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Handbook of Mathematical Geosciences - B.S. Daya Sagar
2018-06-25

This Open Access handbook published at the IAMG's 50th anniversary, presents a compilation of invited path-breaking research contributions by award-winning geoscientists who have been instrumental in shaping the IAMG. It contains 45 chapters that are categorized broadly into five parts (i) theory, (ii) general applications, (iii) exploration and resource estimation, (iv) reviews, and (v) reminiscences covering related topics like mathematical geosciences, mathematical morphology, geostatistics, fractals and multifractals, spatial statistics, multipoint geostatistics, compositional data analysis, informatics, geocomputation, numerical methods, and chaos theory in the geosciences.

Fundamentals of Amorphous Solids - Zbigniew H. Stachurski
2015-03-09

Long awaited, this textbook fills the gap for convincing concepts to describe amorphous solids. Adopting a unique approach, the author develops a framework that lays the foundations for a theory of amorphousness. He unravels the scientific mysteries surrounding the topic, replacing rather vague notions of amorphous materials as disordered crystalline solids with the well-founded

concept of ideal amorphous solids. A classification of amorphous materials into inorganic glasses, organic glasses, glassy metallic alloys, and thin films sets the scene for the development of the model of ideal amorphous solids, based on topology- and statistics-governed rules of three-dimensional sphere packing, which leads to structures with no short, mid or long-range order. This general model is then concretized to the description of specific compounds in the four fundamental classes of amorphous solids, as well as amorphous polyethylene and poly(methyl)methacrylate, emphasizing its versatility and descriptive power. Finally, he includes example applications to indicate the abundance of amorphous materials in modern-day technology, thus illustrating the importance of a better understanding of their structure and properties. Equally ideal as supplementary reading in courses on crystallography, mineralogy, solid state physics, and materials science where amorphous materials have played only a minor role until now.

Strengthening Mechanisms in Crystal Plasticity - Ali Argon
2007-08-30

The strengthening of metals by a variety of means has been of interest over much of history. However, the elucidation of the actual mechanisms involved in the

processes of alloying and work hardening, and the related processes of metals as a scientific pursuit, has become possible only through the parallel developments in dislocation theory and in definitive experimental tools of electron microscopy and X-ray diffraction. The important developments over the past several decades in the mechanistic understanding of the often complex processes of interaction of dislocations with each other, with solute atoms and with precipitates during plastic flow have largely remained scattered in the professional literature. This has made it difficult for students and professionals to have ready access to this subject as a whole. While there are some excellent reviews of certain aspects of the subject, there is presently no single comprehensive coverage available of the central mechanisms and their modelling. The present book on Strengthening Mechanisms in Crystal Plasticity provides such a coverage in a generally transparent and readily understandable form. It is intended as an advanced text for graduate students in materials science and mechanical engineering. The central processes of strengthening that are presented are modeled by dislocation mechanics in detail and the results are compared extensively with the best available experimental information. The form of the coverage is intended to inspire students or professional practitioners in the field to develop their own models of similar or related phenomena and, finally, engage in more advanced computational simulations, guided by the book.

Interregional Interaction in Ancient Mesoamerica - Joshua Englehardt 2019-05-27

Interregional Interaction in Ancient Mesoamerica explores the role of interregional interaction in the dynamic sociocultural processes that shaped the pre-Columbian societies of Mesoamerica. Interdisciplinary contributions from leading scholars investigate linguistic exchange and borrowing, scribal practices, settlement patterns, ceramics, iconography, and trade systems, presenting a variety of case studies drawn from

multiple spatial, temporal, and cultural contexts within Mesoamerica. Archaeologists have long recognized the crucial role of interregional interaction in the development and cultural dynamics of ancient societies, particularly in terms of the evolution of sociocultural complexity and economic systems. Recent research has further expanded the archaeological, art historical, ethnographic, and epigraphic records in Mesoamerica, permitting a critical reassessment of the complex relationship between interaction and cultural dynamics. This volume builds on and amplifies earlier research to examine sociocultural phenomena—including movement, migration, symbolic exchange, and material interaction—in their role as catalysts for variability in cultural systems. Interregional cultural exchange in pre-Columbian Mesoamerica played a key role in the creation of systems of shared ideologies, the production of regional or “international” artistic and architectural styles, shifting sociopolitical patterns, and changes in cultural practices and meanings. Interregional Interaction in Ancient Mesoamerica highlights, engages with, and provokes questions pertinent to understanding the complex relationship between interaction, sociocultural processes, and cultural innovation and change in the ancient societies and cultural histories of Mesoamerica and will be of interest to archaeologists, linguists, and art historians. Contributors: Philip J. Arnold III, Lourdes Budar, José Luis Punzo Diaz, Gary Feinman, David Freidel, Elizabeth Jiménez Garcia, Guy David Hepp, Kerry M. Hull, Timothy J. Knab, Charles L. F. Knight, Blanca E. Maldonado, Joyce Marcus, Jesper Nielsen, John M. D. Pohl, Iván Rivera, D. Bryan Schaeffer, Niklas Schulze

Crossing Central Europe - Helga Mitterbauer 2017-01-01

This volume studies elements of Austro-Hungarian or Central European culture that were common across linguistic, national, and ethnic communities, and shows how some of these commonalities survived or were transformed by the turmoil of the 20th century: two world wars, a major depression between the wars,

Stalinism and the Iron Curtain

Yoga - Mircea Eliade 1958

In this landmark book the renowned scholar of religion Mircea Eliade lays the groundwork for a Western understanding of Yoga, exploring how its guiding principle, that of freedom, involves remaining in the world without letting oneself be exhausted by such "conditionings" as time and history. Drawing on years of study and experience in India, Eliade provides a comprehensive survey of Yoga in theory and practice from its earliest foreshadowings in the Vedas through the twentieth century. The subjects discussed include Patañjali, author of the Yoga-sutras; yogic techniques, such as concentration "on a Single Point," postures, and respiratory discipline; and Yoga in relation to Brahmanism, Buddhism, Tantrism, Oriental alchemy, mystical erotism, and shamanism.

Biologically Inspired Robotics - Yunhui Liu 2017-12-19

Robotic engineering inspired by biology—biomimetics—has many potential applications: robot snakes can be used for rescue operations in disasters, snake-like endoscopes can be used in medical diagnosis, and artificial muscles can replace damaged muscles to recover the motor functions of human limbs. Conversely, the application of robotics technology to our understanding of biological systems and behaviors—biorobotic modeling and analysis—provides unique research opportunities: robotic manipulation technology with optical tweezers can be used to study the cell mechanics of human red blood cells, a surface electromyography sensing system can help us identify the relation between muscle forces and hand movements, and mathematical models of brain circuitry may help us understand how the cerebellum achieves movement control. **Biologically Inspired Robotics** contains cutting-edge material—considerably expanded and with additional analysis—from the 2009 IEEE International Conference on Robotics and Biomimetics (ROBIO). These 16 chapters cover both biomimetics and biorobotic modeling/analysis, taking readers through an exploration of biologically

inspired robot design and control, micro/nano bio-robotic systems, biological measurement and actuation, and applications of robotics technology to biological problems. Contributors examine a wide range of topics, including: A method for controlling the motion of a robotic snake The design of a bionic fitness cycle inspired by the jaguar The use of autonomous robotic fish to detect pollution A noninvasive brain-activity scanning method using a hybrid sensor A rehabilitation system for recovering motor function in human hands after injury Human-like robotic eye and head movements in human-machine interactions A state-of-the-art resource for graduate students and researchers.

100% Renewable Energy Transition - Claudia Kemfert 2020-01-23

Energy markets are already undergoing considerable transitions to accommodate new (renewable) energy forms, new (decentral) energy players, and new system requirements, e.g. flexibility and resilience. Traditional energy markets for fossil fuels are therefore under pressure, while not-yet-mature (renewable) energy markets are emerging. As a consequence, investments in large-scale and capital intensive (traditional) energy production projects are surrounded by high uncertainty, and are difficult to hedge by private entities. Traditional energy production companies are transforming into energy service suppliers and companies aggregating numerous potential market players are emerging, while regulation and system management are playing an increasing role. To address these increasing uncertainties and complexities, economic analysis, forecasting, modeling and investment assessment require fresh approaches and views. Novel research is thus required to simulate multiple actor interplays and idiosyncratic behavior. The required approaches cannot deal only with energy supply, but need to include active demand and cover systemic aspects. Energy market transitions challenge policy-making. Market coordination failure, the removal of barriers hindering restructuring and the combination of market

signals with command-and-control policy measures are some of the new aims of policies. The aim of this Special Issue is to collect research papers that address the above issues using novel methods from any adequate perspective, including economic analysis, modeling of systems, behavioral forecasting, and policy assessment. The issue will include, but is not be limited to: Local control schemes and algorithms for distributed generation systems Centralized and decentralized sustainable energy management strategies Communication architectures, protocols and properties of practical applications Topologies of distributed generation systems improving flexibility, efficiency and power quality Practical issues in the control design and implementation of distributed generation systems Energy transition studies for optimized pathway options aiming for high levels of sustainability

Detection Theory - Neil A. Macmillan 2004-09-22

Detection Theory is an introduction to one of the most important tools for analysis of data where choices must be made and performance is not perfect. Originally developed for evaluation of electronic detection, detection theory was adopted by psychologists as a way to understand sensory decision making, then embraced by students of human memory. It has since been utilized in areas as diverse as animal behavior and X-ray diagnosis. This book covers the basic principles of detection theory, with separate initial chapters on measuring detection and evaluating decision criteria. Some other features include: *complete tools for application, including flowcharts, tables, pointers, and software; *student-friendly language; *complete coverage of content area, including both one-dimensional and multidimensional models; *separate, systematic coverage of sensitivity and response bias measurement; *integrated treatment of threshold and nonparametric approaches; *an organized, tutorial level introduction to multidimensional detection theory; *popular discrimination paradigms presented as applications of multidimensional detection theory; and *a new chapter on

ideal observers and an updated chapter on adaptive threshold measurement. This up-to-date summary of signal detection theory is both a self-contained reference work for users and a readable text for graduate students and other researchers learning the material either in courses or on their own.

The Long Evolution of Brains and Minds - Gerhard Roth
2013-06-03

The main topic of the book is a reconstruction of the evolution of nervous systems and brains as well as of mental-cognitive abilities, in short "intelligence" from simplest organisms to humans. It investigates to which extent the two are correlated. One central topic is the alleged uniqueness of the human brain and human intelligence and mind. It is discussed which neural features make certain animals and humans intelligent and creative: Is it absolute or relative brain size or the size of "intelligence centers" inside the brains, the number of nerve cells inside the brain in total or in such "intelligence centers" decisive for the degree of intelligence, of mind and eventually consciousness? And which are the driving forces behind these processes? Finally, it is asked what all this means for the classical problem of mind-brain relationship and for a naturalistic theory of mind.

Computational Materials Engineering - Koenraad George Frans Janssens 2010-07-26

Computational Materials Engineering is an advanced introduction to the computer-aided modeling of essential material properties and behavior, including the physical, thermal and chemical parameters, as well as the mathematical tools used to perform simulations. Its emphasis will be on crystalline materials, which includes all metals. The basis of Computational Materials Engineering allows scientists and engineers to create virtual simulations of material behavior and properties, to better understand how a particular material works and performs and then use that knowledge to design improvements for particular material applications. The text displays knowledge of software

designers, materials scientists and engineers, and those involved in materials applications like mechanical engineers, civil engineers, electrical engineers, and chemical engineers. Readers from students to practicing engineers to materials research scientists will find in this book a single source of the major elements that make up contemporary computer modeling of materials characteristics and behavior. The reader will gain an understanding of the underlying statistical and analytical tools that are the basis for modeling complex material interactions, including an understanding of computational thermodynamics and molecular kinetics; as well as various modeling systems. Finally, the book will offer the reader a variety of algorithms to use in solving typical modeling problems so that the theory presented herein can be put to real-world use. Balanced coverage of fundamentals of materials modeling, as well as more advanced aspects of modeling, such as modeling at all scales from the atomic to the molecular to the macro-material Concise, yet rigorous mathematical coverage of such analytical tools as the Potts type Monte Carlo method, cellular automata, phase field, dislocation dynamics and Finite Element Analysis in statistical and analytical modeling

Long-term Scenarios of Livestock-crop-land Use

Interactions in Developing Countries - A. F. Bouwman
1997

Radiolabelled Molecules for Brain Imaging with PET and SPECT - Peter Brust 2020-11-26

Positron emission tomography (PET) and single-photon emission computed tomography (SPECT) are in vivo molecular imaging methods which are widely used in nuclear medicine for diagnosis and treatment follow-up of many major diseases. These methods use target-specific molecules as probes, which are labeled with radionuclides of short half-lives that are synthesized prior to the imaging studies. These probes are called radiopharmaceuticals. The use of PET and SPECT for brain imaging is of special significance since the brain

controls all the body's functions by processing information from the whole body and the outside world. It is the source of thoughts, intelligence, memory, speech, creativity, emotion, sensory functions, motion control, and other important body functions. Protected by the skull and the blood-brain barrier, the brain is somehow a privileged organ with regard to nutrient supply, immune response, and accessibility for diagnostic and therapeutic measures. Invasive procedures are rather limited for the latter purposes. Therefore, noninvasive imaging with PET and SPECT has gained high importance for a great variety of brain diseases, including neurodegenerative diseases, motor dysfunctions, stroke, epilepsy, psychiatric diseases, and brain tumors. This Special Issue focuses on radiolabeled molecules that are used for these purposes, with special emphasis on neurodegenerative diseases and brain tumors.

Justice and Food Security in a Changing Climate -

European Society for Agricultural and Food Ethics.
Congress 2021

The UN's Sustainable Development Goals saw the global community agree to end hunger and malnutrition in all its forms by 2030. However, the number of chronically undernourished people is increasing continuously. Ongoing climate change and the action needed to adapt to it are very likely to aggravate this situation by limiting agricultural land and water resources and changing environmental conditions for food production. Climate change and the actions it requires raise questions of justice, especially regarding food security. These key concerns of ethics and justice for food security due to climate change challenges are the focus of this book, which brings together work by scholars from a wide range of disciplines and a multitude of perspectives. These experts discuss the challenges to food security posed by mitigation, geoengineering, and adaptation measures that tackle the impacts of climate change. Others address the consequences of a changing climate for agriculture and

food production and how the Covid-19 pandemic has affected food security and animal welfare.

Opioids in Non-Cancer Pain - Cathy Stannard 2013-03-21

Opioids have been used as analgesics for many years, and their use in the management of acute pain related to trauma and surgery is well established. However, patients with persisting pain need a pain management plan that brings relief of symptoms without adverse effects in both the short and longer terms. The prescribing of opioids for chronic non-cancer pain has increased substantially since the first edition of this pocketbook was published, prompting considerable debate regarding the appropriateness of prescribing for this indication and the potential harms to individuals and to society that may result from this trend. This second edition of Opioids in Non-Cancer Pain brings clinicians up to date on the current use of opioid drugs in patients with non-cancer pain, and highlights the potential benefits of therapy as well as the problems that can occur. The edition includes new chapters on the history of opioids to help contextualize the following discussions, and a new chapter covering the emerging field of pharmacogenomics which provides explanations for differing responsiveness to opioids and propensity to adverse effects. An international perspective on opioid prescribing trends is also a valuable new addition.

Across Space and Time - Arianna Traviglia 2016-04-09

This volume presents a selection of the best papers presented at the forty-first annual Conference on Computer Applications and Quantitative Methods in Archaeology. The theme for the conference was "Across Space and Time", and the papers explore a multitude of topics related to that concept, including databases, the semantic Web, geographical information systems, data collection and management, and more.

Formless - Yve-Alain Bois 1997

Published to accompany exhibition held at the Centre Georges Pompidou, Paris 22/5 - 26/8 1996.

Engineering for Sustainable Future - Annamária R.

Várkonyi-Kóczy 2020-01-13

This book presents selected papers from the 18th International Conference on Global Research and Education, Inter-Academia 2019, held in Budapest and Balatonfüred on September 4-7, 2019. The main goal of the conference was to provide an international forum for reviewing and assessing recent trends in both fundamental and applied research. In addition to sparking interest in recent research findings, the conference aimed to strengthen cooperation among the partners of the Inter-Academia community in the pursuit of new theoretical and practical research advances. The book contains a selection of papers based on lectures presented at the Inter-Academia 2019 conference and covering hot and challenging topics in the fields of machine intelligence and computer science, modeling and simulation, measurement, monitoring, and identification, electronics and nanoelectronics, bio- and environmental engineering, chemical processes and material science, together with related educational aspects. Accordingly, it offers a valuable resource for the global scientific community.

Introduction to Computational Materials Science -

Richard LeSar 2013-03-28

Emphasising essential methods and universal principles, this textbook provides everything students need to understand the basics of simulating materials behaviour. All the key topics are covered from electronic structure methods to microstructural evolution, appendices provide crucial background material, and a wealth of practical resources are available online to complete the teaching package. Modelling is examined at a broad range of scales, from the atomic to the mesoscale, providing students with a solid foundation for future study and research. Detailed, accessible explanations of the fundamental equations underpinning materials modelling are presented, including a full chapter summarising essential mathematical background. Extensive appendices, including essential background on classical and quantum mechanics, electrostatics, statistical thermodynamics

and linear elasticity, provide the background necessary to fully engage with the fundamentals of computational modelling. Exercises, worked examples, computer codes and discussions of practical implementations methods are all provided online giving students the hands-on experience they need.

The Ascetic Imperative in Culture and Criticism -

Geoffrey Galt Harpham 1992-02-15

In this bold interdisciplinary work, Geoffrey Galt Harpham argues that asceticism has played a major role in shaping Western ideas of the body, writing, ethics, and aesthetics. He suggests that we consider the ascetic as "the 'cultural' element in culture," and presents a close analysis of works by Athanasius, Augustine, Matthias, Grünewald, Nietzsche, Foucault, and other thinkers as proof of the extent of asceticism's resources. Harpham demonstrates the usefulness of his findings by deriving from asceticism a "discourse of resistance," a code of interpretation ultimately more generous and humane than those currently available to us.

Turbulence in the Atmosphere - John C. Wyngaard

2010-01-28

Based on his 40+ years of research and teaching, John Wyngaard's textbook is an excellent up-to-date introduction to turbulence in the atmosphere and in engineering flows for advanced students, and a reference work for researchers in the atmospheric sciences. Part I introduces the concepts and equations of turbulence. It includes a rigorous introduction to the principal types of numerical modeling of turbulent flows. Part II describes turbulence in the atmospheric boundary layer. Part III covers the foundations of the statistical representation of turbulence and includes illustrative examples of stochastic problems that can be solved analytically. The book treats atmospheric and engineering turbulence in a unified way, gives clear explanation of the fundamental concepts of modeling turbulence, and has an up-to-date treatment of turbulence in the atmospheric boundary layer. Student

exercises are included at the ends of chapters, and worked solutions are available online for use by course instructors.

Artificial Neural Networks as Models of Neural Information Processing - Marcel van Gerven 2018-02-01
Modern neural networks gave rise to major breakthroughs in several research areas. In neuroscience, we are witnessing a reappraisal of neural network theory and its relevance for understanding information processing in biological systems. The research presented in this book provides various perspectives on the use of artificial neural networks as models of neural information processing. We consider the biological plausibility of neural networks, performance improvements, spiking neural networks and the use of neural networks for understanding brain function.

Clay Minerals in Nature - Marta Valaskova 2012-09-12

Clay is an abundant raw material which has a variety of uses and properties depending on their structure and composition. Clay minerals are inexpensive and environmentally friendly naturally occurring nanomaterials, thanks to their 1 nm thick silicate layers, in all types of sediments and sedimentary rocks. The book chapters have been classified according to their characteristics in topics and applications. Therefore, in the first section five chapters is dedicated to the characterization and utilization of clay minerals in deposits. The second section includes four chapters about the significance of clay minerals in soils. Third section is devoted to different aspects of clay minerals research, especially to the characterization of structure and modifications for their application.

Sustainable Manufacturing - Rainer Stark 2017-01-16

This edited volume presents the research results of the Collaborative Research Center 1026 "Sustainable manufacturing - shaping global value creation". The book aims at providing a reference guide of sustainable manufacturing for researchers, describing methodologies for development of sustainable manufacturing solutions.

The volume is structured in four chapters covering the following topics: sustainable manufacturing technology, sustainable product development, sustainable value creation networks and systematic change towards sustainable manufacturing. The target audience comprises both researchers and practitioners in the field of sustainable manufacturing, but the book may also be beneficial for graduate students.

Marine Algal Antioxidants - Christophe Brunet 2020-09-16

This book entitled Marine Algal Antioxidants, as a special issue of the Antioxidants journal, encloses eleven scientific articles with a preface written by the two editors, Christophe Brunet and Clementina Sansone. Marine Algal Antioxidants book reports advances of the research on marine photosynthetic organisms for the growth of biotechnological pipelines aimed to enhance antioxidant molecules production by algae. More than twenty scientists share the results of their research and highlight the relevance of algae for developing marine biotechnology products to flourish the requirements of nutraceuticals or cosmeceuticals in the defense of human health. Multidisciplinarity of the scientific approaches presented in this book - such as physiological, molecular, chemistry, technical or technological methodologies - lays the foundation for harmonizing the links between them towards the unique goal of the improvement of marine algal factory processes.

Mechanics of Generalized Continua - Gérard A. Maugin 2010-03-24

In their 1909 publication *Théorie des corps déformables*, Eugène and François Cosserat made a historic contribution to materials science by establishing the fundamental principles of the mechanics of generalized continua. The chapters collected in this volume showcase the many areas of continuum mechanics that grew out of the foundational work of the Cosserat brothers. The included contributions provide a detailed survey of the most recent theoretical developments in the field of generalized continuum mechanics and can serve as a

useful reference for graduate students and researchers in mechanical engineering, materials science, applied physics and applied mathematics.

Electrical Power Systems and Computers - Xiaofeng Wan 2011-06-21

This volume includes extended and revised versions of a set of selected papers from the International Conference on Electric and Electronics (EEIC 2011), held on June 20-22, 2011, which is jointly organized by Nanchang University, Springer, and IEEE IAS Nanchang Chapter. The objective of EEIC 2011 Volume 3 is to provide a major interdisciplinary forum for the presentation of new approaches from Electrical Power Systems and Computers, to foster integration of the latest developments in scientific research. 133 related topic papers were selected into this volume. All the papers were reviewed by 2 program committee members and selected by the volume editor Prof. Xiaofeng Wan. We hope every participant can have a good opportunity to exchange their research ideas and results and to discuss the state of the art in the areas of the Electrical Power Systems and Computers.

Values and Functions for Future Cities - Giulio Mondini 2019-08-06

This book features a selection of the best papers presented at two SIEV seminars held in Venice, Italy, in September 2017 and 2018, in the context of the Urbanpromo Green events. Bringing together experts from a diverse range of fields - economics, appraisal, architecture, energy, urban planning, sociology, and the decision sciences - and government representatives, the seminars encouraged reflections on the role of future cities in terms of sustainable development, with a particular focus on improving collective and individual well-being. The book provides a multidisciplinary approach to contemporary green urban agendas and urban sustainability, and addresses the demand for policies and strategies to strengthen resilience through concrete measures to reduce energy consumption, mitigate pollution, promote social inclusion and create urban

identity.

Global geodynamics - 1983

Negative Emissions Technologies and Reliable

Sequestration - National Academies of Sciences, Engineering, and Medicine 2019-03-08

To achieve goals for climate and economic growth, "negative emissions technologies" (NETs) that remove and sequester carbon dioxide from the air will need to play a significant role in mitigating climate change. Unlike carbon capture and storage technologies that remove carbon dioxide emissions directly from large point sources such as coal power plants, NETs remove carbon dioxide directly from the atmosphere or enhance natural carbon sinks. Storing the carbon dioxide from NETs has the same impact on the atmosphere and climate as simultaneously preventing an equal amount of carbon dioxide from being emitted. Recent analyses found that deploying NETs may be less expensive and less disruptive than reducing some emissions, such as a substantial portion of agricultural and land-use emissions and some transportation emissions. In 2015, the National Academies published *Climate Intervention: Carbon Dioxide Removal and Reliable Sequestration*, which described and initially assessed NETs and sequestration technologies. This report acknowledged the relative paucity of research on NETs and recommended development of a research agenda that covers all aspects of NETs from fundamental science to full-scale deployment. To address this need, *Negative Emissions Technologies and Reliable Sequestration: A Research Agenda* assesses the benefits, risks, and "sustainable scale potential" for NETs and sequestration. This report also defines the essential components of a research and development program, including its estimated costs and potential impact.

Solidification - Michel Rappaz 2009-08-21

Solidification is one of the oldest processes for producing useful implements and remains one of the most important modern commercial processes. This text describes the fundamentals of the technology in a

coherent way, using consistent notation.

On Human Nature - Armin Grunwald 2013-04-17

Modern molecular technology in the so-called life sciences (biology as well as medicine) allows today to approach and manipulate living beings in ways and to an extent which not too long ago seemed Utopian. The empirical progress promises further and even more radical developments in the future, and it is at least often claimed that this kind of research will have tremendous effects on and for all of humanity, for example in the areas of food production, transplantation medicine (including stem cell research and xenotransplantation), (therapeutic) genetic manipulation and (cell-line) cloning (of cell lines or tissues), and of biodiversity conservation-strategies. At least in Western, industrialized countries the development of modern sciences led to a steady increase of human health, well-being and quality of life. However, with the move to make the human body itself an object of scientific research interests, the respective scientific descriptions resulted in changes in the image that human beings have of themselves. Scientific progress has led to a startling loss of traditional human self-understanding. This development is in contrast to an understanding according to which the question what it means to be "human" is treated in the realm of philosophy. And indeed, a closer look reveals that - without denying the value of scientific progress - science cannot replace the philosophical approach to anthropological questions.

Vanished Ocean - Dorrik Stow 2012-03-29

Once, the ocean of Tethys stretched across the world. It vanished just before Man appeared on Earth. Dorrik Stow tells of the powerful forces that created and destroyed a great ocean, its marine life, its extinctions, its impact on climate, and the many clues by which scientists have put together its story, stretching back 250 million years.

Flexible Housing - Jeremy Till 2016-09-19

Flexible housing is housing that can adjust to the

changing needs of the user and accommodate new technologies as they emerge. *Flexible Housing* by Jeremy Till and Tatjana Schneider examines the past, present and future of this important subject through over 160 international examples. Specially commissioned plans, printed to scale, together with over 200 illustrations and diagrams provide fascinating detail and allow direct visual comparisons to be made. Combining history, theory and design the book explains the social and economic benefits that can be achieved and shows the various ways it has been and can be delivered. The book ends with an accessible guide to how flexible housing might be designed and constructed today to achieve adaptable and ultimately sustainable buildings. Housing designers, housing managers and students of architecture, construction and housing will find this book of immense value both as a comprehensive reference and design manual.

The Human Use Of Human Beings - Norbert Wiener
1988-03-22

Only a few books stand as landmarks in social and scientific upheaval. Norbert Wiener's classic is one in that small company. Founder of the science of cybernetics—the study of the relationship between computers and the human nervous system—Wiener was widely misunderstood as one who advocated the automation of human life. As this book reveals, his vision was much more complex and interesting. He hoped that machines would release people from relentless and repetitive drudgery in order to achieve more creative pursuits. At the same time he realized the danger of dehumanizing and displacement. His book examines the implications of cybernetics for education, law, language, science, technology, as he anticipates the enormous impact—in effect, a third industrial revolution—that the computer has had on our lives.

State and Society - John Gledhill 1995

The traditional Eurocentric view of state formation and the rise of civilization is challenged in this broad-ranging book. Bringing archaeological research into

contact with the work of ethno-historians and anthropologists, it generates a discussion of fundamental concepts rather than a search for modern analogies for processes that occurred in the past.
Memorial Tributes - National Academy of Engineering
2016-10-16

This is the 20th Volume in the series *Memorial Tributes* compiled by the National Academy of Engineering as a personal remembrance of the lives and outstanding achievements of its members and foreign associates. These volumes are intended to stand as an enduring record of the many contributions of engineers and engineering to the benefit of humankind. In most cases, the authors of the tributes are contemporaries or colleagues who had personal knowledge of the interests and the engineering accomplishments of the deceased. Through its members and foreign associates, the Academy carries out the responsibilities for which it was established in 1964. Under the charter of the National Academy of Sciences, the National Academy of Engineering was formed as a parallel organization of outstanding engineers. Members are elected on the basis of significant contributions to engineering theory and practice and to the literature of engineering or on the basis of demonstrated unusual accomplishments in the pioneering of new and developing fields of technology. The National Academies share a responsibility to advise the federal government on matters of science and technology. The expertise and credibility that the National Academy of Engineering brings to that task stem directly from the abilities, interests, and achievements of our members and foreign associates, our colleagues and friends, whose special gifts we remember in this book.

Computational Materials Science - Dierk Raabe 1998-10-27
Modeling and simulation play an ever increasing role in the development and optimization of materials. Computational Materials Science presents the most important approaches in this new interdisciplinary field of materials science and engineering. The reader will

learn to assess which numerical method is appropriate for performing simulations at the various microstructural levels and how they can be coupled. This book addresses graduate students and professionals in materials science and engineering as well as materials-oriented physicists and mechanical engineers.

Renewable and Efficient Electric Power Systems - Gilbert M. Masters 2005-01-03

This is a comprehensive textbook for the new trend of distributed power generation systems and renewable energy sources in electric power systems. It covers the complete range of topics from fundamental concepts to major technologies as well as advanced topics for power consumers. An Instructor's Manual presenting detailed solutions to all the problems in the book is available from the Wiley editorial department -- to obtain the

manual, send an email to ialine@wiley.com
Friction in Temporary Works - Health and Safety Executive Staff 2003-02-13

During initial assembly, temporary works often rely upon friction to provide lateral stability. Frictional resistance is also utilised in temporary works design as a means of transferring horizontal forces through falsework or formwork to points of restraint. values of static coefficient of friction and to establish practical values of the coefficient for the latest commonly used materials in temporary works. Friction tests were undertaken on 260 combinations of different material faces used in temporary works, including both dry and saturated timber. The tests generated data for combinations for which no codified data exist and also generated data which could be compared with existing British and German codified data