 4th edition. The primary aim of the NNR 2012 is to present the scientific background of the recommendations and their application. A secondary aim is for the NNR 2012 to function as a basis for the national recommendations that are adopted by the individual

Molecular Exercise Physiology Henning Wackerhage 2014-02-24 Molecular Exercise Physiology: An Introduction is the first student-friendly textbook to be published on this key topic in contemporary sport and exercise science. It introduces sport and exercise genetics and the molecular mechanisms by which exercise

causes adaptation. The text is linked to real life sport and exercise science situations such as ‘what makes people good at distance running?’, ‘what DNA sequence variations code for a high muscle mass?’ or ‘by what mechanisms does exercise improve type2 diabetes?’ The book includes a full range of useful features, such as summaries, definitions of key terms, guides to further reading, review questions, personal comments by molecular exercise pioneers (Booth, Bouchard) and leading research in the field, as well as descriptions of research methods. A companion website offers interactive and downloadable resources for both student and lecturers. Structured around central themes in sport and exercise science, such as nutrition, endurance training, resistance training, exercise & chronic disease and ageing, this book is the perfect foundation around which to build a complete upper-level undergraduate or postgraduate course on molecular exercise physiology.

Wearable Robots José L. Pons 2008-04-15 A wearable robot is a mechatronic system that is designed around the shape and function of the human body, with segments and joints corresponding to those of the person it is externally coupled with. Teleoperation and power amplification were the first applications, but after recent technological advances the range of application fields has widened. Increasing recognition from the scientific community means that this technology is now employed in telemanipulation, man-amplification, neuromotor control research and rehabilitation, and to assist with impaired human motor control. Logical in structure and original in its global orientation, this volume gives a full overview of wearable robotics, providing the reader with a complete understanding of the key applications and technologies suitable for its development. The main topics are demonstrated through two detailed case studies; one on a lower limb active orthosis for a human leg, and one on a wearable robot that suppresses upper limb tremor. These examples highlight the difficulties and potentialities in this area of technology, illustrating how design decisions should be made based on these. As well as discussing the cognitive interaction between human and robot, this comprehensive text also covers: the mechanics of the wearable robot and it’s biomechanical interaction with the user, including state-of-the-art technologies that enable sensory and motor interaction between human (biological) and wearable artificial (mechatronic) systems; the basis for bioinspiration and biomimetism, general rules for the development of biologically-inspired designs, and how these could serve recursively as biological models to explain biological systems; the study on the development of networks for wearable robotics. Wearable Robotics: Biomechatronic

Exoskeletons will appeal to lecturers, senior undergraduate students, postgraduates and other researchers of medical, electrical and bio engineering who are interested in the area of assistive robotics. Active system developers in this sector of the engineering industry will also find it an informative and welcome resource.

Encyclopedia of Food Microbiology Carl A. Batt 2014-04-02 Written by the world's leading scientists and spanning over 400 articles in three volumes, the Encyclopedia of Food Microbiology, Second Edition is a complete, highly structured guide to current knowledge in the field. Fully revised and updated, this encyclopedia reflects the key advances in the field since the first edition was published in 1999 The articles in this key work, heavily illustrated and fully revised since the first edition in 1999, highlight advances in areas such as genomics and food safety to bring users up-to-date on microorganisms in foods. Topics such as DNA sequencing and E. coli are particularly well covered. With lists of further reading to help users explore topics in depth, this resource will enrich scientists at every level in academia and industry, providing fundamental information as well as explaining state-of-the-art scientific discoveries. This book is designed to allow disparate approaches (from farmers to processors to food handlers and consumers) and interests to access accurate and objective information about the microbiology of foods Microbiology impacts the safe presentation of food. From harvest and storage to determination of shelf-life, to presentation and consumption. This work highlights the risks of microbial contamination and is an invaluable go-to guide for anyone working in Food Health and Safety Has a two-fold industry appeal (1) those developing new functional food products and (2) to all corporations concerned about the potential hazards of microbes in their food products

Multifunctional Barriers for Flexible Structure Sophie Duquesne 2007-08-29 This is the first complete overview of the present state of the art of flexible barrier materials such as textile, paper and leather, including methods for barrier evaluation. It will be of interest to readers in industries, consumers, and members of the scientific community. The scope of the field is clearly delineated here for the first time, and it deals with a number of specific topics such as barrier to fire and antibacterial properties.

Molecular Biology of Cancer Lauren Pecorino 2012-04-26 Demonstrating how the malfunction of normal molecular pathways and components can lead to cancer, this text explores how our understanding of these

defective mechanisms can be harnessed to develop new targeted therapeutic agents.

Strategic Latency Unleashed Zachary Davis 2021-01-30 The world is being transformed physically and politically. Technology is the handmaiden of much of this change. But since the current sweep of global change is transforming the face of warfare, Special Operations Forces (SOF) must adapt to these circumstances. Fortunately, adaptation is in the SOF DNA. This book examines the changes affecting SOF and offers possible solutions to the complexities that are challenging many long-held assumptions. The chapters explore what has changed, what stays the same, and what it all means for U.S. SOF. The authors are a mix of leading experts in technology, business, policy, intelligence, and geopolitics, partnered with experienced special operators who either cowrote the chapters or reviewed them to ensure accuracy and relevance for SOF. Our goal is to provide insights into the changes around us and generate ideas about how SOF can adapt and succeed in the emerging operational environment.

MiRNomics Malik Yousef 2014 In *miRNomics: MicroRNA Biology and Computational Analysis*, expert researchers in the field present an overview of the current state of the art and aim to put the respective areas of research into a larger perspective. These include methods and techniques ranging from miRNA biogenesis, their biological function, computational analyses to their medical implications and applications. Written in the highly successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and key tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, *miRNomics: MicroRNA Biology and Computational Analysis* seeks to aid scientists in the further study into miRNA research and statistics.

Nature's Nanostructures Amanda S. Barnard 2012-02-02 Natural nanomaterials and nanotechnologies are all around us, which inevitably leads to these questions: What are these natural nanomaterials made of? Where can we find them? What can they do? Answering these questions will facilitate new and environmentally friendly ways of creating and manipulating nanoscale materials for the next generation of new technologies. A truly multidisciplinary resource, this book brings together studies from astronomy, physics, chemistry, materials science, engineering, geology and geophysics, environmental science, agricultural science, entomology, molecular biology, and health and provides an invaluable resource for learning how various scientists approach

similar problems.

Nanoscale Materials Luis M. Liz-Marzán 2007-05-08 Organized nanoassemblies of inorganic nanoparticles and organic molecules are building blocks of nanodevices, whether they are designed to perform molecular level computing, sense the environment or improve the catalytic properties of a material. The key to creation of these hybrid nanostructures lies in understanding the chemistry at a fundamental level. This book serves as a reference book for researchers by providing fundamental understanding of many nanoscopic materials.

Secondhand Smoke Exposure and Cardiovascular Effects Institute of Medicine 2010-02-21 Data suggest that exposure to secondhand smoke can result in heart disease in nonsmoking adults. Recently, progress has been made in reducing involuntary exposure to secondhand smoke through legislation banning smoking in workplaces, restaurants, and other public places. The effect of legislation to ban smoking and its effects on the cardiovascular health of nonsmoking adults, however, remains a question. Secondhand Smoke Exposure and Cardiovascular Effects reviews available scientific literature to assess the relationship between secondhand smoke exposure and acute coronary events. The authors, experts in secondhand smoke exposure and toxicology, clinical cardiology, epidemiology, and statistics, find that there is about a 25 to 30 percent increase in the risk of coronary heart disease from exposure to secondhand smoke. Their findings agree with the 2006 Surgeon General's Report conclusion that there are increased risks of coronary heart disease morbidity and mortality among men and women exposed to secondhand smoke. However, the authors note that the evidence for determining the magnitude of the relationship between chronic secondhand smoke exposure and coronary heart disease is not very strong. Public health professionals will rely upon Secondhand Smoke Exposure and Cardiovascular Effects for its survey of critical epidemiological studies on the effects of smoking bans and evidence of links between secondhand smoke exposure and cardiovascular events, as well as its findings and recommendations.

A Concise Introduction to Logic Patrick Hurley 2008-12-23 Tens of thousands of students have learned to be more discerning at constructing and evaluating arguments with the help of Patrick J. Hurley. Hurley's lucid, friendly, yet thorough presentation has made A CONCISE INTRODUCTION TO LOGIC the most widely used logic text in North America. In addition, the book's accompanying technological resources, such as

CengageNOW and Learning Logic, include interactive exercises as well as video and audio clips to reinforce what you read in the book and hear in class. In short, you'll have all the assistance you need to become a more logical thinker and communicator. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Perception and Discovery Norwood Russell Hanson 2018-05-29 Norwood Russell Hanson was one of the most important philosophers of science of the post-war period. Hanson brought Wittgensteinian ordinary language philosophy to bear on the concepts of science, and his treatments of observation, discovery, and the theory-ladenness of scientific facts remain central to the philosophy of science. Additionally, Hanson was one of philosophy's great personalities, and his sense of humor and charm come through fully in the pages of *Perception and Discovery*. *Perception and Discovery*, originally published in 1969, is Hanson's posthumous textbook in philosophy of science. The book focuses on the indispensable role philosophy plays in scientific thinking. *Perception and Discovery* features Hanson's most complete and mature account of theory-laden observation, a discussion of conceptual and logical boundaries, and a detailed treatment of the epistemological features of scientific research and scientific reasoning. This book is of interest to scholars of philosophy of science, particularly those concerned with Hanson's thought and the development of the discipline in the middle of the 20th century. However, even fifty years after Hanson's early death, *Perception and Discovery* still has a great deal to offer all readers interested in science.

Smart Cities and Construction Technologies Sara Shirowzhan 2020-05-13 This book includes nine chapters presenting the outcome of research projects relevant to building, cities, and construction. A description of a smart city and the journey from conventional to smart cities is discussed at the beginning of the book. Innovative case studies of underground cities and floating city bridges are presented in this book. BIM and GIS applications on different projects, and the concept of intelligent contract and virtual reality are discussed. Two concepts relevant to conventional buildings including private open spaces and place attachments are also included, and these topics can be upgraded in the future by smart technologies.

Acoustic Properties Tom McEnaney 2017-06-15 *Acoustic Properties: Radio, Narrative, and the New Neighborhood of the Americas* discovers the prehistory of wireless culture. It examines both the coevolution of

radio and the novel in Argentina, Cuba, and the United States from the early 1930s to the late 1960s, and the various populist political climates in which the emerging medium of radio became the chosen means to produce the voice of the people. Based on original archival research in Buenos Aires, Havana, Paris, and the United States, the book develops a literary media theory that understands sound as a transmedial phenomenon and radio as a transnational medium. Analyzing the construction of new social and political relations in the wake of the United States' 1930s Good Neighbor Policy, *Acoustic Properties* challenges standard narratives of hemispheric influence through new readings of Richard Wright's cinematic work in Argentina, Severo Sarduy's radio plays in France, and novels by John Dos Passos, Manuel Puig, Raymond Chandler, and Carson McCullers. Alongside these writers, the book also explores Che Guevara and Fidel Castro's *Radio Rebelde*, FDR's fireside chats, Félix Caignet's invention of the radionovela in Cuba, Evita Perón's populist melodramas in Argentina, Orson Welles's experimental New Deal radio, Cuban and U.S. "radio wars," and the 1960s African American activist Robert F. Williams's proto-black power *Radio Free Dixie*. From the doldrums of the Great Depression to the tumult of the Cuban Revolution, *Acoustic Properties* illuminates how novelists in the radio age converted writing into a practice of listening, transforming realism as they struggled to channel and shape popular power.

Green Separation Processes Carlos A. M. Afonso 2006-05-12 This timely book is the first to provide a comprehensive overview of all important aspects of this modern technology with the focus on the "green aspect". The expert authors present everything from reactions without solvents to nanostructures for separation methods, from combinatorial chemistry on solid phase to dendrimers. The result is a ready reference packed full of valuable facts on the latest developments in the field - high-quality information otherwise widely spread throughout articles and reviews. From the contents: * Green chemistry for sustainable development * New synthetic methodologies and the demand for adequate separation processes * New developments in separation processes * Future trends and needs It is a "must-have" for every researcher in the field.

Disease Control Priorities in Developing Countries Dean T. Jamison 2006-04-02 Based on careful analysis of burden of disease and the costs of interventions, this second edition of 'Disease Control Priorities in Developing Countries, 2nd edition' highlights achievable priorities; measures progress toward providing efficient, equitable

care; promotes cost-effective interventions to targeted populations; and encourages integrated efforts to optimize health. Nearly 500 experts - scientists, epidemiologists, health economists, academicians, and public health practitioners - from around the world contributed to the data sources and methodologies, and identified challenges and priorities, resulting in this integrated, comprehensive reference volume on the state of health in developing countries.

Toxic Chemical and Biological Agents Giovanni Sindona 2020-10-19 This book critically assesses the current state of knowledge on new and important detection technologies, e.g. mass spectrometry, tandem mass spectrometry, biosensor detection and tissue imaging, in connection with toxic chemical and biological agents. In general, the main topics discussed concern the risks and consequences of chemical and biological agents for human health in general, with special emphasis on all biochemical and metabolic pathways including the reproductive system. The exposome, genetic risks and the environment, various health hazard agents, risk assessment, environmental assessment and preparedness, and analysis of sub-lethal effects at the molecular level are also discussed. In closing, the book provides comprehensive information on the diagnosis of exposure, and on health concerns related to toxic chemical and biological agents.

Nutritional Epidemiology Walter Willett 2013 Willett's *Nutritional Epidemiology* has become the foundation of this field. This new edition updates existing chapters and adds new ones addressing the assessment of physical activity, the role of genetics in nutritional epidemiology, and the interface of this field with policy.

How to Do Science with Models Axel Gelfert 2015-12-21 Taking scientific practice as its starting point, this book charts the complex territory of models used in science. It examines what scientific models are and what their function is. Reliance on models is pervasive in science, and scientists often need to construct models in order to explain or predict anything of interest at all. The diversity of kinds of models one finds in science – ranging from toy models and scale models to theoretical and mathematical models – has attracted attention not only from scientists, but also from philosophers, sociologists, and historians of science. This has given rise to a wide variety of case studies that look at the different uses to which models have been put in specific scientific contexts. By exploring current debates on the use and building of models via cutting-edge examples drawn from physics and biology, the book provides broad insight into the methodology of modelling in the natural sciences. It

pairs specific arguments with introductory material relating to the ontology and the function of models, and provides some historical context to the debates as well as a sketch of general positions in the philosophy of scientific models in the process.

Genetics and Genomics of *Setaria* Andrew Doust 2016-12-19 *Setaria viridis* and *S.italica* make up a model grass system to investigate C4 photosynthesis, cell wall biosynthesis, responses to drought, herbicide, and other environmental stressors, genome dynamics, developmental genetics and morphology, and interactions with microorganisms. *Setaria viridis* (green foxtail) is one of the world's most widespread weeds, and its small size, native variation, rapidly burgeoning genetic and genomic resources, and transformability are making it the system of choice for both basic research and its translation into crop improvement. Its domesticated variant, *S. italica* (foxtail millet), is a drought-hardy cereal grown in China, India and Africa, and new breeding techniques show great potential for improving yields and nutrition for drought-prone regions. This book brings together for the first time evolutionary, genomic, genetic, and morphological analyses, together with protocols for growing and transforming *Setaria*, and approaches to high throughput genotyping and candidate gene analysis. Authors include major *Setaria* researchers from both the USA and overseas.

Toxicological Profile for Arsenic (Update) Selene Chou 2010-08 Characterizes the toxicologic and adverse health effects for arsenic, which has been found in many sites targeted for long-term fed. cleanup activities. Contents: (1) The examination, summary, and interpretation of available toxicologic info. and epidemiologic evaluations on arsenic to ascertain the levels of significant human exposure for the substance and the associated chronic health effects; (2) A determination of whether adequate info. on the health effects of arsenic is available to determine levels of exposure that present a significant risk to human health of chronic health effects; and (3) Identification of toxicologic testing needed to identify the types or levels of exposure that may present significant risk of adverse health effects in humans. Illus.

EG-ICE 2020 Workshop on Intelligent Computing in Engineering Ungureanu, Lucian Constantin 2020-06-30 The 27th EG-ICE International Workshop 2020 brings together international experts working at the interface between advanced computing and modern engineering challenges. Many engineering tasks require open-world resolutions to support multi-actor collaboration, coping with approximate models, providing effective engineer-

computer interaction, search in multi-dimensional solution spaces, accommodating uncertainty, including specialist domain knowledge, performing sensor-data interpretation and dealing with incomplete knowledge. While results from computer science provide much initial support for resolution, adaptation is unavoidable and most importantly, feedback from addressing engineering challenges drives fundamental computer-science research. Competence and knowledge transfer goes both ways. Der 27. Internationale EG-ICE Workshop 2020 bringt internationale Experten zusammen, die an der Schnittstelle zwischen fortgeschrittener Datenverarbeitung und modernen technischen Herausforderungen arbeiten. Viele ingenieurwissenschaftliche Aufgaben erfordern Open-World-Resolutionen, um die Zusammenarbeit mehrerer Akteure zu unterstützen, mit approximativen Modellen umzugehen, eine effektive Interaktion zwischen Ingenieur und Computer zu ermöglichen, in mehrdimensionalen Lösungsräumen zu suchen, Unsicherheiten zu berücksichtigen, einschließlich fachspezifischen Domänenwissens, Sensordateninterpretation durchzuführen und mit unvollständigem Wissen umzugehen. Während die Ergebnisse aus der Informatik anfänglich viel Unterstützung für die Lösung bieten, ist eine Anpassung unvermeidlich, und am wichtigsten ist, dass das Feedback aus der Bewältigung technischer Herausforderungen die computer-wissenschaftliche Grundlagenforschung vorantreibt. Kompetenz und Wissenstransfer gehen in beide Richtungen.

Nanophotonics and Plasmonics Dr. Ching Eng (Jason) Png 2017-08-21 This book provides a first integrated view of nanophotonics and plasmonics, covering the use of dielectric, semiconductor, and metal nanostructures to manipulate light at the nanometer scale. The presentation highlights similarities and advantages, and shows the common underlying physics, targets, and methodologies used for different materials (optically transparent materials for nanophotonics, vs opaque materials for plasmonics). Ultimately, the goal is to provide a basis for developing a unified platform for both fields. In addition to the fundamentals and detailed theoretical background, the book showcases the main device applications. Ching Eng (Jason) Png is Director of the Electronics and Photonics Department at the Institute of High Performance Computing, Agency for Science Technology and Research, Singapore. Yuriy A. Akimov is a scientist in the Electronics and Photonics Department at the Institute of High Performance Computing, Agency for Science Technology and Research, Singapore.

Advanced Computational and Communication Paradigms Siddhartha Bhattacharyya 2018-05-25 The book titled

Advanced Computational and Communication Paradigms: Proceedings of International Conference on ICACCP 2017, Volume 1 presents refereed high-quality papers of the First International Conference on Advanced Computational and Communication Paradigms (ICACCP 2017) organized by the Department of Computer Science and Engineering, Sikkim Manipal Institute of Technology, held from 8– 10 September 2017. ICACCP 2017 covers an advanced computational paradigms and communications technique which provides failsafe and robust solutions to the emerging problems faced by mankind. Technologists, scientists, industry professionals and research scholars from regional, national and international levels are invited to present their original unpublished work in this conference. There were about 550 technical paper submitted. Finally after peer review, 142 high-quality papers have been accepted and registered for oral presentation which held across 09 general sessions and 05 special sessions along with 04 keynote address and 06 invited talks. This volume comprises 65 accepted papers of ICACCP 2017.