

Physical Sciences 2014 Memorandum

The Department of Commerce operates two telecommunications research laboratories located at the Department of Commerce's Boulder, Colorado, campus: the National Telecommunications and Information Administration's (NTIA's) Institute for Telecommunications Sciences (ITS) and the National Institute of Standards and Technology's (NIST's) Communications Technology Laboratory (CTL). CTL develops appropriate measurements and standards to enable interoperable public safety communications, effective and efficient spectrum use and sharing, and advanced communication technologies. CTL is a newly organized laboratory within NIST, formed mid-2014. As it is new and its planned work represents a departure from that carried out by the elements of which it was composed, this study focuses on its available resources and future plans rather than past work. The Boulder telecommunications laboratories currently play an important role in the economic vitality of the country and can play an even greater role given the importance of access to spectrum and spectrum sharing to the wireless networking and mobile cellular industries. Research advances are needed to ensure the continued evolution and enhancement of the connected world the public has come to expect.

The National Nanotechnology Initiative (NNI) is a multiagency,

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multidisciplinary federal initiative comprising a collection of research programs and other activities funded by the participating agencies and linked by the vision of "a future in which the ability to understand and control matter at the nanoscale leads to a revolution in technology and industry that benefits society." As first stated in the 2004 NNI strategic plan, the participating agencies intend to make progress in realizing that vision by working toward four goals. Planning, coordination, and management of the NNI are carried out by the interagency Nanoscale Science, Engineering, and Technology (NSET) Subcommittee of the National Science and Technology Council (NSTC) Committee on Technology (CoT) with support from the National Nanotechnology Coordination Office (NNCO). Triennial Review of the National Nanotechnology Initiative is the latest National Research Council review of the NNI, an assessment called for by the 21st Century Nanotechnology Research and Development Act of 2003. The overall objective of the review is to make recommendations to the NSET Subcommittee and the NNCO that will improve the NNI's value for basic and applied research and for development of applications in nanotechnology that will provide economic, societal, and national security benefits to the United States. In its assessment, the committee found it important to understand in some detail-and to describe in its report-the NNI's structure and organization; how the

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NNI fits within the larger federal research enterprise, as well as how it can and should be organized for management purposes; and the initiative's various stakeholders and their roles with respect to research. Because technology transfer, one of the four NNI goals, is dependent on management and coordination, the committee chose to address the topic of technology transfer last, following its discussion of definitions of success and metrics for assessing progress toward achieving the four goals and management and coordination. Addressing its tasks in this order would, the committee hoped, better reflect the logic of its approach to review of the NNI. Triennial Review of the National Nanotechnology Initiative also provides concluding remarks in the last chapter.

As the result of disposal practices from the early to mid-twentieth century, approximately 250 sites in 40 states, the District of Columbia, and 3 territories are known or suspected to have buried chemical warfare materiel (CWM). Much of this CWM is likely to occur in the form of small finds that necessitate the continuation of the Army's capability to transport treatment systems to disposal locations for destruction. Of greatest concern for the future are sites in residential areas and large sites on legacy military installations. The Army mission regarding the remediation of recovered chemical warfare materiel (RCWM) is turning into a program much larger than the

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existing munition and hazardous substance cleanup programs. The Army asked the Nation Research Council (NRC) to examine this evolving mission in part because this change is significant and becoming even more prominent as the stockpile destruction is nearing completion. One focus in this report is the current and future status of the Non-Stockpile Chemical Material Project (NSCMP), which now plays a central role in the remediation of recovered chemical warfare materiel and which reports to the Chemical Materials Agency. Remediation of Buried Chemical Warfare Materiel also reviews current supporting technologies for cleanup of CWM sites and surveys organizations involved with remediation of suspected CWM disposal sites to determine current practices and coordination. In this report, potential deficiencies in operational areas based on the review of current supporting technologies for cleanup of CWM sites and develop options for targeted research and development efforts to mitigate potential problem areas are identified.

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principal federal resource for solving the telecommunications concerns of federal agencies, state and local governments, private corporations and associations, standards bodies, and international organizations. ITS could provide an essential service to the nation by being a principal provider of instrumentation and spectrum measurement services; however, the inter-related shortages of funding, staff, and a coherent strategy limits its ability to fully function as a research laboratory. This report examines the institute's performance, resources, and capabilities and the extent to which these meet customer needs. The Boulder telecommunications laboratories currently play an important role in the economic vitality of the country and can play an even greater role given the importance of access to spectrum and spectrum sharing to the wireless networking and mobile cellular industries. Research advances are needed to ensure the continued evolution and enhancement of the connected world the public has come to expect.

A Decadal Strategy for Earth Observation from Space
Final Report

Statewide, Institutional, and International Applications of Distance
Education, 2nd Edition

Paradoxes and Trends in Energy and Transportation

Criminology: Theories, Patterns, and Typologies

Realizing a Vision for 21st Century Research

Progress Toward Restoring the Everglades

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 elsewhereâ€"exploiting techniques such as complex network analysis, machine learning, streaming social media analysis, and anomaly detectionâ€"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.

In 2015, the Air Force Studies Board conducted a workshop, consisting of two data-gathering sessions, to review current research practices employed by the Air Force Office of Scientific Research (AFOSR). Improving the Air Force Scientific Discovery Mission summarizes the presentations and discussions of these two sessions. This report explores the unique drivers associated with management of a 6.1 basic research portfolio in the Department of Defense and

investigates current and future practices that may further the effective and efficient management of basic research on behalf of the Air Force

Elizabeth Votruba-Drzal is an Associate Professor at the University of Pittsburgh in the Department of Psychology. Her research focuses on how families, communities, early care and education setting, and schools shape child development during early and middle childhood.

The bestselling text on the market--now in its Twelfth Edition--CRIMINOLOGY: THEORIES, PATTERNS, AND TYPOLOGIES delivers the most comprehensive, in-depth analysis of criminological theory and crime typologies available. In addition to its unparalleled breadth and depth of coverage, the text is unrivaled in its strong research base and currency. The chapters in Part Three (Crime Typologies) focus on some of the hottest issues in the field today: green crime, transnational crime, and cybercrime. Packed with real-world illustrations, the Twelfth Edition is completely updated and includes cutting-edge seminal research, up-to-the-minute

policy, newsworthy examples, and hundreds of new references. Renowned for his unbiased presentation of theories, issues, and controversies, Dr. Siegel encourages students to weigh the evidence and form their own conclusions. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The funding of science and discovery centres

The Budget of the United States Government

ICEL 2015

Nigeria's Domestic and International Politics in the Twenty-First Century

World Ocean Assessment I

Organization Descriptions and Cross-references

The Wiley Handbook of Early Childhood Development

Programs, Practices, and Policies

This book is the fourth volume of the sub series of the Lecture Notes in Mobility dedicated to Road Vehicle Automation. Its chapters have been written by researchers, engineers and analysts from all around the globe. Topics covered

include public sector activities, human factors and challenges, ethical, legal, energy and technology perspectives, vehicle systems development, as well as transportation infrastructure and planning. The book is based on the Automated Vehicles Symposium which took place in San Francisco, California (USA) in July 2016.

A proposal for using cost-benefit analysis to evaluate the socioeconomic impact of public investment in large scientific projects. Large particle accelerators, outer space probes, genomics platforms: all are scientific enterprises managed through the new form of the research infrastructure, in which communities of scientists collaborate across nations, universities, research institutions, and disciplines. Such large projects are often publicly funded, with no accepted way to measure the benefits to society of these investments. In this book, Massimo Florio suggests the use of cost-benefit analysis (CBA) to evaluate the socioeconomic impact of public investment in large and costly scientific projects. The core concept of CBA of any infrastructure is to undertake the consistent intertemporal accounting of social welfare effects using the available information. Florio develops a simple framework for such accounting in the research infrastructure context and then offers a systematic analysis of the benefits in terms of the social agents involved. He measures the benefits to scientists, students, and postdoctoral researchers; the effect on firms of knowledge spillovers; the benefits to users of information

technology and science-based innovation; the welfare effects on the general public of cultural services provided by RIs; and the willingness of taxpayers to fund scientific knowledge creation. Finally, Florio shows how these costs and benefits can be expressed in the form of stochastic net present value and other summary indicators.

We live on a dynamic Earth shaped by both natural processes and the impacts of humans on their environment. It is in our collective interest to observe and understand our planet, and to predict future behavior to the extent possible, in order to effectively manage resources, successfully respond to threats from natural and human-induced environmental change, and capitalize on the opportunities " social, economic, security, and more " that such knowledge can bring. By continuously monitoring and exploring Earth, developing a deep understanding of its evolving behavior, and characterizing the processes that shape and reshape the environment in which we live, we not only advance knowledge and basic discovery about our planet, but we further develop the foundation upon which benefits to society are built. Thriving on Our Changing Planet presents prioritized science, applications, and observations, along with related strategic and programmatic guidance, to support the U.S. civil space Earth observation program over the coming decade.

Examines the role and effectiveness of science centres, how science centres are co-

ordinated and organised, and how they are funded. This report also welcomes the offer by the Department for Innovation, Universities and Skills to take responsibility for science centres.

Earth at Risk in the 21st Century: Rethinking Peace, Environment, Gender, and Human, Water, Health, Food, Energy Security, and Migration

Sustainable Development and Social Responsibility—Volume 2

Telecommunications Research and Engineering at the Institute for Telecommunication Sciences of the Department of Commerce

Owning the Technical Baseline for Acquisition Programs in the U.S. Air Force Strategies for Team Science Success

The Sixth Biennial Review - 2016

Handbook of Evidence-Based Principles for Cross-Disciplinary Science and Practical Lessons Learned from Health Researchers

Earth at Risk in the 21st Century offers critical interdisciplinary reflections on peace, security, gender relations, migration and the environment, all of which are threatened by climate change, with women and children affected most. Deep-rooted gender discrimination is also a result of the destructive exploitation of natural resources and the pollution of soils, water, biota and air. In the Anthropocene, the management of human society and global resources has become unsustainable and has created multiple conflicts by increasing survival

threats primarily for poor people in the Global South. Alternative approaches to peace and security, focusing from bottom-up on an engendered peace with sustainability, may help society and the environment to be managed in the highly fragile natural conditions of a 'hothouse Earth'. Thus, the book explores systemic alternatives based on indigenous wisdom, gift economy and the economy of solidarity, in which an alternative cosmivision fosters mutual care between humankind and nature. • Special analysis of risks to the survival of humankind in the 21st century. • Interdisciplinary studies on peace, security, gender and environment related to global environmental and climate change. • Critical reflections on gender relations, peace, security, migration and the environment • Systematic analysis of food, water, health, energy security and its nexus. • Alternative proposals from the Global South with indigenous wisdom for saving Mother Earth.

This book provides an interdisciplinary account of how technological advances – mainly in the domains of energy and transportation – contribute to the transformation towards a more sustainable economic system. Drawing on methods from engineering, the management sciences and economics, which it combines in the framework of a systems sciences approach, the book presents qualitative and quantitative studies on government regulation, resources management and firms' strategy. Topics covered include the state-market

dilemma of government CO2 emission targets, implications of the electrification of the economy, incentives and coercion in government transport policies, and innovations in the electric vehicle industry.

The United States' tradition of conserving fish, wildlife, habitats, and cultural resources dates to the mid-19th century. States have long sought to manage fish and wildlife species within their borders, whereas many early federal conservation efforts focused on setting aside specific places as parks, sanctuaries, or reserves. With advances in landscape ecology over the past quarter-century, conservation planners, scientists, and practitioners began to stress the importance of conservation efforts at the scale of landscapes and seascapes. These larger areas were thought to harbor relatively large numbers of species that are likely to maintain population viability and sustain ecological processes and natural disturbance regimes - often considered critical factors in conserving biodiversity. By focusing conservation efforts at the level of whole ecosystems and landscape, practitioners can better attempt to conserve the vast majority of species in a particular ecosystem. Successfully addressing the large-scale, interlinked problems associated with landscape degradation will necessitate a planning process that bridges different scientific disciplines and across sectors, as well as an understanding of complexity, uncertainty, and the local context of conservation work. The landscape approach aims to develop

shared conservation priorities across jurisdictions and across many resources to create a single, collaborative conservation effort that can meet stakeholder needs. Conservation of habitats, species, ecosystem services, and cultural resources in the face of multiple stressors requires governance structures that can bridge the geographic and jurisdictional boundaries of the complex socio-ecological systems in which landscape-level conservation occurs. The Landscape Conservation Cooperatives (LCC) Network was established to complement and add value to the many ongoing state, tribal, federal, and nongovernmental efforts to address the challenge of conserving species, habitats, ecosystem services, and cultural resources in the face of large-scale and long-term threats, including climate change. A Review of the Landscape Conservation Cooperatives evaluates the purpose, goals, and scientific merits of the LCC program within the context of similar programs, and whether the program has resulted in measurable improvements in the health of fish, wildlife, and their habitats.

Obesity is a global public health problem of crucial importance. Obesity rates remain high in high-income countries and are rapidly increasing in low- and middle- income countries. Concurrently, the global consumption of unhealthy products, such as soft drinks and processed foods, continues to rise. The ongoing expansion of multinational food and beverage companies, or 'Big

Food', is a key factor behind these trends. This collection provides critical insight into the global expansion of 'Big Food', including its incursion into low-and-middle income countries. It examines the changing dynamics of the global food supply, and discusses how low-income countries can alter the 'Big Food'-diet from the bottom-up. It examines a number of issues related to 'Big Food' marketing strategies, including the way in which they advertise to youths and the rural poor. These issues are discussed in terms of their public health implications, and their relation to public health activities, for example 'soda taxes', and the promotion of nutritionally-healthier products. This book was originally published as a special issue of Critical Public Health.

Innovation for Development and Deployment of Increasingly Clean Electric Power Technologies

Investing in Science

Force Multiplying Technologies for Logistics Support to Military Operations
Sustainable Development Goal 14 - Life Below Water: Towards a Sustainable Ocean

ICEL2015-10th International Conference on e-Learning

Improving the Air Force Scientific Discovery Mission

These proceedings represent the work of researchers participating

in the 10th International Conference on e-Learning (ICEL 2015) which is being hosted this year by the College of the Bahamas, Nassau on the 25-26 June 2015. ICEL is a recognised event on the International research conferences calendar and provides a valuable platform for individuals to present their research findings, display their work in progress and discuss conceptual advances in the area of e-Learning. It provides an important opportunity for researchers and managers to come together with peers to share their experiences of using the varied and expanding range of e-Learning available to them. With an initial submission of 91 abstracts, after the double blind, peer review process there are 41 academic Research papers and 2 PhD papers Research papers published in these Conference Proceedings. These papers come from some many different countries including: Australia, Belgium, Brazil, Canada, China, Germany, Greece, Hong Kong, Malaysia, Portugal, Republic of Macedonia, Romania, Slovakia, South Africa, Sweden, United Arab Emirates, UK and the USA. A selection of the best papers - those agreed by a panel of reviewers and the editor will be published in a conference edition of EJEL (the Electronic Journal of e-Learning www.ejel.com). These will be chosen for their

quality of writing and relevance to the Journal's objective of publishing papers that offer new insights or practical help into the application e-Learning.

Volume 1 (A and B) of the Yearbook of International Organizations covers international organizations throughout the world, comprising their aims, activities and events

This Proceedings book presents papers from the 39th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering, MaxEnt 2019. The workshop took place at the Max Planck Institute for Plasma Physics in Garching near Munich, Germany, from 30 June to 5 July 2019, and invited contributions on all aspects of probabilistic inference, including novel techniques, applications, and work that sheds new light on the foundations of inference. Addressed are inverse and uncertainty quantification (UQ) and problems arising from a large variety of applications, such as earth science, astrophysics, material and plasma science, imaging in geophysics and medicine, nondestructive testing, density estimation, remote sensing, Gaussian process (GP) regression, optimal experimental design, data assimilation, and data mining.

Reflecting the latest developments and practices from the field, *NUTRITION & DIET THERAPY, 12E* introduces the essentials of nutrition concepts, good health, and client care. It equips LPN/LVN nursing students with the tools and resources to more effectively help clients improve nutrition and overall health -- especially as our nation faces higher rates of preventable chronic disease as a result of poor diet quality and physical inactivity. Extremely user friendly, the text is organized around three simple concepts: Section 1 covers the fundamentals of nutrition, Section 2 explains nutrition over the life cycle, and Section 3 addresses medical nutrition therapy. New information is included on Healthy People 2020, *DIETARY GUIDELINES FOR AMERICANS 2015-2020*, obesity prevention and treatment, lifestyle medicine, diabetes, celiac disease, irritable and short bowel syndrome, and more. In addition, hands-on activities help readers put what they learn into practice. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The Power of Change
Big Food

***A Review of the Landscape Conservation Cooperatives
Team-based Care for Heart Failure
Leveraging Best Practices in Basic Research Management: A
Workshop Report
Proceedings, 2019, MaxEnt 2019
Trauma- and Stressor-Related Disorders***

Collaborations that integrate diverse perspectives are critical to addressing many of our complex scientific and societal problems. Yet those engaged in cross-disciplinary team science often face institutional barriers and collaborative challenges. Strategies for Team Science Success offers readers a comprehensive set of actionable strategies for reducing barriers and overcoming challenges and includes practical guidance for how to implement effective team science practices. More than 100 experts--including scientists, administrators, and funders from a wide range of disciplines and professions-- explain evidence-based principles, highlight state-of-the-art strategies, tools, and resources, and share first-person accounts of how they've applied them in their own successful team science initiatives. While many examples draw from cross-disciplinary team

science initiatives in the health domain, the handbook is designed to be useful across all areas of science. Strategies for Team Science Success will inspire and enable readers to embrace cross-disciplinary team science, by articulating its value for accelerating scientific progress, and by providing practical strategies for success. Scientists, administrators, funders, and others engaged in team science will also leave equipped to develop new policies and practices needed to keep pace in our rapidly changing scientific landscape. Scholars across the Science of Team Science (SciTS), management, organizational, behavioral and social sciences, public health, philosophy, and information technology, among other areas of scholarship, will find inspiration for new research directions to continue advancing cross-disciplinary team science.

The Everglades ecosystem is vast, stretching more than 200 miles from Orlando to Florida Bay, and Everglades National Park is but a part located at the southern end. During the 19th and 20th centuries, the historical Everglades has been reduced to half of its original size, and what remains is not the pristine ecosystem many image it to be, but one that has been highly engineered and otherwise heavily

influenced, and is intensely managed by humans. Rather than slowly flowing southward in a broad river of grass, water moves through a maze of canals, levees, pump stations, and hydraulic control structures, and a substantial fraction is diverted from the natural system to meet water supply and flood control needs. The water that remains is polluted by phosphorus and other contaminants originating from agriculture and other human activities. Many components of the natural system are highly degraded and continue to degrade. Progress Toward Restoring the Everglades is the sixth biennial review of progress made in meeting the goals of the Comprehensive Everglades Restoration Plan (CERP). This complex, multibillion-dollar project to protect and restore the remaining Everglades has a 30-40 year timeline. This report assesses progress made in the various separate project components and discusses specific scientific and engineering issues that may impact further progress. According to Progress Toward Restoring the Everglades, a dedicated source of funding could provide ongoing long-term system-wide monitoring and assessment that is critical to meeting restoration objectives. This report examines the implications of knowledge gained and changes in widely accepted

scientific understanding regarding pre-drainage hydrology, climate change, and the feasibility of water storage since the CERP was developed.

This issue of Heart Failure Clinics examines the critical role of team-based care in the management of patients with heart failure. Articles address Team-Based Care for Prevention, Patients Hospitalized with Heart Failure, Transitions of Care, Outpatients, Managing Cardiac Comorbidities, Managing Non-cardiac Conditions, Cardiac Rehabilitation and Exercise Training, External Telemonitoring, Ambulatory Hemodynamic Cardiac Device Monitoring, Advanced Heart Failure, and Palliative and End-of-Life Care.

The World Ocean Assessment - or, to give its full title, The First Global Integrated Marine Assessment - is the outcome of the first cycle of the United Nations' Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects. The Assessment provides vital, scientifically-grounded bases for the consideration of ocean issues, including climate change, by governments, intergovernmental agencies, non-governmental agencies and all other stakeholders and policymakers involved in

ocean affairs. Together with future assessments and related initiatives, it will support the implementation of the recently adopted 2030 Agenda for Sustainable Development, particularly its ocean-related goals. Moreover, it will also form an important reference text for marine science courses.

Budget of the United States Government

Social Cost-Benefit Analysis of Research Infrastructures

eleventh report of session 2006-07, Vol. 2: Oral and written evidence

Meeting the Nation's Telecommunications Needs

Critical perspectives on the global growth of the food and beverage industry

Towards a Sustainable Economy

Crime, Violence, and Global Warming

In response to the Chief of Naval Operations (CNO), the National Research Council appointed a committee operating under the auspices of the Naval Studies Board to study the national security implications of climate change for U.S. naval forces. In conducting this study, the committee found that even the most moderate current trends in climate, if continued, will present new national security challenges for the U.S. Navy, Marine Corps, and Coast Guard. While the timing, degree, and consequences of future

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climate change impacts remain uncertain, many changes are already underway in regions around the world, such as in the Arctic, and call for action by U.S. naval leadership in response. The terms of reference (TOR) directed that the study be based on Intergovernmental Panel on Climate Change (IPCC) scenarios and other peer-reviewed assessment. Therefore, the committee did not address the science of climate change or challenge the scenarios on which the committee's findings and recommendations are based. National Security Implications of Climate Change for U.S. Naval Forces addresses both the near- and long-term implications for U.S. naval forces in each of the four areas of the TOR, and provides corresponding findings and recommendations. This report and its conclusions are organized around six discussion areas--all presented within the context of a changing climate.

The Hubble Space Telescope (HST) has operated continuously since 1990. During that time, four space shuttle-based service missions were launched, three of which added major observational capabilities. A fifth "SM-4" was intended to replace key telescope systems and install two new instruments. The loss of the space shuttle Columbia, however, resulted in a decision by NASA not to pursue the SM-4 mission leading to a likely end of Hubble's useful life in 2007-2008. This situation resulted in an unprecedented outcry from scientists and the public. As a result, NASA began to explore and develop a robotic servicing mission; and Congress directed NASA to request a study from the National Research Council (NRC) of the robotic and shuttle servicing

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options for extending the life of Hubble. This report presents an assessment of those two options. It provides an examination of the contributions made by Hubble and those likely as the result of a servicing mission, and a comparative analysis of the potential risk of the two options for servicing Hubble. The study concludes that the Shuttle option would be the most effective one for prolonging Hubble's productive life.

Crime, Violence, and Global Warming introduces the many connections between climate change and criminal activity. Conflict over natural resources can escalate to state and non-state actors, resulting in wars, asymmetrical warfare, and terrorism. Crank and Jacoby apply criminological theory to each aspect of this complicated web, helping readers to evaluate conflicting claims about global warming and to analyze evidence of the current and potential impact of climate change on conflict and crime. Beginning with an overview of the science of global warming, the authors move on to the links between climate change, scarce resources, and crime. Their approach takes in the full scope of causes and consequences, present and future, in the United States and throughout the world. The book concludes by looking ahead at the problem of forecasting future security implications if global warming continues or accelerates. This fresh approach to the criminology of climate change challenges readers to examine all sides of this controversial question and to formulate their own analysis of our planet's future. This edited volume explores Nigeria's domestic and international politics and its implications for the country's national development and international status. Coinciding

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with the twenty year anniversary of Nigeria's return to democratic rule, this volume considers the state of democracy in Nigeria and examines its successes and challenges with a view towards offering possible solutions for the country's future development. The first half of the volume addresses domestic politics, focusing on current issues such as the 2019 elections, Nigerian federalism, media, state-civil society relations, and Boko Haram terrorism. The second half looks at Nigeria's relations with its African neighbors, discussing the relationships between Nigeria and South Africa, Egypt, Ghana, and Cameroon, among others. Engaging the full spectrum of the politics of a rising African power, this volume will be of interest to students and researchers of comparative politics, international relations, foreign policy, African studies, regional politics, peace, security, conflict, and development studies, as well as African policymakers.

*With a Foreword by Lourdes Arizpe Schlosser and a Preface by Hans Günter Brauch
Strengthening Data Science Methods for Department of Defense Personnel and
Readiness Missions*

*Open Science in der Soziologie: Eine interdisziplinäre Bestandsaufnahme zur offenen
Wissenschaft und eine Untersuchung ihrer Verbreitung in der Soziologie*

Assessment of Options for Extending the Life of the Hubble Space Telescope

Distance Education

Triennial Review of the National Nanotechnology Initiative

Nutrition & Diet Therapy

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Trauma, stress, and manmade and natural disasters are increasingly impacting individuals and communities. The clinical and scientific advances presented here strive to address the rapidly expanding individual and community burden of disease resulting from the experience of traumatic or stressful events. The authors describe the suffering which trauma- and stressor-related disorders (TSRDs) cause, and explain in 30 concise chapters the state of the science for the DSM-5 trauma- and stressor-related disorders with regard to pathogenesis, diagnostic assessment and approach to treatment. This volume presents the genetic, neurochemical, developmental, and psychological foundations and epidemiology of the trauma- and stressor-related disorders, in addition to specific guidance on screening and evaluation, diagnosis, prevention, and biological, psychological and social treatments. The chapters in this book cover a variety of TSRDs: posttraumatic stress disorder, acute stress disorder, adjustment disorders, persistent complex bereavement disorder, and reactive attachment and disinhibited social engagement disorders. Graphics, including neuroimaging are integrated for easy reference and to aid grasping of key concepts. The book draws on the current literature and provides brief case scenarios from individuals and families exposed to psychological or physical traumas, including mass trauma events. Factors contributing to susceptibility to these disorders and to

resilience are also addressed. Trauma- and Stressor-Related Disorders provides an in-depth yet succinct introduction to current clinical and research knowledge for trainees and for professionals including psychotherapeutic, psychopharmacological, public health, and policy interventions. It addresses the level of evidence for different best practices to target the disabling cognitive, emotional or behavioral symptoms for a specific patient or population.

Openness and sharing of information are fundamental to the progress of science and to the effective functioning of the research enterprise. The advent of scientific journals in the 17th century helped power the Scientific Revolution by allowing researchers to communicate across time and space, using the technologies of that era to generate reliable knowledge more quickly and efficiently. Harnessing today's stunning, ongoing advances in information technologies, the global research enterprise and its stakeholders are moving toward a new open science ecosystem. Open science aims to ensure the free availability and usability of scholarly publications, the data that result from scholarly research, and the methodologies, including code or algorithms, that were used to generate those data. Open Science by Design is aimed at overcoming barriers and moving toward open science as the default approach across the research enterprise. This report explores specific examples of open science and discusses a range of

challenges, focusing on stakeholder perspectives. It is meant to provide guidance to the research enterprise and its stakeholders as they build strategies for achieving open science and take the next steps.

Electricity, supplied reliably and affordably, is foundational to the U.S. economy and is utterly indispensable to modern society. However, emissions resulting from many forms of electricity generation create environmental risks that could have significant negative economic, security, and human health consequences. Large-scale installation of cleaner power generation has been generally hampered because greener technologies are more expensive than the technologies that currently produce most of our power. Rather than trade affordability and reliability for low emissions, is there a way to balance all three? The Power of Change: Innovation for Development and Deployment of Increasingly Clean Energy Technologies considers how to speed up innovations that would dramatically improve the performance and lower the cost of currently available technologies while also developing new advanced cleaner energy technologies. According to this report, there is an opportunity for the United States to continue to lead in the pursuit of increasingly clean, more efficient electricity through innovation in advanced technologies. The Power of Change: Innovation for Development and Deployment of Increasingly Clean Energy

Technologies makes the case that America's advantages—world-class universities and national laboratories, a vibrant private sector, and innovative states, cities, and regions that are free to experiment with a variety of public policy approaches—position the United States to create and lead a new clean energy revolution. This study focuses on five paths to accelerate the market adoption of increasing clean energy and efficiency technologies: (1) expanding the portfolio of cleaner energy technology options; (2) leveraging the advantages of energy efficiency; (3) facilitating the development of increasing clean technologies, including renewables, nuclear, and cleaner fossil; (4) improving the existing technologies, systems, and infrastructure; and (5) leveling the playing field for cleaner energy technologies. *The Power of Change: Innovation for Development and Deployment of Increasingly Clean Energy Technologies* is a call for leadership to transform the United States energy sector in order to both mitigate the risks of greenhouse gas and other pollutants and to spur future economic growth. This study's focus on science, technology, and economic policy makes it a valuable resource to guide support that produces innovation to meet energy challenges now and for the future.

Distance Learning journal is a premiere outlet for articles featuring practical applications of distance education in states, institutions, and countries. Distance

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Education: Statewide, Institutional, and International Applications of Distance Education, 2nd Edition is a collection of readings from Distance Learning journal written by practitioners for practitioners.

Road Vehicle Automation 4

The Chemical News and Journal of Physical Science

Telecommunications Research and Engineering at the Communications Technology Laboratory of the Department of Commerce

Yearbook of International Organizations 2013-2014

Open Science by Design

Remediation of Buried Chemical Warfare Materiel

An Issue of Heart Failure Clinics

The mission of the United States Army is to fight and win our nation's wars by providing prompt, sustained land dominance across the full range of military operations and spectrum of conflict in support of combatant commanders.

Accomplishing this mission rests on the ability of the Army to equip and move its forces to the battle and sustain them while they are engaged. Logistics provides the backbone for Army combat operations. Without fuel, ammunition, rations, and other supplies, the Army would grind to a halt. The U.S. military must be prepared to fight anywhere on the globe and, in an era of coalition warfare, to

logistically support its allies. While aircraft can move large amounts of supplies, the vast majority must be carried on ocean going vessels and unloaded at ports that may be at a great distance from the battlefield. As the wars in Afghanistan and Iraq have shown, the costs of convoying vast quantities of supplies is tallied not only in economic terms but also in terms of lives lost in the movement of the materiel. As the ability of potential enemies to interdict movement to the battlefield and interdict movements in the battlespace increases, the challenge of logistics grows even larger. No matter how the nature of battle develops, logistics will remain a key factor. Force Multiplying Technologies for Logistics Support to Military Operations explores Army logistics in a global, complex environment that includes the increasing use of antiaccess and area-denial tactics and technologies by potential adversaries. This report describes new technologies and systems that would reduce the demand for logistics and meet the demand at the point of need, make maintenance more efficient, improve inter- and intratheater mobility, and improve near-real-time, in-transit visibility. Force Multiplying Technologies also explores options for the Army to operate with the other services and improve its support of Special Operations Forces. This report provides a logistics-centric research and development investment strategy and illustrative examples of how improved logistics could look in the future.

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This book gathers high-quality research papers presented at the 2nd AUE international research conference, AUEIRC 2018, which was organized by the American University in the Emirates, Dubai, and held on November 13th-15th, 2018. The book is broadly divided into two main sections: Sustainability and Smart Business, and Sustainability and Creative Industries. The broad range of topics covered under these sections includes: risk assessment in agriculture, corporate social responsibility and the role of intermediaries, the impact of privatizing health insurance, political events and their effect on foreign currency exchange, the effect of sustainable HR practices on financial performance, sustainability integration in the supply chain and logistics, gender inequality in the MENA economies, the panel data model, the model of sustainable marketing in the era of Industry 4.0, micro-enterprises as a tool for combating unemployment, the impact of financial education and control on financial behavior, measuring financial and asset performance in agricultural firms, a comprehensive strategic approach to sustainability in the UAE, sustainability and project finance, HR analytics, FaD or fashion for organizational sustainability, a conceptual framework of sustainable competitive advantages, psychology of organizational sustainability, Blockchain technology and sustainability, veganism and sustainability, institution building from an emotional intelligence perspective,

sustainable concrete production using CWP, occupants' behavior and energy usage in Emirati houses, the effect of shop lighting on consumer behavior, multimedia applications in digital transformation art, integrating biomimicry principles in sustainable architecture, experimental sustainable practices in fashion education, technology-assisted student-centered learning for civil engineering, and a 10-step design process for architectural design studios. All contributions present high-quality original research work, findings and lessons learned in practical development.

While there are examples of successful weapon systems acquisition programs within the U.S. Air Force (USAF), many of the programs are still incurring cost growth, schedule delays, and performance problems. The USAF now faces serious challenges in acquiring and maintaining its weapons systems as it strives to maintain its current programs; add new capabilities to counter evolving threats; and reduce its overall program expenditures. Owning the technical baseline is a critical component of the Air Force's ability to regain and maintain acquisition excellence. Owning the technical baseline allows the government acquisition team to manage and respond knowledgeably and effectively to systems development, operations, and execution, thereby avoiding technical and other programmatic barriers to mission success. Additionally, owning the technical

baseline ensures that government personnel understand the user requirements, why a particular design and its various features have been selected over competing designs, and what the options are to pursue alternative paths to the final product given unanticipated cost, schedule, and performance challenges. Owning the Technical Baseline for Acquisition Programs in the U.S. Air Force discusses the strategic value to the Air Force of owning the technical baseline and the risk of not owning it and highlights key aspects of how agencies other than the Air Force own the technical baseline for their acquisition programs. This report identifies specific barriers to owning the technical baseline for the Air Force and makes recommendations to help guide the Air Force in overcoming those barriers.

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Proceedings of the 2nd American University in the Emirates International
Research Conference, AUEIRC'18–Dubai, UAE 2018
Thriving on Our Changing Planet
The First Global Integrated Marine Assessment
Appendix

A Sleeping Giant?