2017 Emerging Georgia Tech

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Anticipating and Preparing for Emerging

Skills and Jobs

This book focuses on developing an understanding of the complex interplay of forces acting on individual universities and higher education systems to enable leaders and practitioners to take purposeful and strategic action. It explores the challenging landscape of higher education and the pressures that are reshaping the university as a societal institution, describing the complex interplay of technological, sociological, political and economic forces driving change. The issues analysed are global in scope, reflecting the diversity of contexts, but also the common nature of the challenges facing institutions individually and collectively. The analysis draws on the lessons learnt and evidence from over fifty organisational case studies undertaken by the author over the past decade, exploring organisational change in higher education institutions in New Zealand, Australia, the United States and the United Kingdom, and on his engagement as president of the ACODE organisation with colleagues responsible for learning technological change in Australasia. The book helps institutions respond to technological change purposefully, in ways that build upon a clear understanding of the complex nature of the existing institution, its students and the organisational context.

Who Reads Poetry

The concept of "the city" —as well as "the state" and "the nation state" —is passé, agree contributors to

this insightful book. The new scale for considering economic strength and growth opportunities is "the megaregion," a network of metropolitan centers and their surrounding areas that are spatially and functionally linked through environmental, economic, and infrastructure interactions. Recently a great deal of attention has been focused on the emergence of the European Union and on European spatial planning, which has boosted the region's competitiveness. Megaregions applies these emerging concepts in an American context. It addresses critical questions for our future: What are the spatial implications of local, regional, national, and global trends within the context of sustainability, economic competitiveness, and social equity? How can we address housing, transportation, and infrastructure needs in growing megaregions? How can we develop and implement the policy changes necessary to make viable, livable megaregions? By the year 2050, megaregions will contain two-thirds of the U.S. population. Given the projected growth of the U.S. population and the accompanying geographic changes, this forward-looking book argues that U.S. planners and policymakers must examine and implement the megaregion as a new and appropriate framework. Contributors, all of whom are leaders in their academic and professional specialties, address the most critical issues confronting the U.S. over the next fifty years. At the same time, they examine ways in which the idea of megaregions might help address our concerns about equity, the economy, and the environment. Together, these essays define the theoretical, analytical, and operational underpinnings of a new structure that could respond to the

anticipated upheavals in U.S. population and living patterns.

Network Algorithmics

Nutraceutical and Functional Food Components: Effects of Innovative Processing Techniques presents the latest information on the chemistry, biochemistry, toxicology, health effects, and nutrition characteristics of food components and the recent trends and practices that the food industry (e.g. the implementation of non-thermal technologies, nanoencapsulation, new extraction techniques, and new sources, like by-products, etc.) has adopted. This book fills the gap in knowledge by denoting the impact of recent food industry advances in different parameters of food components (e.g. nutritional value, physical and chemical properties, bioavailability and bioaccessibility characteristics) and final products (e.g. applications, shelf-life, sensory characteristics). Provides a holistic view of the interactions between novel processing techniques and food components Explains how innovative techniques, such as non-thermal, nano-encapsulation, waste recovery, and novel extraction and processing methods impact the nutritional value of ingredients commonly used in functional food and nutraceutical products Covers food applications, shelf-life, and sensory characteristics

Trucking in the Age of Information

Diagnostic Molecular Pathology: A Guide to Applied

Molecular Testing is organized around disease types (genetic disease, infectious disease, neoplastic disease, among others). In each section, the authors provide background on disease mechanisms and describe how laboratory testing is built on knowledge of these mechanisms. Sections are dedicated to general methodologies employed in testing (to convey the concepts reflected in the methods), and specific description of how these methods can be applied and are applied to specific diseases are described. The book does not present molecular methods in isolation, but considers how other evidence (symptoms, radiology or other imaging, or other clinical tests) is used to guide the selection of molecular tests or how these other data are used in conjunction with molecular tests to make diagnoses (or otherwise contribute to clinical workup). In addition, final chapters look to the future (new technologies, new approaches) of applied molecular pathology and how discovery-based research will yield new and useful biomarkers and tests. Diagnostic Molecular Pathology: A Guide to Applied Molecular Testing contains exercises to test readers on their understanding of how molecular diagnostic tests are utilized and the value of the information that can be obtained in the context of the patient workup. Readers are directed to an ancillary website that contains supplementary materials in the form of exercises where decision trees can be employed to simulate actual clinical decisions. Focuses on the menu of molecular diagnostic tests available in modern molecular pathology or clinical laboratories that can be applied to disease detection, diagnosis, and classification in the clinical workup of a patient

Explains how molecular tests are utilized to guide the treatment of patients in personalized medicine (guided therapies) and for prognostication of disease Features an ancillary website with self-testing exercises where decision trees can be employed to simulate actual clinical decisions Highlights new technologies and approaches of applied molecular pathology and how discovery-based research will yield new and useful biomarkers and tests

Will the Internet Fragment?

RRAM technology has made significant progress in the past decade as a competitive candidate for the next generation non-volatile memory (NVM). This lecture is a comprehensive tutorial of metal oxide-based RRAM technology from device fabrication to array architecture design. State-of-the-art RRAM device performances, characterization, and modeling techniques are summarized, and the design considerations of the RRAM integration to large-scale array with peripheral circuits are discussed. Chapter 2 introduces the RRAM device fabrication techniques and methods to eliminate the forming process, and will show its scalability down to sub-10 nm regime. Then the device performances such as programming speed, variability control, and multi-level operation are presented, and finally the reliability issues such as cycling endurance and data retention are discussed. Chapter 3 discusses the RRAM physical mechanism, and the materials characterization techniques to observe the conductive filaments and the electrical characterization techniques to study the electronic

conduction processes. It also presents the numerical device modeling techniques for simulating the evolution of the conductive filaments as well as the compact device modeling techniques for circuit-level design. Chapter 4 discusses the two common RRAM array architectures for large-scale integration: one-transistor-one-resistor (1T1R) and cross-point architecture with selector. The write/read schemes are presented and the peripheral circuitry design considerations are discussed. Finally, a 3D integration approach is introduced for building ultra-high density RRAM array. Chapter 5 is a brief summary and will give an outlook for RRAM's potential novel applications beyond the NVM applications.

Industrial and Municipal Sludge

This book reports on research and practice on computational thinking and the effect it is having on education worldwide, both inside and outside of formal schooling. With coding becoming a required skill in an increasing number of national curricula (e.g., the United Kingdom, Israel, Estonia, Finland), the ability to think computationally is quickly becoming a primary 21st century "basic" domain of knowledge. The authors of this book investigate how this skill can be taught and its resultant effects on learning throughout a student's education, from elementary school to adult learning.

The Reading Mina Loy's Autobiographies

Contemporary High Performance Computing: From

Petascale toward Exascale, Volume 3 focuses on the ecosystems surrounding the world's leading centers for high performance computing (HPC). It covers many of the important factors involved in each ecosystem: computer architectures, software, applications, facilities, and sponsors. This third volume will be a continuation of the two previous volumes, and will include other HPC ecosystems using the same chapter outline: description of a flagship system, major application workloads, facilities, and sponsors. Features: Describes many prominent, international systems in HPC from 2015 through 2017 including each system's hardware and software architecture Covers facilities for each system including power and cooling Presents application workloads for each site Discusses historic and projected trends in technology and applications Includes contributions from leading experts Designed for researchers and students in high performance computing, computational science, and related areas, this book provides a valuable guide to the state-of-the art research, trends, and resources in the world of HPC.

Resistive Random Access Memory (RRAM)

In designing a network device, you make dozens of decisions that affect the speed with which it will perform-sometimes for better, but sometimes for worse. Network Algorithmics provides a complete, coherent methodology for maximizing speed while meeting your other design goals. Author George

Varghese begins by laying out the implementation bottlenecks that are most often encountered at four disparate levels of implementation: protocol, OS, hardware, and architecture. He then derives 15 solid principles-ranging from the commonly recognized to the groundbreaking-that are key to breaking these bottlenecks. The rest of the book is devoted to a systematic application of these principles to bottlenecks found specifically in endnodes, interconnect devices, and specialty functions such as security and measurement that can be located anywhere along the network. This immensely practical, clearly presented information will benefit anyone involved with network implementation, as well as students who have made this work their goal. FOR INSTRUCTORS: To obtain access to the solutions manual for this title simply register on our textbook website (textbooks.elsevier.com)and request access to the Computer Science subject area. Once approved (usually within one business day) you will be able to access all of the instructor-only materials through the "Instructor Manual" link on this book's academic web page at textbooks.elsevier.com. Addresses the bottlenecks found in all kinds of network devices, (data copying, control transfer, demultiplexing, timers, and more) and offers ways to break them Presents techniques suitable specifically for endnodes, including Web servers Presents techniques suitable specifically for interconnect devices, including routers, bridges, and gateways Written as a practical guide for implementers but full of valuable insights for students, teachers, and researchers Includes end-of-chapter summaries and exercises

Diagnostic Molecular Pathology

Prevent destructive attacks to your Azure public cloud infrastructure, remove vulnerabilities, and instantly report cloud security readiness. This book provides comprehensive guidance from a security insider's perspective. Cyber Security on Azure explains how this 'security as a service' (SECaaS) business solution can help you better manage security risk and enable data security control using encryption options such as Advanced Encryption Standard (AES) cryptography. Discover best practices to support network security groups, web application firewalls, and database auditing for threat protection. Configure custom security notifications of potential cyberattack vectors to prevent unauthorized access by hackers, hacktivists, and industrial spies. What You'll Learn This book provides step-by-step guidance on how to: Support enterprise security policies Improve cloud security Configure intrusion detection Identify potential vulnerabilities Prevent enterprise security failures Who This Book Is For IT, cloud, and security administrators; CEOs, CIOs, and other business professionals

Contemporary High Performance Computing

CSR and Climate Change Implications for Multinational Enterprises

Who reads poetry? We know that poets do, but what

about the rest of us? When and why do we turn to verse? Seeking the answer, Poetry magazine since 2005 has published a column called "The View From Here," which has invited readers "from outside the world of poetry" to describe what has drawn them to poetry. Over the years, the incredibly diverse set of contributors have included philosophers, journalists, musicians, and artists, as well as doctors and soldiers, an iron-worker, an anthropologist, and an economist. This collection brings together fifty compelling pieces, which are in turns surprising, provocative, touching, and funny. In one essay, musician Neko Case calls poetry "a delicate, pretty lady with a candy exoskeleton on the outside of her crepe-paper dress." In another, anthropologist Helen Fisher turns to poetry while researching the effects of love on the brain, "As other anthropologists have studied fossils, arrowheads, or pot shards to understand human thought, I studied poetry. . . . I wasn't disappointed: everywhere poets have described the emotional fallout produced by the brain's eruptions." Even film critic Roger Ebert memorized the poetry of e. e. cummings, and the rapper Rhymefest attests here to the self-actualizing power of poems: "Words can create worlds, and I've discovered that poetry can not only be read but also lived out. My life is a poem." Music critic Alex Ross tells us that he keeps a paperback of The Palm at the End of the Mind by Wallace Stevens on his desk next to other, more utilitarian books like a German dictionary, a King James Bible, and a Macintosh troubleshooting manual. Who Reads Poetry offers a truly unique and broad selection of perspectives and reflections, proving that poetry can be read by everyone. No matter what

you're seeking, you can find it within the lines of a poem.

On-Chip Networks

Graph partitioning and graph clustering are ubiquitous subtasks in many applications where graphs play an important role. Generally speaking, both techniques aim at the identification of vertex subsets with many internal and few external edges. To name only a few, problems addressed by graph partitioning and graph clustering algorithms are: What are the communities within an (online) social network? How do I speed up a numerical simulation by mapping it efficiently onto a parallel computer? How must components be organized on a computer chip such that they can communicate efficiently with each other? What are the segments of a digital image? Which functions are certain genes (most likely) responsible for? The 10th DIMACS Implementation Challenge Workshop was devoted to determining realistic performance of algorithms where worst case analysis is overly pessimistic and probabilistic models are too unrealistic. Articles in the volume describe and analyze various experimental data with the goal of getting insight into realistic algorithm performance in situations where analysis fails.

Barbie Chang

Emerging Cyber Threats and Cognitive Vulnerabilities identifies the critical role human behavior plays in

cybersecurity and provides insights into how human decision-making can help address rising volumes of cyberthreats. The book examines the role of psychology in cybersecurity by addressing each actor involved in the process: hackers, targets, cybersecurity practitioners and the wider social context in which these groups operate. It applies psychological factors such as motivations, group processes and decision-making heuristics that may lead individuals to underestimate risk. The goal of this understanding is to more quickly identify threat and create early education and prevention strategies. This book covers a variety of topics and addresses different challenges in response to changes in the ways in to study various areas of decision-making, behavior, artificial intelligence, and human interaction in relation to cybersecurity. Explains psychological factors inherent in machine learning and artificial intelligence Discusses the social psychology of online radicalism and terrorist recruitment Examines the motivation and decision-making of hackers and "hacktivists" Investigates the use of personality psychology to extract secure information from individuals

Salvinia Molesta

This book investigates new enabling technologies for Fi-Wi convergence. The editors discuss Fi-Wi technologies at the three major network levels involved in the path towards convergence: system level, network architecture level, and network management level. The main topics will be: a. At

system level: Radio over Fiber (digitalized vs. analogic, standardization, E-band and beyond) and 5G wireless technologies; b. Network architecture level: NGPON, WDM-PON, BBU Hotelling, Cloud Radio Access Networks (C-RANs), HetNets. c. Network management level: SDN for convergence, Next-generation Point-of-Presence, Wi-Fi LTE Handover, Cooperative MultiPoint.

The Strength in Numbers

Industrial and Municipal Sludge: Emerging Concerns and Scope for Resource Recovery begins with a characterization of the types of sludge and their sources and management strategies. This section is followed by specific chapters that cover Emerging contaminants in sludge (Endocrine disruptors, Pesticides and Pharmaceutical residues, including illicit drugs/controlled substances), Bioleaching of sludge [with an enriched sulfur-oxidizing bacterial community, Recovery of valuable metals (Bioleaching and use of sulfur-oxidizing bacterial community, and Biogas production by continuous thermal hydrolysis and thermophilic anaerobic digestion of waste activated sludge. In addition, the book includes numerous tables and flow diagrams to help users further comprehend the subject matter. Includes numerous tables and flow diagrams to assist in the comprehension of new and existing sludge treatments and resource recovery technology Covers biogas production by continuous thermal hydrolysis and thermophilic anaerobic digestion of waste activated sludge Presents information on the recovery of valuable metals from sludge (bioleaching and the use

of a sulfur-oxidizing bacterial community) Includes opportunities and challenges in the biorefinery-based valorization of pulp and paper sludge

Emotions and Affect in Human Factors and Human-Computer Interaction

Victoria Chang's collection takes its title from what many call "the worst weed in the world," a plant so rapidly and uncontrollably invasive that it is illegal to sell or possess in the United States. Chang explores this image of vitality and evil in three thematically grouped sections focusing on corporate greed, infidelity and desire, and historical atrocities, including the excesses of the Cultural Revolution in China and the massacre of Chinese people in Nanking by Japanese troops in World War II. This edgy, fierce subject matter becomes engaging and fresh as Chang applies her powers of imagination to the extraordinary lives of Madame Mao, investment banker Frank P. Quattrone, and others living at extraordinary historical moments. In "Seven Stages of Genocide," for example, the poem's speaker is herded into a death camp along with a neighbor that he strongly dislikes: "The barbed wire around us forces me / to catch his breath that smells like goose." Chang focuses her attention to occurrences in the world that many poets find too violent or disturbing to write about, thereby making her own distinctive aesthetic from that which is, like Salvinia molesta, both creepy and beautiful.

Emerging Nanoelectronics

On a mountainside in sunny Tuscany, in October 1989, 96 people from 23 countries on five continents gathered to learn and teach about the problems of managing contemporary science. The diversity of economic and political systems represented in the group was matched by our occupations, which stretched from science policy practitioners, through research scientists and engineers, through academic observers of science and science policy. It was this diversity, along with the opportunities for infonnal discussion provided by long meals and remote location, that made the conference a special learning experience. Except at lecture time, it was impossible to distinguish the "students" at this event from the "teachers," and even the most senior members of the teaching staff went away with a sense that they had learned more from this group than from many a standard conference on science policy they had attended. The flavor of the conference experience cannot be captured adequately in a proceedings volume, and so we have not tried to create a historical record in this book. Instead, we have attempted to illustrate the core problems the panicipants at the conference shared, discussed, and debated, using both lectures delivered by the fonnal teaching staff and summaries of panel discussions, which extended to other panicipants and therefore increased the range of experiences reponed.

Emerging Cyber Threats and Cognitive Vulnerabilities

This is the first comprehensive history of human-

computer interaction (HCI). Whether you are a user experience professional or an academic researcher, whether you identify with computer science, human factors, information systems, information science, design, or communication, you can discover how your experiences fit into the expanding field of HCI. You can determine where to look for relevant information in other fields—and where you won't find it. This book describes the different fields that have participated in improving our digital tools. It is organized chronologically, describing major developments across fields in each period. Computer use has changed radically, but many underlying forces are constant. Technology has changed rapidly, human nature very little. An irresistible force meets an immovable object. The exponential rate of technological change gives us little time to react before technology moves on. Patterns and trajectories described in this book provide your best chance to anticipate what could come next. We have reached a turning point. Tools that we built for ourselves to use are increasingly influencing how we use them, in ways that are planned and sometimes unplanned. The book ends with issues worthy of consideration as we explore the new world that we and our digital partners are shaping.

Signifying the Local

In Ruling the Root, Milton Mueller uses the theoretical framework of institutional economics to analyze the global policy and governance problems created by the assignment of Internet domain names and addresses.

"The root" is the top of the domain name hierarchy and the Internet address space. It is the only point of centralized control in what is otherwise a distributed and voluntaristic network of networks. Both domain names and IP numbers are valuable resources, and their assignment on a coordinated basis is essential to the technical operation of the Internet. Mueller explains how control of the root is being leveraged to control the Internet itself in such key areas as trademark and copyright protection, surveillance of users, content regulation, and regulation of the domain name supply industry. Control of the root originally resided in an informally organized technical elite comprised mostly of American computer scientists. As the Internet became commercialized and domain name registration became a profitable business, a six-year struggle over property rights and the control of the root broke out among Internet technologists, business and intellectual property interests, international organizations, national governments, and advocates of individual rights. By the late 1990s, it was apparent that only a new international institution could resolve conflicts among the factions in the domain name wars. Mueller recounts the fascinating process that led to the formation of a new international regime around ICANN, the Internet Corporation for Assigned Names and Numbers. In the process, he shows how the vaunted freedom and openness of the Internet is being diminished by the institutionalization of the root.

Cyber Security on Azure

This book targets engineers and researchers familiar with basic computer architecture concepts who are interested in learning about on-chip networks. This work is designed to be a short synthesis of the most critical concepts in on-chip network design. It is a resource for both understanding on-chip network basics and for providing an overview of state of the-art research in on-chip networks. We believe that an overview that teaches both fundamental concepts and highlights state-of-the-art designs will be of great value to both graduate students and industry engineers. While not an exhaustive text, we hope to illuminate fundamental concepts for the reader as well as identify trends and gaps in on-chip network research. With the rapid advances in this field, we felt it was timely to update and review the state of the art in this second edition. We introduce two new chapters at the end of the book. We have updated the latest research of the past years throughout the book and also expanded our coverage of fundamental concepts to include several research ideas that have now made their way into products and, in our opinion, should be textbook concepts that all on-chip network practitioners should know. For example, these fundamental concepts include message passing, multicast routing, and bubble flow control schemes.

Shaping the University of the Future

Why collaborations in STEM fields succeed or fail and how to ensure success Once upon a time, it was the lone scientist who achieved brilliant breakthroughs. No longer. Today, science is done in teams of as

many as hundreds of researchers who may be scattered across continents. These collaborations can be powerful, but they also demand new ways of thinking. The Strength in Numbers illuminates the nascent science of team science by synthesizing the results of the most far-reaching study to date on collaboration among university scientists. Drawing on a national survey with responses from researchers at more than one hundred universities, archival data, and extensive interviews with scientists and engineers in over a dozen STEM disciplines, Barry Bozeman and Jan Youtie establish a framework for characterizing different collaborations and their outcomes, and lay out what they have found to be the gold-standard approach: consultative collaboration management. The Strength in Numbers is an indispensable guide for scientists interested in maximizing collaborative success.

Securing Advanced Manufacturing in the United States

What we can learn from Atlanta's struggle to reinvent itself in the 21st Century Atlanta is on the verge of tremendous rebirth-or inexorable decline. A kind of Petri dish for cities struggling to reinvent themselves, Atlanta has the highest income inequality in the country, gridlocked highways, suburban sprawl, and a history of racial injustice. Yet it is also an energetic, brash young city that prides itself on pragmatic solutions. Today, the most promising catalyst for the city's rebirth is the BeltLine, which the New York Times described as "a staggeringly ambitious engine

of urban revitalization." A long-term project that is cutting through forty-five neighborhoods ranging from affluent to impoverished, the BeltLine will complete a twenty-two-mile loop encircling downtown, transforming a massive ring of mostly defunct railways into a series of stunning parks connected by trails and streetcars. Acclaimed author Mark Pendergrast presents a deeply researched, multi-faceted, up-to-the-minute history of the biggest city in America's Southeast, using the BeltLine saga to explore issues of race, education, public health, transportation, business, philanthropy, urban planning, religion, politics, and community. An inspiring narrative of ordinary Americans taking charge of their local communities, City of the Verge provides a model for how cities across the country can reinvent themselves.

Emerging Issues in Global Marketing

Even in its earliest history, cyberspace had disruptions, caused by malicious actors, which have gone beyond being mere technical or criminal problems. These cyber conflicts exist in the overlap of national security and cybersecurity, where nations and non-state groups use offensive and defensive cyber capabilities to attack, defend, and spy on each other, typically for political or other national security purposes. A two-year study, resulting in the new book -- A Fierce Domain: Cyber Conflict, 1986 to 2012 -- has made the following conclusions, which are very different from those that policymakers are usually told: Cyber conflict has changed only gradually over

time, making historical lessons especially relevant (though usually ignored). The probability and consequence of disruptive cyber conflicts has been hyped while the impact of cyber espionage is consistently underappreciated. The more strategically significant the cyber conflict, the more similar it is to conflict in the other domains ? with one critical exception.

A Fierce Domain

Smart Composites: Mechanics and Design addresses the current progress in the mechanics and design of smart composites and multifunctional structures. Divided into three parts, it covers characterization of properties, analyses, and design of various advanced composite material systems with an emphasis on the coupled mechanical and non-mechanical behaviors. Part one includes analyses of smart materials related to electrically conductive, magnetostrictive nanocomposites and design of active fiber composites. These discussions include several techniques and challenges in manufacturing smart composites and characterizing coupled properties, as well as the analyses of composite structures at various length and time scales undergoing coupled mechanical and non-mechanical stimuli considering elastic, viscoelastic (and/or viscoplastic), fatigue, and damage behaviors. Part two is dedicated to a higher-scale analysis of smart structures with topics such as piezoelectrically actuated bistable composites, wing morphing design using macrofiber composites, and multifunctional layered composite beams. The

analytical expressions for characterization of the smart structures are presented with an attention to practical application. Finally, part three presents recent advances regarding sensing and structural health monitoring with a focus on how the sensing abilities can be integrated within the material and provide continuous sensing, recognizing that multifunctional materials can be designed to both improve and enhance the health-monitoring capabilities and also enable effective nondestructive evaluation. Smart Composites: Mechanics and Design is an essential text for those interested in materials that not only possess the classical properties of stiffness and strength, but also act as actuators under a variety of external stimuli, provide passive and active response to enable structural health monitoring, facilitate advanced nondestructive testing strategies, and enable shape-changing and morphing structures.

Inventing the Medium

The Internet has united the world as never before. But is it in danger of breaking apart? Cybersecurity, geopolitical tensions, and calls for data sovereignty have made many believe that the Internet is fragmenting. In this incisive new book, Milton Mueller argues that the "fragmentation" diagnosis misses the mark. The rhetoric of "fragmentation" camouflages the real issue: the attempt by governments to align information flows with their jurisdictional boundaries. The fragmentation debate is really a power struggle over the future of national sovereignty. It pits global

governance and open access against the traditional territorial institutions of government. This conflict, the book argues, can only be resolved through radical institutional innovations. Will the Internet Fragment? is essential reading for students and scholars of media and communications, international relations, political science and STS, as well as anyone concerned about the quality of Internet governance.

Ruling the Root

Mina Loy is recognised today as one of the most innovative modernist poets, numbering Gertrude Stein, Marcel Duchamp, Djuna Barnes and T.S. Eliot amongst her admirers. Drawing on substantial new archival research, this book challenges the existing critical myth of Loy as a 'modern woman' through an analysis of her unpublished autobiographical prose. Mina Loy's Autobiographies explores this major twentieth century writer's ideas about the 'modern' and how they apply to the 'modernist' writer--based on her engagement with twentieth-century avant-garde aesthetics--and charts how Loy herself uniquely defined modernity in her essays on literature and art. Sandeep Parmar here shows how, ultimately, Loy's autobiographies extend the modernist project by rejecting earlier impressions of avant-garde futurity and newness in favour of a 'late modernist' aesthetic, one that is more pessimistic, inward and interested in the fragmentary interplay between the past and present.

Megaregions

This publication examines the opportunities and challenges, for business and government, associated with technologies bringing about the "next production revolution". These include a variety of digital technologies (e.g. the Internet of Things and advanced robotics), industrial biotechnology, 3D printing, new materials and nanotechnology. Some of these technologies are already used in production, while others will be available in the near future. All are developing rapidly. As these technologies transform the production and the distribution of goods and services, they will have far-reaching consequences for productivity, skills, income distribution, well-being and the environment. The more that governments and firms understand how production could develop in the near future, the better placed they will be to address the risks and reap the benefits.

City on the Verge

WINNER OF THE T. S. ELIOT PRIZE 2015 *WINNER OF THE SUNDAY TIMES / PETERS FRASER + DUNLOP YOUNG WRITER OF THE YEAR AWARD 2015* *SHORTLISTED FOR THE FORWARD PRIZE FOR BEST FIRST COLLECTION 2015* There is a Chinese proverb that says: 'It is more profitable to raise geese than daughters.' But geese, like daughters, know the obligation to return home. In her exquisite first collection, Sarah Howe explores a dual heritage, journeying back to Hong Kong in search of her roots. With extraordinary range and power, the poems build into a meditation on hybridity, intermarriage and love

– what meaning we find in the world, in art, and in each other. Crossing the bounds of time, race and language, this is an enthralling exploration of self and place, of migration and inheritance, and introduces an unmistakable new voice in British poetry.

Nutraceutical and Functional Food Components

About ordering and building information, in games, libraries, encyclopedias. Meant for anyone "whose work involves shaping new digital artifacts and the systems of behavior in which they are embedded".

Graph Partitioning and Graph Clustering

Smart Composites

Innovation underpins competitiveness, is crucial to addressing societal challenges, and its support has become a major public policy goal. But what really works in innovation policy, and why? This Handbook, compiled by leading experts in the field, is the first comprehensive guide to understanding the logic and effects of innovation polices. The Handbook develops a conceptualisation and typology of innovation policies, presents meta-evaluations for 16 key innovation policy instruments and analyses evidence on policy-mix. For each policy instrument, underlying rationales and examples are presented, along with a critical analysis of the available impact evidence. Providing access to primary sources of impact

analysis, the book offers an insightful assessment of innovation policy practice and its evaluation.

Loop of Jade

This book examines emerging theories, frameworks, and applications of global marketing for the 21st century. It highlights how global marketing is changing in a globalized and digital economy that is fast increasing in complexity and uncertainty. The traditional approach to global marketing is no longer sufficient to address the emerging issues in global markets. Global companies need to challenge traditional assumptions in global marketing in an era of shifting political, cultural, economic, and technological changes. They need to take a fresh look at the contemporary threats and opportunities in markets, institutions, and technology and how they affect entry and expansion strategies through careful re-calibration of the marketing-mix. This book offers new insights for global marketing that addresses these issues. This book should be an ideal resource to both academic scholars and reflective practitioners globally such as CEOs and chief marketing officers as well as government officials and policy makers interested in formulating strategies/policies for global marketing activities in the face of a globalized and digitized economy. This well-crafted research volume is an excellent addition to the growing literature on new trends in international marketing. The authors present the latest insight on the impact of phenomena such as cross-border e-commerce and digital markets, and they discuss new tools for

political risk assessment, international branding and more broadly the reconfiguring of marketing-mix strategies – A powerful reminder that the new global market remains a rugged landscape. - Alain Verbeke, McCaig Research Chair in Management and Editor-in-Chief Journal of International Business Studies, University of Calgary, Canada. Emerging trends in institutions, markets, and societies, along with new technological advances, are redefining the scope and strategy in global marketing. Professors Agarwal and Wu have assembled a remarkable collection of cutting-edge topics and issues that capture the shifting paradigm and contemporary developments in the global marketing field. This is an informative and timely resource that makes a valuable contribution, useful for both scholars and business practitioners of global marketing. - Constantine S. Katsikeas, Arnold Ziff Endowed Research Chair in Marketing & International Management, Editor-in-Chief Journal of International Marketing, University of Leeds, UK. This book presents new and cutting-edge thinking at a time when the traditional views of international marketing need to be scrapped. Convergence forces are creating new opportunities as well as threats on a daily basis, and marketing practitioners as well as scholars must be forewarned as well as forearmed on how to deal with these changes. The real growth is coming from the emerging nations, and the theories that provided sufficient insights ten years ago have been completely outmoded by the ever-accelerating rate of innovation and technological change as well as the pressures to address the needs of all of the firm's relevant stakeholders. The strategic insights provided here are absolutely invaluable. Don't miss an

opportunity to read this book!! - John B. Ford, Professor of Marketing & International Business, Eminent Scholar & Haislip-Rohrer Fellow, Editor-in-Chief, Journal of Advertising Research, Old Dominion University, USA.

Emerging Research, Practice, and Policy on Computational Thinking

The Manufacturing USA initiative seeks to reinforce U.S.-based advanced manufacturing through partnerships among industry, academia, and government. Started in 2012 and established with bipartisan support by the Revitalize American Manufacturing and Innovation Act of 2014, the initiative envisages a nationwide network of research centers for manufacturing innovation. As of May 2017, 14 manufacturing innovation institutes had been established to facilitate the movement of early-stage research into proven capabilities ready for adoption by U.S. manufacturers. To better understand the role and experiences of the Manufacturing USA institutes to date, a committee of the Innovation Policy Forum of the National Academies of Sciences, Engineering, and Medicine convened a workshop on May 23, 2017 drawing together institute directors and manufacturing policy experts along with leaders from industry, academia, and government. Participants addressed the role of the manufacturing institutes in increasing advanced manufacturing in the United States, examined selected foreign programs designed to support advanced manufacturing, and reviewed recent assessments of existing institutes. This

publication summarizes the presentations and
discussions from the workshop.

Chinese Under Globalization

Multinational economic actors, particularly
corporations, play a defining role in the response to
the climate change or warming debate and the
emerging scientific consensus. This book describes,
explains, and predicts how multinational firms will rise
to the multiple challenges posed by global climate
issues and the organizational and behavioral various
responses of the international corporate community.
It focuses on three core research and learning
objectives. Firstly, it develops the core idea that
multinational enterprises cannot implement
meaningful sustainability initiatives without an
appropriate governance system and corporate
culture. Building on this notion, it addresses the
question of environmental sustainability across select
industry sectors, such oil and banking. Finally,
drawing on a diverse range of contributing experts, it
presents select best practices such as the
opportunities arising from smart technologies
implementation to achieve symbiotic industrial
relationships, directed particularly towards the
ecological environment of these firms' transborder
operations and global reach.

Fiber-Wireless Convergence in Next-Generation Communication Networks

Emotions and Affect in Human Factors and

Human–Computer Interaction is a complete guide for conducting affect-related research and design projects in H/F and HCI domains. Introducing necessary concepts, methods, approaches, and applications, the book highlights how critical emotions and affect are to everyday life and interaction with cognitive artifacts. The text covers the basis of neural mechanisms of affective phenomena, as well as representative approaches to Affective Computing, Kansei Engineering, Hedonomics, and Emotional Design. The methodologies section includes affect induction techniques, measurement techniques, detection and recognition techniques, and regulation models and strategies. The application chapters discuss various H/F and HCI domains: product design, human–robot interaction, behavioral health and game design, and transportation. Engineers and designers can learn and apply psychological theories and mechanisms to account for their affect-related research and can develop their own domain-specific theory. The approach outlined in this handbook works to close the existing gap between the traditional affect research and the emerging field of affective design and affective computing. Provides a theoretical background of affective sciences Demonstrates diverse affect induction methods in actual research settings Describes sensing technologies, such as brain–computer interfaces, facial expression detection, and more Covers emotion modeling and its application to regulation processes Includes case studies and applied examples in a variety of H/F and HCI application areas Addresses emerging interdisciplinary areas including Positive Technology, Subliminal Perception, Physiological Computing, and

Aesthetic Computing

Open Space

In Signifying the Local, Jin Liu examines contemporary cultural productions rendered in local languages and dialects (fangyan) in the fields of television, cinema, music, and literature in mainland China.

The Research System in Transition

Key to understanding and addressing climate change is continuous and precise monitoring of environmental conditions. Satellites play an important role in collecting climate data, offering comprehensive global coverage that can't be matched by in situ observation. And yet, as Mariel Borowitz shows in this book, much satellite data is not freely available but restricted; this remains true despite the data-sharing advocacy of international organizations and a global open data movement. Borowitz examines policies governing the sharing of environmental satellite data, offering a model of data-sharing policy development and applying it in case studies from the United States, Europe, and Japan -- countries responsible for nearly half of the unclassified government Earth observation satellites. Borowitz develops a model that centers on the government agency as the primary actor while taking into account the roles of such outside actors as other government officials and non-governmental actors, as well as the economic, security, and normative attributes of the data itself. The case studies include

the U.S. National Aeronautics and Space Administration (NASA) and the U.S. National Oceanographic and Atmospheric Association (NOAA), and the United States Geological Survey (USGS); the European Space Agency (ESA) and the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT); and the Japanese Aerospace Exploration Agency (JAXA) and the Japanese Meteorological Agency (JMA). Finally, she considers the policy implications of her findings for the future and provides recommendations on how to increase global sharing of satellite data.

Handbook of Innovation Policy Impact

The nine papers collected in this volume examine recent trends in language use in mainland China, and the associated social, economic, political, and cultural manifestations.

The Next Production Revolution

Trucking in the Age of Information provides a comprehensive overview of the contemporary trucking industry. Prior research on trucking has focused on the effects of deregulation on the industry, but the industry's current transformation is driven by information technology, emerging business strategies, globalization of commodity production and the rise of package express and logistics. The volume brings together acknowledged and emerging scholars of the industry including Thomas Corsi (University of Maryland), Chelsea White III (Georgia Tech), Starr

McMullen (Oregon State University), Will Mitchell (Duke University), Jeff Liker (University of Michigan), Francine LaFontaine (University of Michigan), Kristen Monaco (California State University at Long Beach) and Michael Conyngham (International Brotherhood of Teamsters) to address issues including technological change, third party logistics, lean trucking, driver safety and health, homeland security and the consolidation of trucking services. Each chapter provides an overview of industry issues and a discussion of current research.

From Tool to Partner

"With astringent understatement and wry economy, with nuance and intelligence and an enviable command of syntax and poetic line, Victoria Chang dissects the venerable practices of cultural piety and self-regard. She is a master of the thumbnail narrative. She can wield a dark eroticism. She is determined to tackle subject matter that is not readily subdued to the proportions of lyric. Her talent is conspicuous."—Linda Gregerson "Chang's voice is equal parts searing, vulnerable, and terrified."—American Poets Barbie Chang, Victoria Chang explores racial prejudice, sexual privilege, and the disillusionment of love through a reimagining of Barbie—perfect in the cultural imagination yet repeatedly falling short as she pursues the American dream. This energetic string of linked poems is full of wordplay, humor, and biting social commentary involving the quote-unquote speaker, Barbie Chang, a disillusioned Asian-American suburbanite. By turns

woeful and passionate, playful and incisive, these poems reveal a voice insisting that "even silence is not silent." From "Barbie Chang Lives": Barbie Chang lives on Facebook has a house on Facebook street so she can erase herself Facebook is a country with no trees it allows her to believe people love her don't want to cover her Barbie Chang . . . Victoria Chang is the author of three previous poetry books. In 2013, she won the PEN Center USA Literary Award and a California Book Award. Chang teaches poetry at Chapman University and lives in Southern California.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION