

# Physical Science Paper 1 November 2012 Memo

Eventually, you will enormously discover a new experience and achievement by spending more cash. still when? pull off you take that you require to acquire those every needs in the same way as having significantly cash? Why dont you attempt to get something basic in the beginning? Thats something that will guide you to understand even more going on for the globe, experience, some places, taking into consideration history, amusement, and a lot more?

It is your unconditionally own era to feat reviewing habit. along with guides you could enjoy now is **Physical Science Paper 1 November 2012 Memo** below.

## **Imprimitive Irreducible Modules for Finite Quasisimple Groups**

Gerhard Hiss 2015-02-06 Motivated by the maximal subgroup problem of the finite classical groups the authors begin the classification of imprimitive irreducible modules of finite quasisimple groups over algebraically closed fields  $K$ . A module of a group  $G$  over  $K$  is imprimitive, if it is induced from a module of a proper subgroup of  $G$ . The authors obtain their strongest results when  $\text{char}(K)=0$ , although much of their analysis carries over into positive characteristic. If  $G$  is a finite quasisimple group of Lie type, they prove that an imprimitive irreducible  $KG$ -module is Harish-Chandra induced. This being true for  $\text{char}(K)$  different from the defining characteristic of  $G$ , the authors specialize to the case  $\text{char}(K)=0$  and apply Harish-Chandra philosophy to classify irreducible Harish-Chandra induced modules in terms of Harish-Chandra series, as well as in terms of Lusztig series. The authors determine the asymptotic proportion of the irreducible imprimitive  $KG$ -modules, when  $G$  runs through a series groups of fixed (twisted) Lie type. One of the surprising outcomes of their investigations is the fact that these proportions tend to 1, if the Lie rank of the groups tends to infinity. For exceptional groups  $G$  of Lie type of small rank, and for sporadic groups  $G$ , the authors determine all irreducible imprimitive  $KG$ -modules for

arbitrary characteristic of  $K$ .

**Rearming for the Cold War 1945 -- 1960** Elliot V. Converse III 2012  
*Overcoming Barriers to Deployment of Plug-in Electric Vehicles* National Research Council 2015-06-26 In the past few years, interest in plug-in electric vehicles (PEVs) has grown. Advances in battery and other technologies, new federal standards for carbon-dioxide emissions and fuel economy, state zero-emission-vehicle requirements, and the current administration's goal of putting millions of alternative-fuel vehicles on the road have all highlighted PEVs as a transportation alternative. Consumers are also beginning to recognize the advantages of PEVs over conventional vehicles, such as lower operating costs, smoother operation, and better acceleration; the ability to fuel up at home; and zero tailpipe emissions when the vehicle operates solely on its battery. There are, however, barriers to PEV deployment, including the vehicle cost, the short all-electric driving range, the long battery charging time, uncertainties about battery life, the few choices of vehicle models, and the need for a charging infrastructure to support PEVs. What should industry do to improve the performance of PEVs and make them more attractive to consumers? At the request of Congress, *Overcoming Barriers to Deployment of Plug-in Electric Vehicles* identifies barriers to the introduction of electric vehicles and recommends ways to mitigate

these barriers. This report examines the characteristics and capabilities of electric vehicle technologies, such as cost, performance, range, safety, and durability, and assesses how these factors might create barriers to widespread deployment. *Overcoming Barriers to Deployment of Plug-in Electric Vehicles* provides an overview of the current status of PEVs and makes recommendations to spur the industry and increase the attractiveness of this promising technology for consumers. Through consideration of consumer behaviors, tax incentives, business models, incentive programs, and infrastructure needs, this book studies the state of the industry and makes recommendations to further its development and acceptance.

**World Ocean Assessment** World Ocean Assessment team 2017-04-30  
*A Copyright Masquerade* Monica Horten 2013-08-08 When thousands marched through ice and snow against a copyright treaty, their cries for free speech on the Internet shot to the heart of the European Union and forced a political U-turn. The mighty entertainment industries could only stare in dismay, their back-room plans in tatters. This highly original analysis of three attempts to bring in new laws to defend copyright on the Internet - ACTA, Ley Sinde and the Digital Economy Act - investigates the dance of influence between lobbyists and their political proxies and unmask the sophistry of their arguments. Copyright expert Monica Horten outlines the myriad ways that lobbyists contrived to bypass democratic process and persuade politicians to take up their cause in imposing an American corporate agenda. In doing so, she argues the case for stronger transparency in copyright policy-making. *A Copyright Masquerade* is essential reading for anyone who cares about copyright and the Internet, and to those who care about freedom of speech and good government.

*Native Games* Chris Hallinan 2013 Research on Indigenous participation in sport offers many opportunities to better understand the political issues of equality, empowerment, self-determination and protection of culture and identity. This volume compares and conceptualises the sociological significance of Indigenous sports in different international contexts. The contributions, all written by Indigenous scholars and those

working directly in Indigenous/Native Studies units, provide unique studies of contemporary experiences of Indigenous sports participation. The papers investigate current understandings of Indigeneity found to circulate throughout sports, sports organisations and Indigenous communities. by (1): situating attitudes to racial and cultural difference within the broader sociological processes of post colonial Indigenous worlds (2): interrogating perceptions of Indigenous identity with reference to contemporary theories of identity drawn from Indigenous Studies and (3): providing insight to increased Indigenous participation, empowerment and personal development through sport with reference to sociological theory.

*The Seven Sins of Wall Street* Bob Ivry 2014-03-11 We all know that the financial crisis of 2008 came dangerously close to pushing the United States and the world into a depression rivaling that of the 1930s. But what is astonishing -- and should make us not just afraid but very afraid -- are the shenanigans of the biggest banks since the crisis. Bob Ivry passionately, eloquently, and convincingly details the operative ineptitude of America's best-compensated executives and the ways the government kowtows to what it mistakenly imagines is their competence and success. Ivry shows that the only thing that has changed since the meltdown is how too-big-to-fail banks and their fellow travelers in Washington have nudged us ever closer to an even bigger economic calamity. Informed by deep reporting from New York, Washington, and the heartland, *The Seven Sins of Wall Street*, like no other book, shows how we're all affected by the financial industry's inhumanity. The transgressions of "Wall Street titans" and "masters of the universe" are paid for by real people. In fierce, plain English, Ivry indicts a financial industry that continues to work for the few at the expense of the rest of us. Problems that financiers deemed too complicated to be understood by ordinary folks are shown by Ivry to be financial legerdemain -- a smokescreen of complexity and jargon that hide the bankers' nefarious activities. *The Seven Sins of Wall Street* is irreverent and timely, an infuriating black comedy. The Great Depression of the 1930s moved the American political system to real reform that kept the finance industry in check. With

millions so deeply affected since the crisis of 2008, you'll finish this book asking yourself how it is that so many of the nation's leading financial institutions remain such exasperating problem children.

**Breakout** Newt Gingrich 2013-11-04 It is not between the Left and the Right, but between the past and the future. America is on the edge of a breakout. In fact, we are poised for one of the most spectacular leaps in human well-being in history. Pioneers of the future—innovators and entrepreneurs—are achieving breakthroughs in medicine, transportation, energy, education, and other fields that will make the world a dramatically different and better place. Unless the “prison guards” of the past stop them. Every American must choose a side. Will you be a champion of the future or a prisoner of the past? Every potential breakthrough has to get past a host of individuals and institutions whose power and comfort depend on the status quo. These prison guards of the past will strangle every innovation that threatens to change the way things have always been done—if we let them.

**Presidential Management of Science and Technology** W. Henry Lambright 2012-02-01 How do science and technology issues become important to a particular presidency? Which issues gain priority? How? Why? What is the role of the presidency in the adoption of national policies affecting science and technology? In their implementation? How does the presidency try to curtail certain programs? Eliminate others? Or rescue programs Congress might seek to terminate? How does implementation vary between a president's own program and one that is inherited? Such are the questions raised in this book, one of the first to address the relationship between scientists, few of whom have political backgrounds, and presidents, few of whom are knowledgeable in matters of science and technology. Drawing on extensive research performed at the Lyndon B. Johnson Library in Austin, Texas, and the National Archives in Washington, as well as on secondary sources and interviews, W. Henry Lambright describes, discusses, and analyzes this relationship and shows how one presidency set its agenda, adopted, implemented, and curtailed or eliminated science and technology programs. Twenty-four case studies of specific decision processes occurring in the era of

Lyndon Johnson anchor the book in the world of real events. Some programs adopted under Johnson are now all but forgotten, such as the Manned Orbiting Laboratory, nuclear desalting, and electronic barrier. The effects of many more, initiated, maintained, or enlarged under LBJ, lasted far beyond his administration. These include environmental pollution control, Project Apollo, and the application of Agent Orange in Vietnam. Finally, there are those that were redirected, placed on hold, or terminated under Johnson, such as the supersonic transport, antiballistic missile, and Project Mohole. In this important book, Lambright has provided a framework for analyzing how the presidency as an institution deals with such issues, and he has established a strong foundation on which all future students of presidential policy management can build. *Strengthening Data Science Methods for Department of Defense Personnel and Readiness Missions* National Academies of Sciences, Engineering, and Medicine 2017-02-06 The Office of the Under Secretary of Defense (Personnel & Readiness), referred to throughout this report as P&R, is responsible for the total force management of all Department of Defense (DoD) components including the recruitment, readiness, and retention of personnel. Its work and policies are supported by a number of organizations both within DoD, including the Defense Manpower Data Center (DMDC), and externally, including the federally funded research and development centers (FFRDCs) that work for DoD. P&R must be able to answer questions for the Secretary of Defense such as how to recruit people with an aptitude for and interest in various specialties and along particular career tracks and how to assess on an ongoing basis service members' career satisfaction and their ability to meet new challenges. P&R must also address larger-scale questions, such as how the current realignment of forces to the Asia-Pacific area and other regions will affect recruitment, readiness, and retention. While DoD makes use of large-scale data and mathematical analysis in intelligence, surveillance, reconnaissance, and elsewhere—“exploiting techniques such as complex network analysis, machine learning, streaming social media analysis, and anomaly detection”—these skills and capabilities have not been applied as well to the personnel and readiness enterprise. *Strengthening Data*

Science Methods for Department of Defense Personnel and Readiness Missions offers and roadmap and implementation plan for the integration of data analysis in support of decisions within the purview of P&R.

**Coercive Care** Bernadette Mcsherry 2013-06-26 There has been much debate about mental health law reform and mental capacity legislation in recent years with the UN Convention on the Rights of Persons with Disabilities also having a major impact on thinking about the issue. This edited volume explores the concept of 'coercive care' in relation to individuals such as those with severe mental illnesses, those with intellectual and cognitive disabilities and those with substance use problems. With a focus on choice and capacity the book explores the impact of and challenges posed by the provision of care in an involuntary environment. The contributors to the book look at mental health, capacity and vulnerable adult's care as well as the law related to those areas. The book is split into four parts which cover: human rights and coercive care; legal capacity and coercive care; the legal coordination of coercive care and coercive care and individuals with cognitive impairments. The book covers new ground by exploring issues arising from the coercion of persons with various disabilities and vulnerabilities, helping to illustrate how the capacity to provide consent to treatment and care is impaired by reason of their condition.

**A Lever Long Enough** Robert McCaughey 2014-06-03 In this comprehensive social history of Columbia University's School of Engineering and Applied Science (SEAS), Robert McCaughey combines archival research with oral testimony and contemporary interviews to build a critical and celebratory portrait of one of the oldest engineering schools in the United States. McCaughey follows the evolving, occasionally rocky, and now integrated relationship between SEAS's engineers and the rest of the Columbia University student body, faculty, and administration. He also revisits the interaction between the SEAS staff and the inhabitants and institutions of the City of New York, where the school has resided since its founding in 1864. McCaughey compares the historical struggles and achievements of the school's engineers with their present-day battles and accomplishments, and he contrasts their

teaching and research approaches with those of their peers at other free-standing and Ivy League engineering schools. What begins as a localized history of a school striving to define itself within a university known for its strengths in the humanities and the social sciences becomes a wider story of the transformation of the applied sciences into a critical component of American technology and education.

**Alan Turing's Electronic Brain** B. Jack Copeland 2012-05-24 Rev. ed. of: Alan Turing's automatic computing engine / edited by B. Jack Copeland.

Outer Continental Shelf Oil and Gas Leasing Program, 2012-2017 2011 **Federal Register** 2013

**Spacecraft Dynamics and Control** Enrico Canuto 2018-03-08 Spacecraft Dynamics and Control: The Embedded Model Control Approach provides a uniform and systematic way of approaching space engineering control problems from the standpoint of model-based control, using state-space equations as the key paradigm for simulation, design and implementation. The book introduces the Embedded Model Control methodology for the design and implementation of attitude and orbit control systems. The logic architecture is organized around the embedded model of the spacecraft and its surrounding environment. The model is compelled to include disturbance dynamics as a repository of the uncertainty that the control law must reject to meet attitude and orbit requirements within the uncertainty class. The source of the real-time uncertainty estimation/prediction is the model error signal, as it encodes the residual discrepancies between spacecraft measurements and model output. The embedded model and the uncertainty estimation feedback (noise estimator in the book) constitute the state predictor feeding the control law. Asymptotic pole placement (exploiting the asymptotes of closed-loop transfer functions) is the way to design and tune feedback loops around the embedded model (state predictor, control law, reference generator). The design versus the uncertainty class is driven by analytic stability and performance inequalities. The method is applied to several attitude and orbit control problems. The book begins with an extensive introduction to attitude geometry and

algebra and ends with the core themes: state-space dynamics and Embedded Model Control. Fundamentals of orbit, attitude and environment dynamics are treated giving emphasis to state-space formulation, disturbance dynamics, state feedback and prediction, closed-loop stability. Sensors and actuators are treated giving emphasis to their dynamics and modelling of measurement errors. Numerical tables are included and their data employed for numerical simulations. Orbit and attitude control problems of the European GOCE mission are the inspiration of numerical exercises and simulations. The suite of the attitude control modes of a GOCE-like mission is designed and simulated around the so-called mission state predictor. Solved and unsolved exercises are included within the text - and not separated at the end of chapters - for better understanding, training and application. Simulated results and their graphical plots are developed through MATLAB/Simulink code.

*The Age of Radiances* Craig Nelson 2014-12-30 "A riveting narrative of the Atomic Age--from x-rays and Marie Curie to the Nevada Test Site and the 2011 meltdown in Japan--written by the prizewinning and bestselling author of *Rocket Men*. Radiation is a complex and paradoxical concept: staggering amounts of energy flow from seemingly inert rock and that energy is both useful and dangerous. While nuclear energy affects our everyday lives--from nuclear medicine and food irradiation to microwave technology--its invisible rays trigger biological damage, birth defects, and cellular mayhem. Written with a biographer's passion, Craig Nelson unlocks one of the great mysteries of the universe in a work that is both tragic and triumphant. From the end of the nineteenth century through the use of the atomic bomb in World War II to the twenty-first century's confrontation with the dangers of nuclear power, Nelson illuminates a pageant of fascinating historical figures: Enrico Fermi, Marie and Pierre Curie, Albert Einstein, FDR, Robert Oppenheimer, and Ronald Reagan, among others. He reveals many little-known details, including how Jewish refugees fleeing Hitler transformed America from a country that created light bulbs and telephones into one that split atoms; how the most grotesque weapon ever invented could realize Alfred Nobel's

lifelong dream of global peace; how emergency workers and low-level utility employees fought to contain a run-amok nuclear reactor, while wondering if they would live or die. Brilliantly fascinating and remarkably accessible, *The Age of Radiances* traces mankind's complicated and difficult relationship with the dangerous power it discovered and made part of civilization"--

**Going Soft? The US and China Go Global** Mei Renyi 2014-04-11 What is "soft power"? How can a country acquire and enjoy it? Is it the product of public or private initiatives? How significant is "soft power" in world affairs? The concept of "soft power," the idea that international success depends not just upon weaponry, force, and military coercion, but also on admiration and respect for a country's culture and way of life, is winning ever-greater global attention. As China enjoys ever-increasing heft on the global scene, many Chinese officials seek to emulate the past success of the United States in dominating the world, not simply militarily, but in terms of influence and prestige. Most are very conscious that "soft power" can be extremely valuable in terms of supplementing and boosting their country's military and strategic position, but are often uncertain as to how to deploy the instruments of propaganda and cultural diplomacy most effectively. The essays in this volume, largely written by scholars based in mainland China, represent an extended effort to debate and assess the theoretical concept of "soft power" and just what it means and how it works in practice. The authors focus upon the practical impact and implications of "soft power" in diverse settings and situations in the United States past and present. How, they ask, does "soft power" relate to issues of religion, gender, race, and social equality, at home and abroad? What do American elections and political rhetoric do for American "soft power"? Will China succeed in rivalling the United States in power, whether hard, soft, or smart? And how will "soft power" feature in US-China relations, present and future?

[You Are Here](#) Hiawatha Bray 2014-04-01 The story of the rise of modern navigation technology, from radio location to GPS—and the consequent decline of privacy What does it mean to never get lost? *You Are Here* examines the rise of our technologically aided era of navigational

omniscience—or how we came to know exactly where we are at all times. In a sweeping history of the development of location technology in the past century, Bray shows how radio signals created to carry telegraph messages were transformed into invisible beacons to guide ships and how a set of rapidly-spinning wheels steered submarines beneath the polar icecap. But while most of these technologies were developed for and by the military, they are now ubiquitous in our everyday lives. Our phones are now smart enough to pinpoint our presence to within a few feet—and nosy enough to share that information with governments and corporations. Filled with tales of scientists and astronauts, inventors and entrepreneurs, *You Are Here* tells the story of how humankind ingeniously solved one of its oldest and toughest problems—only to herald a new era in which it's impossible to hide.

Counterterrorism and Cybersecurity Newton Lee 2013-04-15 Imagine James Bond meets Sherlock Holmes: Counterterrorism and Cybersecurity is the sequel to Facebook Nation in the Total Information Awareness book series by Newton Lee. The book examines U.S. counterterrorism history, technologies, and strategies from a unique and thought-provoking approach that encompasses personal experiences, investigative journalism, historical and current events, ideas from great thought leaders, and even the make-believe of Hollywood. Demystifying Total Information Awareness, the author expounds on the U.S. intelligence community, artificial intelligence in data mining, social media and privacy, cyber attacks and prevention, causes and cures for terrorism, and longstanding issues of war and peace. The book offers practical advice for businesses, governments, and individuals to better secure the world and protect cyberspace. It quotes U.S. Navy Admiral and NATO's Supreme Allied Commander James Stavridis: "Instead of building walls to create security, we need to build bridges." The book also provides a glimpse into the future of Plan X and Generation Z, along with an ominous prediction from security advisor Marc Goodman at TEDGlobal 2012: "If you control the code, you control the world." Counterterrorism and Cybersecurity: Total Information Awareness will keep you up at night but at the same time give you some peace of mind

knowing that "our problems are manmade — therefore they can be solved by man [or woman]," as President John F. Kennedy said at the American University commencement in June 1963.

History of Acquisition in the Department of Defense, Volume 1 Elliott V. Converse 2012-06-12 This volume is a history of the acquisition of major weapon systems by the United States armed forces from 1945 to 1960, the decade and a half that spanned the Truman and Eisenhower administrations following World War II. These instruments of warfare—aircraft, armored vehicles, artillery, guided missiles, naval vessels, and supporting electronic systems—when combined with nuclear warheads, gave the postwar American military unprecedented deterrent and striking power.<sup>1</sup> They were also enormously expensive. The volume is organized chronologically, with individual chapters addressing the roles of OSD, the Army, Navy, and Air Force in two distinct periods. The first, roughly coinciding with President Truman's tenure, covers the years from the end of World War II through the end of the Korean War in 1953. The second spans the two terms of the Eisenhower presidency from 1953 through early 1961. The year 1953 marked a natural breakpoint between the two periods. The Korean War had ended. President Eisenhower and his defense team began implementing the "New Look," a policy and strategy based on nuclear weapons, which they believed would provide security and make it possible to reduce military spending. The New Look's stress on nuclear weapons, along with the deployment of the first operational guided missiles and the rapid advances subsequently made in nuclear and missile technology, profoundly influenced acquisition in the services throughout the 1950s and the remainder of the century. As used in this study, the term "acquisition" encompasses the activities by which the United States obtains weapons and other equipment. In surveying the history of acquisition between 1945 and 1960, this study discusses or refers in passing to many of the hundreds of weapon system programs initiated by the services in that period, but it is not a weapons encyclopedia. Instead, it investigates a few major programs in depth in the belief that such detailed examination best reveals the evolution of acquisition policies,

organizations, and processes, and the various forces influencing weapons programs.

**Handbook of Cannabis** Roger Pertwee 2014-08-21 Truly global in scope and with contributions from leading researchers around the world, The Handbook of Cannabis is the definitive resource on this fascinating drug. Combining scientific perspectives and clinical applications, it covers a vast array of topics, from why over the centuries cannabis has been used as a medicine, through the regulations facing those wishing to self-administer cannabis or provide cannabis-based medicines, to the chemical structure of its many constituents and the rapidly growing group of synthetic cannabinoids that are currently being used for 'legal highs'. With each chapter written by a group of one or more internationally recognised subject experts, it provides academics and researchers with authoritative scientific material on the main pharmacological actions and their effects, as well as their pharmacokinetics, metabolism, and forensic detection. In addition it also examines the complex morphology, cultivation, harvesting, and processing of cannabis and the ways in which the plant's chemical composition can be controlled. As well as offering a raft of scientific information there is extensive coverage of cannabinoid-based medicines. Helping readers to identify and evaluate their benefits, chapters explore pharmacological actions and the effects that seem to underlie approved therapeutic uses, how they are currently used to treat certain disorders, and the ever-growing number of wide-ranging potential clinical applications. There is also coverage of both the legal and illegal sources of cannabis, including 'coffee shops' and 'cannabis dispensaries'. The complex issue of 'recreational cannabis' is also tackled. The sought-after and adverse psychological and non-psychological effects are described and discussions are included on how some adverse effects can be lessened by at least one constituent of cannabis, and that it might be possible to reduce the harm that cannabis does to some by changing current regulatory policies. The Handbook of Cannabis is a one-stop reference; essential reading for all clinicians, pharmacologists, psychologists, and psychiatrists interested in this drug, as well as those

working in the field of public health.

*Formality of the Little  $\mathbb{N}$ -disks Operad* Pascal Lambrechts 2014-06-05 The little  $\mathbb{N}$ -disks operad,  $\mathbb{N}$ , along with its variants, is an important tool in homotopy theory. It is defined in terms of configurations of disjoint  $n$ -dimensional disks inside the standard unit disk in  $\mathbb{R}^n$  and it was initially conceived for detecting and understanding  $n$ -fold loop spaces. Its many uses now stretch across a variety of disciplines including topology, algebra, and mathematical physics. In this paper, the authors develop the details of Kontsevich's proof of the formality of little  $\mathbb{N}$ -disks operad over the field of real numbers. More precisely, one can consider the singular chains  $C_*(\mathbb{N})$  on  $\mathbb{N}$  as well as the singular homology  $H_*(\mathbb{N})$  of  $\mathbb{N}$ . These two objects are operads in the category of chain complexes. The formality then states that there is a zig-zag of quasi-isomorphisms connecting these two operads. The formality also in some sense holds in the category of commutative differential graded algebras. The authors additionally prove a relative version of the formality for the inclusion of the little  $\mathbb{N}$ -disks operad in the little  $\mathbb{N}$ -disks operad when  $n > 1$ .

**Alan Turing's Electronic Brain** others 2012-05-24 The mathematical genius Alan Turing, now well known for his crucial wartime role in breaking the ENIGMA code, was the first to conceive of the fundamental principle of the modern computer—the idea of controlling a computing machine's operations by means of a program of coded instructions, stored in the machine's 'memory'. In 1945 Turing drew up his revolutionary design for an electronic computing machine—his Automatic Computing Engine ('ACE'). A pilot model of the ACE ran its first program in 1950 and the production version, the 'DEUCE', went on to become a cornerstone of the fledgling British computer industry. The first 'personal' computer was based on Turing's ACE. Alan Turing's Automatic Computing Engine describes Turing's struggle to build the modern computer. The first detailed history of Turing's contributions to computer science, this text is essential reading for anyone interested in the history of the computer and the history of mathematics. It contains first hand accounts by Turing and by the pioneers of computing who worked with him. As well as relating the story of the invention of the computer, the

book clearly describes the hardware and software of the ACE-including the very first computer programs. The book is intended to be accessible to everyone with an interest in computing, and contains numerous diagrams and illustrations as well as original photographs. The book contains chapters describing Turing's path-breaking research in the fields of Artificial Intelligence (AI) and Artificial Life (A-Life). The book has an extensive system of hyperlinks to The Turing Archive for the History of Computing, an on-line library of digital facsimiles of typewritten documents by Turing and the other scientists who pioneered the electronic computer.

**Cities** Ian Douglas 2013-05-30 Cities are amongst our greatest creations. Yet, with cities now home to over half the world's population, there is increasing concern over their unchecked expansion and the detrimental effect this is having on the planet. This unfettered growth is affecting every ecosystem on Earth, from the deepest oceans to the highest mountains, as induced climate change and ever increasing demands upon the world's resources take effect. As the pace of urbanisation quickens, how can we make the world's cities more sustainable? Ian Douglas tells the story of cities. He shows why they exist, how they have evolved and the problems they have encountered, revealing how from the very beginning environmental management played a key role in urban life. He addresses specific problems, such as noise and air pollution, water supply and waste management, as well as the vulnerability of cities to hazards such as earthquakes and flooding. And he considers strategies to make cities more sustainable and help them adapt to climate change, such as waste recycling, energy conservation, dual water systems, sustainable housing, as well as initiatives to retrofit existing cities. Written by an acknowledged international authority, this unique volume will be welcomed by students and specialists in environment, planning, geography, ecology and the built environment.

**Assessment of Advanced Solid-State Lighting** National Research Council 2013-04-27 The standard incandescent light bulb, which still works mainly as Thomas Edison invented it, converts more than 90% of the consumed electricity into heat. Given the availability of newer

lighting technologies that convert a greater percentage of electricity into useful light, there is potential to decrease the amount of energy used for lighting in both commercial and residential applications. Although technologies such as compact fluorescent lamps (CFLs) have emerged in the past few decades and will help achieve the goal of increased energy efficiency, solid-state lighting (SSL) stands to play a large role in dramatically decreasing U.S. energy consumption for lighting. This report summarizes the current status of SSL technologies and products-light-emitting diodes (LEDs) and organic LEDs (OLEDs)-and evaluates barriers to their improved cost and performance. Assessment of Advanced Solid State Lighting also discusses factors involved in achieving widespread deployment and consumer acceptance of SSL products. These factors include the perceived quality of light emitted by SSL devices, ease of use and the useful lifetime of these devices, issues of initial high cost, and possible benefits of reduced energy consumption.

**Technological Innovation in Legacy Sectors** William B. Bonvillian 2015-08-18 The American economy faces two deep problems: expanding innovation and raising the rate of quality job creation. Both have roots in a neglected problem: the resistance of Legacy economic sectors to innovation. While the U.S. has focused its policies on breakthrough innovations to create new economic frontiers like information technology and biotechnology, most of its economy is locked into Legacy sectors defended by technological/ economic/ political/ social paradigms that block competition from disruptive innovations that could challenge their models. Americans like to build technology "covered wagons" and take them "out west" to open new innovation frontiers; we don't head our wagons "back east" to bring innovation to our Legacy sectors. By failing to do so, the economy misses a major opportunity for innovation, which is the bedrock of U.S. competitiveness and its standard of living. Technological Innovation in Legacy Sectors uses a new, unifying conceptual framework to identify the shared features underlying structural obstacles to innovation in major Legacy sectors: energy, air and auto transport, the electric power grid, buildings, manufacturing, agriculture, health care delivery and higher education, and develops

approaches to understand and transform them. It finds both strengths and obstacles to innovation in the national innovation environments - a new concept that combines the innovation system and the broader innovation context - for a group of Asian and European economies. Manufacturing is a major Legacy sector that presents a particular challenge because it is a critical stage in the innovation process. By increasingly offshoring production, the U.S. is losing important parts of its innovation capacity. "Innovate here, produce here," where the U.S. took all the gains of its strong innovation system at every stage, is being replaced by "innovate here, produce there," which threatens to lead to "produce there, innovate there." To bring innovation to Legacy sectors, authors William Bonvillian and Charles Weiss recommend that policymakers focus on all stages of innovation from research through implementation. They should fill institutional gaps in the innovation system and take measures to address structural obstacles to needed disruptive innovations. In the specific case of advanced manufacturing, the production ecosystem can be recreated to reverse "jobless innovation" and add manufacturing-led innovation to the U.S.'s still-strong, research-oriented innovation system.

*Current Catalog* National Library of Medicine (U.S.) 1968 Includes subject section, name section, and 1968-1970, technical reports.

**Life Out of Sequence** Hallam Stevens 2013-11-04 Thirty years ago, the most likely place to find a biologist was standing at a laboratory bench, peering down a microscope, surrounded by flasks of chemicals and petri dishes full of bacteria. Today, you are just as likely to find him or her in a room that looks more like an office, poring over lines of code on computer screens. The use of computers in biology has radically transformed who biologists are, what they do, and how they understand life. In *Life Out of Sequence*, Hallam Stevens looks inside this new landscape of digital scientific work. Stevens chronicles the emergence of bioinformatics—the mode of working across and between biology, computing, mathematics, and statistics—from the 1960s to the present, seeking to understand how knowledge about life is made in and through virtual spaces. He shows how scientific data moves from living organisms

into DNA sequencing machines, through software, and into databases, images, and scientific publications. What he reveals is a biology very different from the one of predigital days: a biology that includes not only biologists but also highly interdisciplinary teams of managers and workers; a biology that is more centered on DNA sequencing, but one that understands sequence in terms of dynamic cascades and highly interconnected networks. *Life Out of Sequence* thus offers the computational biology community welcome context for their own work while also giving the public a frontline perspective of what is going on in this rapidly changing field.

**Research Summary** Jet Propulsion Laboratory (U.S.) 1960

**Outer Continental Shelf Oil and Gas Leasing Program, 2012-2017** United States. Bureau of Ocean Energy Management 2011

Alternative Accountabilities in Global Politics Brent J. Steele 2013 In fields such as politics, international relations, public administration and international law, there is a rapidly growing interest in the topic of 'accountability'. In this innovative new work, Steele shows how we might recognize how an alternative form of accountability in global politics has been present for some time, and that, furthermore, this form's continued presence remains one of the most politically powerful, if not endurable, possibilities for resistance in the near future. This book argues that the physical and visually shocking outcomes of violence found on the bodies of humans, as well as the buildings and landscapes which surround us, specifically the scars they leave behind, remain one of our most compelling forms of accountability. Steele develops the theoretical argument on scars and exteriority utilizing insights from several philosophical and theoretical resources including Hannah Arendt, Erving Goffmann, and Richard Rorty. The work examines scars and their effects through several illustrations, including the accounts of Emmett Till, Iranian protestor Neda Agha-Soltan, the Syrian boy Hamza al-Khateeb, the massacre in WWII and then memorializing throughout the 20th century of the Lidice children in the modern-day Czech Republic, the particular architecturally destructive outcomes of the 2008-9 Gaza War, the loss of the Twin Towers in New York, as well as a variety of violent

scars found on the landscapes of Europe and Southeast Asia. Emphasizing the importance of the space and 'time' of scars, the book illustrates how an alternative form of accountability in the scar can be a useful, disruptive, spontaneous, but also creative practice to challenge the discourses of violence which remain with us today.

*Transitions to Alternative Vehicles and Fuels* National Research Council 2013-04-14 For a century, almost all light-duty vehicles (LDVs) have been powered by internal combustion engines operating on petroleum fuels. Energy security concerns about petroleum imports and the effect of greenhouse gas (GHG) emissions on global climate are driving interest in alternatives. *Transitions to Alternative Vehicles and Fuels* assesses the potential for reducing petroleum consumption and GHG emissions by 80 percent across the U.S. LDV fleet by 2050, relative to 2005. This report examines the current capability and estimated future performance and costs for each vehicle type and non-petroleum-based fuel technology as options that could significantly contribute to these goals. By analyzing scenarios that combine various fuel and vehicle pathways, the report also identifies barriers to implementation of these technologies and suggests policies to achieve the desired reductions. Several scenarios are promising, but strong, and effective policies such as research and development, subsidies, energy taxes, or regulations will be necessary to overcome barriers, such as cost and consumer choice.

Environmental Risk Assessment Ted Simon 2014-02-05 The purpose of risk assessment is to support science-based decisions about how to solve complex societal problems. The problems we face in the twenty-first century have many social, political, and technical complexities.

Environmental risk assessment in particular is of increasing importance as a means of seeking to address the potential effects of

Open Access Peter Suber 2012-07-20 A concise introduction to the basics of open access, describing what it is (and isn't) and showing that it is easy, fast, inexpensive, legal, and beneficial. The Internet lets us share perfect copies of our work with a worldwide audience at virtually no cost. We take advantage of this revolutionary opportunity when we make our work "open access": digital, online, free of charge, and free of most

copyright and licensing restrictions. Open access is made possible by the Internet and copyright-holder consent, and many authors, musicians, filmmakers, and other creators who depend on royalties are understandably unwilling to give their consent. But for 350 years, scholars have written peer-reviewed journal articles for impact, not for money, and are free to consent to open access without losing revenue. In this concise introduction, Peter Suber tells us what open access is and isn't, how it benefits authors and readers of research, how we pay for it, how it avoids copyright problems, how it has moved from the periphery to the mainstream, and what its future may hold. Distilling a decade of Suber's influential writing and thinking about open access, this is the indispensable book on the subject for researchers, librarians, administrators, funders, publishers, and policy makers.

**Using Science as Evidence in Public Policy** National Research Council 2012-10-31 *Using Science as Evidence in Public Policy* encourages scientists to think differently about the use of scientific evidence in policy making. This report investigates why scientific evidence is important to policy making and argues that an extensive body of research on knowledge utilization has not led to any widely accepted explanation of what it means to use science in public policy. *Using Science as Evidence in Public Policy* identifies the gaps in our understanding and develops a framework for a new field of research to fill those gaps. For social scientists in a number of specialized fields, whether established scholars or Ph.D. students, *Using Science as Evidence in Public Policy* shows how to bring their expertise to bear on the study of using science to inform public policy. More generally, this report will be of special interest to scientists who want to see their research used in policy making, offering guidance on what is required beyond producing quality research, beyond translating results into more understandable terms, and beyond brokering the results through intermediaries, such as think tanks, lobbyists, and advocacy groups. For administrators and faculty in public policy programs and schools, *Using Science as Evidence in Public Policy* identifies critical elements of instruction that will better equip graduates to promote the use of science

in policy making.

*Re-entry and Planetary Entry Physics and Technology* W.H.T. Loh

2012-12-06 During the last decade, a rapid growth of knowledge in the field of re-entry and planetary entry has resulted in many significant advances useful to the student, engineer and scientist. The purpose of offering this course is to make available to them these recent significant advances in physics and technology. Accordingly, this course is organized into five parts: Part 1, Entry Dynamics, Thermodynamics, Physics and Radiation; Part 2, Entry Ablation and Heat Transfer; Part 3, Entry Experimentation; Part 4, Entry Concepts and Technology; and Part 5, Advanced Entry Programs. It is written in such a way so that it may easily be adopted by other universities as a textbook for a two semesters senior or graduate course on the subject. In addition to the undersigned who served as the course instructor and wrote Chapters, 1, 2, 3 and 4, guest lecturers included: Prof. FRANKLIN K. MOORE who wrote Chapter 5 "Entry Radiative Transfer," Prof. SHIH-I PAI who wrote Chapter 6 "Entry Radiation-Magnetodynamics," Dr. CARL GAZLEY, Jr. who

wrote Chapter 7 "Entry Deceleration and Mass Change of an Ablating Body," Dr. SINCLAIRE M. SCALA who wrote Chapter 8 "Entry Heat Transfer and Material Response," Mr.

*Elemental Germans* Christoph Laucht 2012-05-15 Christoph Laucht offers the first investigation into the roles played by two German-born emigre atomic scientists, Klaus Fuchs and Rudolf Peierls, in the development of British nuclear culture, especially the practice of nuclear science and the political implications of the atomic scientists' work, from the start of the Second World War until 1959.

10 Years UPSC CAPF Assistant Commandant (2021 - 2012) Solved Papers I & II with 5 Practice Sets Disha Experts 2021-09-01

Scientists' Expertise as Performance Joris Vandendriessche 2015-10-06

The essays in this collection explore our reliance on experts within a historical context and across a wide range of fields, including agriculture, engineering, health sciences and labour management. Contributors argue that experts were highly aware of their audiences and used performance to gain both scientific and popular support.