

Physical Sciences P1 November 2013 Memorandum

This volume features a collection of contributed articles and lecture notes from the XI Symposium on Probability and Stochastic Processes, held at CIMAT Mexico in September 2013. Since the symposium was part of the activities organized in Mexico to celebrate the International Year of Statistics, the program included topics from the interface between statistics and stochastic processes.

Following on from *Pandeism: An Anthology* this new volume brings you three returning authors and a dozen new ones, including renowned physicist and theologian Varadaraja V. Raman, communications professor and poet John Ross, Jr., mixed martial artist turned musician Jimmy "Ninja" Chaikong, Judaism author Roger Price, and mythohistorian Julian West. The theme of this volume is the creativity of the human mind - in art, in poetry, in recasting historical events in mythological terms, in film and television, and, indeed, in prose theological writing. A creative mind is a fire which gives light to the head, warmth to the heart, and nourishment to the soul, and we are blessed to present talents sufficient to fuel many a conversation to come. Indeed, perhaps the creativity of the human mind is a flickering echo of a greater mind which we all occupy. The focus of this interdisciplinary volume is on four areas of nanoparticle research: characterization, manipulation, and potential effects on humanity and the environment. The book includes a comprehensive collection of data on industrial nanoparticle creation and the characterization of the nanoscale products of these processes. The authors describe the effects of these nanoscale structures on human health and discuss prospective implementations for detection and characterization of nanoparticles in the environment. They recommend, utilizing the most up-to-date understanding of nanotechnology, methods for limiting the negative effects of these products on the environment and human health through manipulation, sorting, and filtration.

This is the first volume in the new COSPAR Colloquia series which will provide a forum for an in-depth discussion on selective topics of importance to the international community. The International Heliospheric Study (IHS) was initially approved by COSPAR in 1982 when it was anticipated that the study would centre on the ESA/NASA Ulysses spacecraft. This mission was delayed until October 1990, but it was decided to commence the study in 1986 in order to exploit the existence of the Pioneer 10 and 11 and the Voyager 1 and 2 spacecraft in the outer heliosphere. The primary purpose of *Physics of the Outer Heliosphere* is to study the three-dimensional structure of the solar wind and interplanetary magnetic field carried by it, the propagation of energetic solar particles throughout the heliosphere and the modulation of galactic cosmic rays by the heliosphere. This volume provides information for scientists interested in spectroscopic studies of the local interstellar medium, galactic and solar cosmic ray populations in the outer heliosphere and also plasma and magnetic field aspects of the distant solar wind.

STATISTICS: LEARNING FROM DATA, by respected and successful author Roxy Peck, resolves common problems faced by both students and instructors with an innovative approach to elementary statistics. Peck tackles the areas students struggle with most--probability, hypothesis testing, and selecting an appropriate method of analysis--unlike any text on the market. Probability coverage is based on current research that shows how students best learn the subject. Two unique chapters, one on

statistical inference and another on learning from experiment data, address two common areas of student confusion: choosing a particular inference method and using inference methods with experimental data. Supported by learning objectives, real-data examples and exercises, and technology notes, this brand new text guides students in gaining conceptual understanding, mechanical proficiency, and the ability to put knowledge into practice. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The seventh edition of this classic text outlines the fundamental physical principles of thermal radiation, as well as analytical and numerical techniques for quantifying radiative transfer between surfaces and within participating media. The textbook includes newly expanded sections on surface properties, electromagnetic theory, scattering and absorption of particles, and near-field radiative transfer, and emphasizes the broader connections to thermodynamic principles. Sections on inverse analysis and Monte Carlo methods have been enhanced and updated to reflect current research developments, along with new material on manufacturing, renewable energy, climate change, building energy efficiency, and biomedical applications. Features: Offers full treatment of radiative transfer and radiation exchange in enclosures. Covers properties of surfaces and gaseous media, and radiative transfer equation development and solutions. Includes expanded coverage of inverse methods, electromagnetic theory, Monte Carlo methods, and scattering and absorption by particles. Features expanded coverage of near-field radiative transfer theory and applications. Discusses electromagnetic wave theory and how it is applied to thermal radiation transfer. This textbook is ideal for Professors and students involved in first-year or advanced graduate courses/modules in Radiative Heat Transfer in engineering programs. In addition, professional engineers, scientists and researchers working in heat transfer, energy engineering, aerospace and nuclear technology will find this an invaluable professional resource. Over 350 surface configuration factors are available online, many with online calculation capability. Online appendices provide information on related areas such as combustion, radiation in porous media, numerical methods, and biographies of important figures in the history of the field. A Solutions Manual is available for instructors adopting the text.

Encyclopedia of Biomedical Gerontology presents a wide range of topics, ranging from what happens in the body during aging, the reasons and mechanisms relating to those age-related changes, and their clinical, psychological and social modulators and determinants. The book covers the biological and medical aspects of gerontology within the general framework of the biological basis of assessing age, biological mechanisms of aging, age-related changes in biological systems, human age-related diseases, the biomedical practicality and impracticality of interventions, and finally, the ethics of intervention. Provides a 'one-stop' resource to information written by world-leading scholars in the field of biomedical gerontology Fills a critical gap of information in a field that has seen significant progress in the last 10 years The two volumes are contained in a case.

The highly-respected book of reference of sought-after Independent Schools in membership of the Independent Schools Council's Associations: HMC, GSA, The Society of Heads, IAPS, ISA and COBIS.

This book presents a selection of papers based on the XXXIII Bia?owie?a Workshop on Geometric Methods in Physics, 2014. The Bia?owie?a Workshops are among the most important meetings in the field and attract researchers from both mathematics and physics.

The articles gathered here are mathematically rigorous and have important physical implications, addressing the application of geometry in classical and quantum physics. Despite their long tradition, the workshops remain at the cutting edge of ongoing research. For the last several years, each Bia?owie?a Workshop has been followed by a School on Geometry and Physics, where advanced lectures for graduate students and young researchers are presented; some of the lectures are reproduced here. The unique atmosphere of the workshop and school is enhanced by its venue, framed by the natural beauty of the Bia?owie?a forest in eastern Poland. The volume will be of interest to researchers and graduate students in mathematical physics, theoretical physics and mathematics.

The most non-trivial of the established microscopic theories of physics is QCD: the theory of the strong interaction. A critical link between theory and experiment is provided by the methods of perturbative QCD, notably the well-known factorization theorems. Giving an accurate account of the concepts, theorems and their justification, this book is a systematic treatment of perturbative QCD. As well as giving a mathematical treatment, the book relates the concepts to experimental data, giving strong motivations for the methods. It also examines in detail transverse-momentum-dependent parton densities, an increasingly important subject not normally treated in other books. Ideal for graduate students starting their work in high-energy physics, it will also interest experienced researchers wanting a clear account of the subject. Second in a series of publications from the Institute of Medicine's Quality of Health Care in America project Today's health care providers have more research findings and more technology available to them than ever before. Yet recent reports have raised serious doubts about the quality of health care in America. Crossing the Quality Chasm makes an urgent call for fundamental change to close the quality gap. This book recommends a sweeping redesign of the American health care system and provides overarching principles for specific direction for policymakers, health care leaders, clinicians, regulators, purchasers, and others. In this comprehensive volume the committee offers: A set of performance expectations for the 21st century health care system. A set of 10 new rules to guide patient-clinician relationships. A suggested organizing framework to better align the incentives inherent in payment and accountability with improvements in quality. Key steps to promote evidence-based practice and strengthen clinical information systems. Analyzing health care organizations as complex systems, Crossing the Quality Chasm also documents the causes of the quality gap, identifies current practices that impede quality care, and explores how systems approaches can be used to implement change.

The field of design research has been gaining momentum over the last five years, particularly in educational studies. As papers and articles have grown in number, definition of the domain is now beginning to standardise. This book fulfils a growing need by providing a synthesised assessment of the use of development research in education. It looks at four main elements: background information including origins, definitions of development research, description of applications and benefits and risks associated with studies of this kind how the approach can serve the design of learning environments and educational technology quality assurance - how to safeguard academic rigor while conducting design and development studies a synthesis and overview of the topic along with relevant reflections.

In the 25 years since their introduction, Higgs bundles have seen a surprising number of interactions within different areas of mathematics and physics. There is a recent surge of interest following Ngô Bau Châu's proof of the Fundamental

Lemma and the work of Kapustin and Witten on the Geometric Langlands program. The program on The Geometry, Topology and Physics of Moduli Spaces of Higgs Bundles, was held at the Institute for Mathematical Sciences at the National University of Singapore during 2014. It hosted a number of lectures on recent topics of importance related to Higgs bundles, and it is the purpose of this volume to collect these lectures in a form accessible to graduate students and young researchers interested in learning more about this field.

Aspekte der Nachhaltigkeit bestimmen die Richtung zukunftsweisender Gebäudekonzepte. Dabei werden die Zukunftsfähigkeit und Ressourcenschonung insbesondere an der Energieeffizienz gemessen. Die Mitgliedsländer der Europäischen Union müssen ihre Regeln an die EU-Richtlinie für energieeffiziente Gebäude 2010 anpassen. Diese erlaubt ab 2020 nur noch Passiv- und Nullenergie-Neubauten und fordert energieeffiziente Sanierungen im Bestand. Deutschland wird die Energieeinsparverordnung EnEV 2009 zur EnEV 2014 novellieren. Der Referentenentwurf liegt vor und wird nach Anhörung, Kabinettsbeschluss, An.

Hazards, Risks, and Disasters in Society provides analyses of environmentally related catastrophes within society in historical, political and economic contexts. Personal and corporate culture mediates how people may become more vulnerable or resilient to hazard exposure. Societies that strengthen themselves, or are strengthened, mitigate decline and resultant further exposure to what are largely human induced risks of environmental, social and economic degradation. This book outlines why it is important to explore in more depth the relationships between environmental hazards, risk and disasters in society. It presents challenges presented by mainstream and non-mainstream approaches to the human side of disaster studies. By hazard categories this book includes critical processes and outcomes that significantly disrupt human wellbeing over brief or long time-frames. Whilst hazards, risks and disasters impact society, individuals, groups, institutions and organisations offset the effects by becoming strong, healthy, resilient, caring and creative. Innovations can arise from social organisation in times of crisis. This volume includes much of use to practitioners and policy makers needing to address both prevention and response activities. Notably, as people better engage prevalent hazards and risks they exercise a process that has become known as disaster risk reduction (DRR). In a context of climatic risks this is also indicative of climate change adaptation (CCA).

Ultimately it represents the quest for development of sustainable environmental and societal futures. Throughout the book cases studies are derived from the world of hazards risks and disasters in society. Includes sections on prevention of and response to hazards, risks and disasters Provides case studies of prominent societal challenges of hazards, risks and disasters Innovative approaches to dealing with disaster drawing from multiple disciplines and sectors

Magnetic Fusion Energy: From Experiments to Power Plants is a timely exploration of the field, giving readers an understanding of the experiments that

brought us to the threshold of the ITER era, as well as the physics and technology research needed to take us beyond ITER to commercial fusion power plants. With the start of ITER construction, the world's magnetic fusion energy (MFE) enterprise has begun a new era. The ITER scientific and technical (S&T) basis is the result of research on many fusion plasma physics experiments over a period of decades. Besides ITER, the scope of fusion research must be broadened to create the S&T basis for practical fusion power plants, systems that will continuously convert the energy released from a burning plasma to usable electricity, operating for years with only occasional interruptions for scheduled maintenance. Provides researchers in academia and industry with an authoritative overview of the significant fusion energy experiments Considers the pathway towards future development of magnetic fusion energy power plants Contains experts contributions from editors and others who are well known in the field

Beyond Control reveals the Mississippi as a waterway of change, unnaturally confined by ever-larger levees and control structures. During the great flood of 1973, the current scoured a hole beneath the main structure near Baton Rouge and enlarged a pre-existing football-field-size crater. That night the Mississippi River nearly changed its course for a shorter and steeper path to the sea. Such a map-changing reconfiguration of the country's largest river would bear national significance as well as disastrous consequences for New Orleans and towns like Morgan City, at the mouth of the Atchafalaya River. Since 1973, the US Army Corps of Engineers Control Complex at Old River has kept the Mississippi from jumping out of its historic channel and plunging through the Atchafalaya Basin to the Gulf of Mexico. Beyond Control traces the history of this phenomenon, beginning with a major channel shift around 3,000 years ago. By the time European colonists began to explore the Lower Mississippi Valley, a unique confluence of waterways had formed where the Red River joined the Mississippi, and the Atchafalaya River flowed out into the Atchafalaya Basin. A series of human alterations to this potentially volatile web of rivers, starting with a bend cutoff in 1831 by Captain Henry Miller Shreve, set the forces in motion for the Mississippi's move into the Atchafalaya Basin. Told against the backdrop of the Lower Mississippi River's impending diversion, the book's chapters chronicle historic floods, rising flood crests, a changing strategy for flood protection, and competing interests in the management of the Old River outlet. Beyond Control is both a history and a close look at an inexorable, living process happening now in the twenty-first century.

This open access book provides a comprehensive overview of volcanic crisis research, the goal being to establish ways of successfully applying volcanology in practice and to identify areas that need to be addressed for future progress. It shows how volcano crises are managed in practice, and helps to establish best practices. Consequently the book brings together authors from all over the globe who work with volcanoes, ranging from observatory volcanologists, disaster

practitioners and government officials to NGO-based and government practitioners to address three key aspects of volcanic crises. First, the book explores the unique nature of volcanic hazards, which makes them a particularly challenging threat to forecast and manage, due in part to their varying spatial and temporal characteristics. Second, it presents lessons learned on how to best manage volcanic events based on a number of crises that have shaped our understanding of volcanic hazards and crises management. Third, it discusses the diverse and wide-ranging aspects of communication involved in crises, which merge old practices and new technologies to accommodate an increasingly challenging and globalised world. The information and insights presented here are essential to tapping established knowledge, moving towards more robust volcanic crises management, and understanding how the volcanic world is perceived from a range of standpoints and contexts around the globe.

This “engaging social history of play” explores how technology and culture have shaped toys, games, and leisure—and vice versa (Choice). In this romp through the changing landscape of nineteenth- and twentieth-century American toys, games, hobbies, and amusements, technology historian Carroll Pursell poses a simple but interesting question: What can we learn by studying the relationship between technology and play? *From Playgrounds to PlayStation* explores how play reflects and drives the evolution of American culture. Pursell engagingly examines the ways in which technology affects play and play shapes people. The objects that children (and adults) play with and play on, along with their games and the hobbies they pursue, can reinforce but also challenge gender roles and cultural norms. Inventors—who often talk about “playing” at their work, as if motivated by the pure fun of invention—have used new materials and technologies to reshape sports and gameplay, sometimes even crafting new, extreme forms of recreation, but always responding to popular demand. Drawing from a range of sources, including scholarly monographs, patent records, newspapers, and popular and technical journals, the book covers numerous modes and sites of play. Pursell touches on the safety-conscious playground reform movement, the dazzling mechanical innovations that gave rise to commercial amusement parks, and the media’s colorful promotion of toys, pastimes, and sporting events. Along the way, he shows readers how technology enables the forms, equipment, and devices of play to evolve constantly, both reflecting consumer choices and driving innovators and manufacturers to promote toys that involve entirely new kinds of play—from LEGOs and skateboards to beading kits and videogames.

Most existing businesses plan for a world that is straightforward and static. Unfortunately, the world does not work that way. In an increasingly complex and uncertain world, FUSE provides a way to tackle problems whilst incorporating uncertainty into our analyses. This book: Shows how to make decisions in the present to better affect your future Explains why foresight is important even when struggling with day-to-day operations Describes how to best harvest the daily

deluge of information from your internal and external environment Offers a process-driven way of thinking about strategy that places principles at its very core Highlights the importance of retaining flexibility and agility to adapt when things go wrong. Written by renowned strategist and thinker Devadas Krishnadas, FUSE is a valuable tool for any business leader, manager or strategist.

The focus of these conference proceedings is on research, development, and applications in the fields of numerical geometry, scientific computing and numerical simulation, particularly in mesh generation and related problems. In addition, this year's special focus is on Delaunay triangulations and their applications, celebrating the 130th birthday of Boris Delaunay. In terms of content, the book strikes a balance between engineering algorithms and mathematical foundations. It presents an overview of recent advances in numerical geometry, grid generation and adaptation in terms of mathematical foundations, algorithm and software development and applications. The specific topics covered include: quasi-conformal and quasi-isometric mappings, hyperelastic deformations, multidimensional generalisations of the equidistribution principle, discrete differential geometry, spatial and metric encodings, Voronoi-Delaunay theory for tilings and partitions, duality in mathematical programming and numerical geometry, mesh-based optimisation and optimal control methods. Further aspects examined include iterative solvers for variational problems and algorithm and software development. The applications of the methods discussed are multidisciplinary and include problems from mathematics, physics, biology, chemistry, material science, and engineering.

Make sure you are thoroughly prepared to work in a clinical lab. Rodak's Hematology: Clinical Principles and Applications, 6th Edition uses hundreds of full-color photomicrographs to help you understand the essentials of hematology. This new edition shows how to accurately identify cells, simplifies hemostasis and thrombosis concepts, and covers normal hematopoiesis through diseases of erythroid, myeloid, lymphoid, and megakaryocytic origins. Easy to follow and understand, this book also covers key topics including: working in a hematology lab; complementary testing areas such as flow cytometry, cytogenetics, and molecular diagnostics; the parts and functions of the cell; and laboratory testing of blood cells and body fluid cells. UPDATED nearly 700 full-color illustrations and photomicrographs make it easier for you to visualize hematology concepts and show what you'll encounter in the lab, with images appearing near their mentions in the text to minimize flipping pages back and forth. UPDATED content throughout text reflects latest information on hematology. Instructions for lab procedures include sources of possible errors along with comments. Hematology instruments are described, compared, and contrasted. Case studies in each chapter provide opportunities to apply hematology concepts to real-life scenarios. Hematology/hemostasis reference ranges are listed on the inside front and back

covers for quick reference. A bulleted summary makes it easy for you to review the important points in every chapter. Learning objectives begin each chapter and indicate what you should achieve, with review questions appearing at the end. A glossary of key terms makes it easy to find and learn definitions. NEW! Additional content on cell structure and receptors helps you learn to identify these organisms. NEW! New chapter on Introduction to Hematology Malignancies provides an overview of diagnostic technology and techniques used in the lab. Updated with color and gray scale illustrations, a companion website housing supplementary material, and new sections covering recent developments in antenna analysis and design This book introduces the fundamental principles of antenna theory and explains how to apply them to the analysis, design, and measurements of antennas. Due to the variety of methods of analysis and design, and the different antenna structures available, the applications covered in this book are made to some of the most basic and practical antenna configurations. Among these antenna configurations are linear dipoles; loops; arrays; broadband antennas; aperture antennas; horns; microstrip antennas; and reflector antennas. The text contains sufficient mathematical detail to enable undergraduate and beginning graduate students in electrical engineering and physics to follow the flow of analysis and design. Readers should have a basic knowledge of undergraduate electromagnetic theory, including Maxwell's equations and the wave equation, introductory physics, and differential and integral calculus. Presents new sections on flexible and conformal bowtie, Vivaldi antenna, antenna miniaturization, antennas for mobile communications, dielectric resonator antennas, and scale modeling Provides color and gray scale figures and illustrations to better depict antenna radiation characteristics Includes access to a companion website housing MATLAB programs, Java-based applets and animations, Power Point notes, Java-based interactive questionnaires and a solutions manual for instructors Introduces over 100 additional end-of-chapter problems Antenna Theory: Analysis and Design, Fourth Edition is designed to meet the needs of senior undergraduate and beginning graduate level students in electrical engineering and physics, as well as practicing engineers and antenna designers. Constantine A. Balanis received his BSEE degree from the Virginia Tech in 1964, his MEE degree from the University of Virginia in 1966, his PhD in Electrical Engineering from The Ohio State University in 1969, and an Honorary Doctorate from the Aristotle University of Thessaloniki in 2004. From 1964 to 1970, he was with the NASA Langley Research Center in Hampton, VA, and from 1970 to 1983, he was with the Department of Electrical Engineering of West Virginia University. In 1983 he joined Arizona State University and is now Regents' Professor of Electrical Engineering. Dr. Balanis is also a life fellow of the IEEE.

Solar Physics publishes up to two Topical Issues per year that focus on areas of especially vigorous and active research. The present Topical Issue contains papers of recent results on the solar corona, as well as on the transition region

and low solar wind. The majority of these papers, which were all refereed in accordance with the standards of Solar Physics, were presented in August 1999 at a workshop held in Monterey, California. The authors were offered the opportunity to present relevant parts of their contributions on an accompanying CD ROM of this Topical Issue. The Sun's magnetic field is responsible for the spectacularly dynamic and intricate phenomenon that we call the corona. The past decade has seen an enormous increase in our understanding of this part of the solar outer atmosphere, both as a result of observations and because of rapid advances in numerical studies. The Yohkoh satellite has observed the Sun now for over eight years, producing spectacular sequences of images that convey the complexity of the corona. The imaging and spectroscopic instruments on SOHO have added information on the cooler part of the corona. And since April of 1998 TRACE has given us very high resolution images of the 1-2 MK corona, at cadences that allow detailed observations of field oscillations, loop evolution, mass ejecta, etc.

In recent years, the use of technology has become increasingly integrated into classroom settings. By utilizing new innovations, students can be provided with a deeper learning experience. Digital Tools for Seamless Learning is a pivotal reference source for the latest scholarly material on the implementation of technology in modern classrooms and provides a thorough overview of how such applications assist in the learning process. Highlighting pedagogical approaches, theoretical foundations, and curriculum development strategies, this book is ideally designed for teachers, researchers, professionals, upper-level students, and practitioners actively involved in the education field.

This book does not give a prediction of what the efficiency will be of the energy use of industrial processes in the future. However, it does give an exploration of limits to the efficiency of current processes and an indication of what might be achieved if new technologies can be developed. At the Department of Science, Technology and Society of Utrecht University research had been done to the opportunities for improvement of the energy efficiency in the short term since the 1980's. This had resulted in a comprehensive database on energy efficient measures. This database and a possible application are described in Chapter 3 of this book. The use of the database induced new research themes around efficiency improvement, e.g. concerning barriers for implementation of measures. It was around 1993 that I did a preliminary study to the potential for efficiency improvement in the long term. Historical analysis had shown us that the short term potential stayed constant over the years. It seemed to be replenished by the introduction of new technologies. This led to the question whether there are limits to the efficiency, taking into account both thermodynamic considerations and ideas on the development and dissemination of new technologies.

Introduction to Machine Olfaction Devices discusses the various aspects of a MOD device, from historical approaches to state-of-the-art technologies. This book also covers the mechanism in dealing and detecting gases, odor, and

aroma. Problems and solutions relevant to present day design have been outlined as well as a step-by-step guide to Machine Olfaction Device (MOD) design. Sensors and gas systems, along with polymers and certain manufacturing processes, have been discussed, together with other relevant materials for the MOD process and functions including comparison and validations, data processing, data analysis, MOD new design, micro systems, and monitoring systems. Aimed at developing a novel and improved MOD with more efficient on-board data processing capability for monitoring applications, this book will help you to design an MOD with a faster stabilizing base line; a quicker sample result display; an ability to use ambient air; a low power consumption; and the ability to deal with different varieties of organic/inorganic samples. With a focus on the most important and relevant aspects of designing MODs which currently require a solution, topics covered include MOD and market issues, cost, technical issues, and MOD applications. With a huge range of potential applications, this book will be of special interest to those working (or studying) in this field at every level, from Biomedical, Energy, or Electrical Engineers, to Computer or Food Scientists. Introduction to Machine Olfaction Devices discusses the various aspects of a MOD device, from historical approaches to state-of-the-art technologies. This book also covers the mechanism in dealing and detecting gases, odor, and aroma. Problems and solutions relevant to present day design have been outlined as well as a step-by-step guide to Machine Olfaction Device (MOD) design. Sensors and gas systems, along with polymers and certain manufacturing processes, have been discussed, together with other relevant materials for the MOD process and functions including comparison and validations, data processing, data analysis, MOD new design, micro systems, and monitoring systems. Aimed at developing a novel and improved MOD with more efficient on-board data processing capability for monitoring applications, this book will help you to design an MOD with a faster stabilizing base line; a quicker sample result display; an ability to use ambient air; a low power consumption; and the ability to deal with different varieties of organic/inorganic samples. With a focus on the most important and relevant aspects of designing MODs which currently require a solution, topics covered include MOD and market issues, cost, technical issues, and MOD applications. With a huge range of potential applications, this book will be of special interest to those working (or studying) in this field at every level, from Biomedical, Energy, or Electrical Engineers, to Computer or Food Scientists. Focuses on the most important and relevant aspects of designing machine olfaction devices (MOD) which currently require a solution Topics covered include: MOD and market issues; MOD and cost; MOD and technical issues; MOD applications

The Geometry, Topology And Physics Of Moduli Spaces Of Higgs BundlesWorld Scientific

An increasing number of scholars have begun to see science and technology as

relevant issues in International Relations (IR), acknowledging the impact of material elements, technical instruments, and scientific practices on international security, statehood, and global governance. This two-volume collection brings the debate about science and technology to the center of International Relations. It shows how integrating science and technology translates into novel analytical frameworks, conceptual approaches and empirical puzzles, and thereby offers a state-of-the-art review of various methodological and theoretical ways in which sciences and technologies matter for the study of international affairs and world politics. The authors not only offer a set of practical examples of research frameworks for experts and students alike, but also propose a conceptual space for interdisciplinary learning in order to improve our understanding of the global politics of science and technology. The second volume raises a plethora of issue areas, actors, and cases under the umbrella notion techno-politics. Distinguishing between interactional and co-productive perspectives, it outlines a toolbox of analytical frameworks that transcend technological determinism and social constructivism.

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