

Nbic 2013

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Ageing and Technology Emma Domínguez-Rué 2016-01-31 The booming increase of the senior population has become a social phenomenon and a challenge to our societies, and technological advances have undoubtedly contributed to improve the lives of elderly citizens in numerous aspects. In current debates on technology, however, the »human factor« is often largely ignored. The ageing individual is rather seen as a malfunctioning machine whose deficiencies must be diagnosed or as a set of limitations to be overcome by means of technological devices. This volume aims at focusing on the perspective of human beings deriving from the development and use of technology: this change of perspective - taking the human being and not technology first - may help us to become more sensitive to the ambivalences involved in the interaction between humans and technology, as well as to adapt technologies to the people that created the need for its existence, thus contributing to improve the quality of life of senior citizens.

Industry 4.0 Jean-Claude André 2019-07-10 Digital technology opens up extraordinary fields for applications that will deeply change the nature of jobs and trade, the very concept of work and the expectations of user-producers. The "masters of algorithms" have disrupted production and services, and this trend will continue for as long as electric energy and the elements of Industry 4.0 are in continued development. Beyond data control, a power struggle is working its way through the links in the value chain: intermediation, control of resources and command over human and physical networks, as well as partnerships, creativity and the political system. *Industry 4.0: Paradoxes and Conflicts* examines the need for a serious and technological review, as well as for research and training regarding citizenship and politics. This is a new situation in terms of relationships of competence and authority, which must be the subject of scientific as well as political reflections for the whole social body, which needs to be educated about choices. Throughout the book, the author poses the following question: instead of submitting to choices, would it not be better to exercise foresight?

Biological Invasions in Changing Ecosystems João Canning-Clode 2015-01-01 When organisms are deliberately or accidentally introduced into a new ecosystem a biological invasion may take place. These so-called 'invasive species' may establish, spread and ecologically alter the invaded community. Biological invasions by animals, plants, pathogens or vectors are one of the greatest environmental and economic threats and, along with habitat destruction, a leading cause of global biodiversity loss. In this book, more than 50 worldwide invasion scientists cover our current understanding of biological invasions, its impacts, patterns and mechanisms in both aquatic and terrestrial systems.

Auditory Efferent System: New Insights from Cortex to Cochlea Paul H. Delano 2016-09-06 The main function of the sensory systems is the transducing of external stimuli into bioelectrical signals, which are conducted through afferent pathways from sensory epithelia to the brain. However, it is known that descending projections are ubiquitous in the different sensory modalities, and in the case of auditory efferents connect the cerebral cortex with sensory receptor cells. Several functions have been attributed to the efferent system, including protection to acoustic trauma, unmasking of auditory stimuli in background noise, balance of interaural sensitivity and some cognitive functions like modulation of cochlear sensitivity during selective attention to auditory or visual stimuli. In addition there is evidence of a possible involvement of the efferent system in the etiology or treatment of some clinical pathologies like tinnitus. In this e-book, entitled "Auditory Efferent System: New Insights from Cortex to Cochlea", we aimed to give an overview of the advances concerning the descending projections from the auditory cortex to subcortical nuclei and the olivocochlear system. In addition, different theoretical proposals of efferent functions are presented. We think that this e-book is an important contribution to the understanding of the efferent system in mammals, merging auditory-cortex literature with studies performed in the olivocochlear system.

Education and New Technologies Kieron Sheehy 2017-12-13 When should children begin their digital diet? Does the use of new technology hinder or enhance children's literacy development? Do new technologies give children new abilities or undermine their skills and identities? Are learners safe in modern online educational spaces? Kieron Sheehy and Andrew Holliman have assembled expert contributors from around the world to discuss these questions and have divided the book into three parts: early engagement with new technologies: decisions, dangers and data new technology: supporting all learners or divisive tools global and cultural reflections on educational technology. Education and New Technologies focuses on aspects of education where the use of twenty-first-century technologies has been particularly controversial, contemplating the possible educational benefits alongside potential negative impacts on learners. Topics covered include: e-books and their influence on literacy skills games-based learning the impact of new technologies on abilities and disabilities learning analytics and the use of large-scale learner data cyberbullying intelligent technologies and the connected learner. A twenty-first-century book for twenty-first-century concerns, Education and New Technologies presents up-

to-date research and clear, engaging insight about the relationship between technology and how we learn.

Closed Feedwater Heaters for Power Generation: A Working Guide Stanley Yokell 2014-10-22 Best practices for using closed feedwater heaters in power generation plants Based on the authors' decades of industry experience, this book explains how to improve cycle efficiency and reduce the cost of fuel used to produce electricity using closed feedwater heaters. This practical guide describes the steam cycle and contains detailed information on how manufacturers build feedwater heaters. Closed Feedwater Heaters for Power Generation illustrates how to control the liquid level of the condensed extraction steam and offers recommendations for what to include in procurement specifications. Expert advice for evaluating manufacturers' technical proposals for new and replacement feedwater heaters is provided. This comprehensive resource also discusses inspection, maintenance, and repair of closed feedwater heaters as well as failures and their causes. Complete coverage includes: The steam cycle Channel design and construction Tubing Tubesheets Tube-to-tubesheet joints Bundle construction Shell construction Assembly of bundles and shells Examining and testing feedwater heaters Quality assurance and quality control Level control Preparing procurement specifications Evaluating bidder's proposals Drawing reviews Inspection, maintenance, and repair Feedwater heater autopsies

Advances in Manufacturing, Production Management and Process Control Waldemar Karwowski 2018-06-26 This book discusses the latest advances in manufacturing and process control, with a special emphasis on digital manufacturing and intelligent technologies for manufacturing and industrial processes control. The human aspect of the developed technologies and products, their interaction with the users, as well as sustainability issues, are covered in detail. Development of new products using 3D printers, rapid prototyping systems, remote fabrication, and other advanced techniques, is described in detail, highlighting the state-of-the-art and current challenges. Other key topics include digital modeling systems and additive manufacturing, together with their applications in a number of fields, e.g in bioengineering/biomedicine, in the aerospace, maritime and military fields or for archeological and historical purposes, such as preserving structures, but not limited to this. The book is based on three AHFE 2018 affiliated conferences i.e. the AHFE 2018 International Conference on Advanced Production Management and Process Control, the AHFE 2018 International Conference on Human Aspects of Advanced Manufacturing, and the AHFE 2018 International Conference on Additive Manufacturing, Modeling Systems and 3D Prototyping, which were held on July 21-25, 2018, in Orlando, Florida, USA.

International Manufacturing Strategies Per Lindberg 2013-11-11 Over the last twenty years, there has been an increasing number of factors that have placed the manufacturing strategies of companies and countries in a global context. This book reviews and addresses the global manufacturing strategy area through research in the four major economic areas of the world: Europe, North America,

Latin America and Asia. *International Manufacturing Strategies: Context, Content and Change* is the result of a single major research project undertaken in twenty countries, focusing on the manufacturing strategies and practices in each, and uses research data to focus on factors specific to industrial countries or regions and those which are common across the group of countries or the entire sample. The core of this book is a set of chapters reviewing individual countries. Each country is reviewed in a format with an overall common approach: the socio-economic background; the distinctive results for that country from the research and the link between the two. Most will be illustrated by a small case study of a company. Following this is an integrating review of the findings from various countries, the different trajectories followed, and the impact on external variables and the socioeconomic context on those. The final part of the book is devoted to new ideas and developments in functional areas and in manufacturing strategy that have been developed from the analysis conducted during the research.

The Oxford Handbook of the Auditory Brainstem Karl Kandler PhD 2019-08-22 The Oxford Handbook of The Auditory Brainstem provides an introduction as well as an in-depth reference to the organization and function of ascending and descending auditory pathways in the mammalian brainstem. Individual chapters are organized along the auditory pathway beginning with the cochlea and ending with the auditory midbrain. Each chapter provides an introduction to the respective area, and summarizes our current knowledge before discussing disputes and challenges the field currently faces. A major emphasis throughout this book is on the numerous forms of plasticity that are increasingly observed in many areas of the auditory brainstem. Several chapters focus on neuronal modulation of function and synaptic, neuronal, and circuit plasticity, especially under circumstances when they occur most prominently: during development, aging, and following peripheral hearing loss. In addition, the book addresses the role of trauma-induced maladaptive plasticity with respect to its contribution in generating central hearing dysfunction such as hyperacusis and tinnitus. The book is intended for students and postdocs starting in the auditory field, and researchers of related fields who wish to get an authoritative and up-to-date summary of the current state of auditory brainstem research. For clinical practitioners in audiology, otolaryngology, and neurology, the book is a valuable resource of information about the neuronal mechanisms that are major candidates for the generation of central hearing dysfunction.

When More Is Not Better Roger L. Martin 2020-09-29 American democratic capitalism is in danger. How can we save it? For its first two hundred years, the American economy exhibited truly impressive performance. The combination of democratically elected governments and a capitalist system worked, with ever-increasing levels of efficiency spurred by division of labor, international trade, and scientific management of companies. By the nation's bicentennial celebration in 1976, the American economy was the envy of the world. But since then, outcomes have changed dramatically. Growth in the economic prosperity of the average American family has slowed to a crawl, while the wealth of the

richest Americans has skyrocketed. This imbalance threatens the American democratic capitalist system and our way of life. In this bracing yet constructive book, world-renowned business thinker Roger Martin starkly outlines the fundamental problem: We have treated the economy as a machine, pursuing ever-greater efficiency as an inherent good. But efficiency has become too much of a good thing. Our obsession with it has inadvertently shifted the shape of our economy, from a large middle class and smaller numbers of rich and poor (think of a bell-shaped curve) to a greater share of benefits accruing to a thin tail of already-rich Americans (a Pareto distribution). With lucid analysis and engaging anecdotes, Martin argues that we must stop treating the economy as a perfectible machine and shift toward viewing it as a complex adaptive system in which we seek a fundamental balance of efficiency with resilience. To achieve this, we need to keep in mind the whole while working on the component parts; pursue improvement, not perfection; and relentlessly tweak instead of attempting to find permanent solutions. Filled with keen economic insight and advice for citizens, executives, policy makers, and educators, *When More Is Not Better* is the must-read guide for saving democratic capitalism.

Reflections on Bioethics Jose Antonio Morales-Gonzalez 2018-06-27 The book *Reflections on Bioethics* is an effort that brings together works grouped into five sections: "Bioethics and Health", "Bioethics and Education", "Bioethics and Technology", "Bioethics in the Use of Experimental Animals", and "Selected Topics of Bioethics". In each of these sections, the fundamental concepts of bioethics and their relationship with each of these branches of knowledge are covered. The purpose is to give the reader a specific document of topics, it is not intended to be a treaty because the study of any of the five sections is very broad. However, this is an effort that manages to combine in interdisciplinary subjects that are fundamental for professionals of all fields of knowledge.

The Changing Scope of Technoethics in Contemporary Society Luppicini, Rocci 2018-04-13 In the modern era each new innovation poses its own special ethical dilemma. How can human society adapt to these new forms of expression, commerce, government, citizenship, and learning while holding onto its ethical and moral principles? *The Changing Scope of Technoethics in Contemporary Society* is a critical scholarly resource that examines the existing intellectual platform within the field of technoethics. Featuring coverage on a broad range of topics such as ethical perspectives on internet safety, technoscience, and ethical hacking communication, this book is geared towards academicians, researchers, and students seeking current research on domains of technoethics.

Knowing New Biotechnologies Matthias Wienroth 2015-02-20 The areas of personal genomics and citizen science draw on – and bring together – different cultures of producing and managing knowledge and meaning. They also cross local and global boundaries, are subjects and objects of transformation and mobility of research practices, evaluation and multi-stakeholder groups. Thirdly, they draw on logics of 'convergence': new links between, and new kinds of, stakeholders,

spaces, knowledge, practices, challenges and opportunities. This themed collection of essays from nationally and internationally leading scholars and commentators advances and widens current debates in Science and Technology Studies and in Science Policy concerning 'converging technologies' by complementing the customary focus on technical aspirations for convergence with the analysis of the practices and logics of scientific, social and cultural knowledge production that constitute contemporary technoscience. In case studies from across the globe, contributors discuss the ways in which science and social order are linked in areas such as direct-to consumer genetic testing and do-it-yourself biotechnologies. Organised into thematic sections, 'Knowing New Biotechnologies' explores: • ways of understanding the dynamics and logics of convergences in emergent biotechnologies • governance and regulatory issues around technoscientific convergences • democratic aspects of converging technologies – lay involvement in scientific research and the co-production of biotechnology and social and cultural knowledge.

Pressure Vessels Field Manual Maurice Stewart 2012 The majority of the cost-savings for any oil production facility is the prevention of failure in the production equipment such as pressure vessels. Money lost through lost production far outweighs expenses associated with maintenance and proper operation. However, many new engineers lack the necessary skills to effectively find and troubleshoot operating problems while experienced engineers lack knowledge of the latest codes and standards. The fifth book in the Field Manual Series, the Pressure Vessel Operations Field Manual provides new and experienced engineers with the latest tools to alter, repair and re-rate pressure vessels using ASME, NBIC and API 510 codes and standards. Step-by-step procedure on how to design, perform in-shop and in-field inspections and repairs, perform alterations and re-rate a pressure vessel How to select the appropriate vessel specifications, evaluate associated reports and determine allowable stresses Calculations for stresses in pressure vessels Select the appropriate materials of construction for a pressure vessel Design pressure vessels using the ASME Code Section VIII, Division 1 and 2 to best fit the circumstance

Federal Register 2013-12

Department of Homeland Security Appropriations for 2013 United States. Congress. House. Committee on Appropriations. Subcommittee on Homeland Security 2012

Beyond Human Eve Herold 2016-08-16 Never before in the history of medicine has mankind faced such hope and peril as those of us poised to embrace the radical medical technologies of today. Eve Herold's *Beyond Human* examines the medical technologies taking shape at the nexus of computing, microelectronics, engineering, nanotechnology, cellular and gene therapies, and robotics. These technologies will dramatically transform our lives and allow us to live for hundreds of years. Yet, with these blessings come complicated practical and ethical issues, some of which we can predict, but many we cannot. *Beyond Human*

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taps the minds of doctors, scientists, and engineers engaged in developing a host of new technologies while telling the stories of some of the patients courageously testing the radical new treatments about to come into the market. Beyond Human asks the difficult questions of the scientists and bioethicists who seek to ensure that as our bodies and brains become ever more artificial, we hold onto our humanity. In this new world, will everyone have access to technological miracles, or will we end up living in a world of radical disparities? How will society accommodate life spans that extend into hundreds of years? Will we and our descendants be able to bring about the dream of a future liberated by technology, or will we end up merely serving the machines and devices that keep us healthy, smart, young, and alive?

The Oxford Handbook of the Science of Science Communication Kathleen Hall Jamieson 2017-05-17 The proposal to vaccinate adolescent girls against the human papilloma virus ignited political controversy, as did the advent of fracking and a host of other emerging technologies. These disputes attest to the persistent gap between expert and public perceptions. Complicating the communication of sound science and the debates that surround the societal applications of that science is a changing media environment in which misinformation can elicit belief without corrective context and likeminded individuals are prone to seek ideologically comforting information within their own self-constructed media enclaves. Drawing on the expertise of leading science communication scholars from six countries, The Oxford Handbook of the Science of Science Communication not only charts the media landscape - from news and entertainment to blogs and films - but also examines the powers and perils of human biases - from the disposition to seek confirming evidence to the inclination to overweight endpoints in a trend line. In the process, it draws together the best available social science on ways to communicate science while also minimizing the pernicious effects of human bias. The Handbook adds case studies exploring instances in which communication undercut or facilitated the access to scientific evidence. The range of topics addressed is wide, from genetically engineered organisms and nanotechnology to vaccination controversies and climate change. Also unique to this book is a focus on the complexities of involving the public in decision making about the uses of science, the regulations that should govern its application, and the ethical boundaries within which science should operate. The Handbook is an invaluable resource for researchers in the communication fields, particularly in science and health communication, as well as to scholars involved in research on scientific topics susceptible to distortion in partisan debate.

Meta-Scientific Study of Artificial Intelligence Elena G. Popkova 2021-05-01 The book studies artificial intelligence as a new reality and a perspective direction for the modern economy's development, as well as its future technological basis. The book forms a meta-scientific approach to studying AI, which allows uniting the efforts of scholars from different spheres of science for formation of a comprehensive idea of AI. The book reflects the meta-scientific approach to the balanced use of human and artificial intelligence and the features of successful development of the information economy under the

conditions of technological progress based on artificial intelligence. It describes the implementation of the subject approach in psychology and pedagogy based on artificial intelligence and reflects the political and legal aspects of creating, implementing and developing artificial intelligence. The impact of artificial intelligence on the economy and financial services is considered, and modernization of management of production and distribution processes and systems based on AI are studied. The target audience of the book includes scholars from different spheres of science who study AI, companies interested in implementation of AI, and government that regulates the issues of development and use of AI.

Voyage Charters Julian Cooke 2014-09-19 Widely regarded as the leading authority on voyage charters, this book is the most comprehensive and intellectually-rigorous analysis of the area, is regularly cited in court and by arbitrators, and is the go-to guide for drafting and disputing charterparty contracts. Voyage Charters provides the reader with a clause-by-clause analysis of the two major charterparty forms: the Gencon standard charterparty contract and the Asbatankvoy form. It also delivers thorough treatment of COGSA and the Hague and Hague-Visby Rules, a comparative analysis of English and United States law, and a detailed section on arbitration awards. Key features of the fourth edition: The only textbook to deal specifically with this key area of maritime law Written by an impressive team of highly-regarded maritime authorities from both sides of the Atlantic Contains a wealth of updated English and American case law and arbitrations, as well as addressing broader issues such as Rome II Regulation Convention regarding the conflict of laws Practical user-friendly guide, which is accessible not only to lawyers but also shipping professionals A new, detailed United States law section on COGSA This book is an indispensable, practical guide for both contentious and non-contentious shipping law practitioners, and postgraduate students studying this area of law.

The Economics of Digital Transformation Tessaleno Devezas 2021-02-15 This book takes an in-depth look at the economics of digital transformation. Presenting a variety of perspectives from experts, it deals with the socioeconomic changes associated with the digital transformation of production systems. The chapters also address the impacts of digital transformation on the sustainable functioning of socioeconomic and environmental systems. Select chapters also investigate the consequences of adopting intelligent learning systems, both in terms of replacing the human labor force. and their effects on the smart digital management and security of cities, places, and people. Lastly, chapters discuss important questions regarding innovations leading to sustainable change.

United States Code: Title 5: Government organization and employees, [sections] 6101-End to Title 7: Agriculture, [sections] 1-855 2013 Preface 2012 edition: The United States Code is the official codification of the general and permanent laws of the United States. The Code was first published in 1926, and a new edition of the code has been published every six years since 1934. The

2012 edition of the Code incorporates laws enacted through the One Hundred Twelfth Congress, Second session, the last of which was signed by the President on January 15, 2013. It does not include laws of the One Hundred Thirteenth Congress, First session, enacted between January 3, 2013, the date it convened, and January 15, 2013. By statutory authority this edition may be cited "U.S.C. 2012 ed." As adopted in 1926, the Code established prima facie the general and permanent laws of the United States. The underlying statutes reprinted in the Code remained in effect and controlled over the Code in case of any discrepancy. In 1947, Congress began enacting individual titles of the Code into positive law. When a title is enacted into positive law, the underlying statutes are repealed and the title then becomes legal evidence of the law. Currently, 26 of the 51 titles in the Code have been so enacted. These are identified in the table of titles near the beginning of each volume. The Law Revision Counsel of the House of Representatives continues to prepare legislation pursuant to 2 USC 285b to enact the remainder of the Code, on a title-by-title basis, into positive law. The 2012 edition of the Code was prepared and published under the supervision of Ralph V. Seep, Law Revision Counsel. Grateful acknowledgment is made of the contributions by all who helped in this work, particularly the staffs of the Office of the Law Revision Counsel and the Government Printing Office. -- John. A. Boehner, Speaker of the House of Representatives, Washington, D.C., January 15, 2013--Page VII.

2013 NBIC. National Board of Boiler and Pressure Vessel Inspectors 2013 "It is the purpose of the National Board Inspection Code (NBIC) to maintain the integrity of pressure-retaining items by providing rules for installation, and after the items have been placed into service, by providing rules for inspection and repair and alteration, thereby ensuring that these items may continue to be safely used."--Introduction.

Energy Markets in Emerging Economies Henry K. H. Wang 2016-07-15 Energy Markets in Emerging Economies addresses current key issues, new opportunities, and various growth strategies relating to the energy markets in key emerging economies. The book addresses key aspects, including key oil and gas energy markets, and their strategic ties to global petrochemical and chemicals, shale gas, and renewable energy growths. It also provides insights on business strategies and market expansion strategies employed by MNCs and state-owned companies in maintaining and defending their positions in the global market, and in developing new markets and opportunities globally, particularly in China, India and the Middle East. The strategic implications of the global oil and gas prices fluctuations on the industries are also discussed. The practical and theoretical perspectives within the commercial context addressed in this book provide a clearer understanding of the energy markets and their leading players, relevant not only to industry players, but also interdependent markets.

Integrative Functions in the Mammalian Auditory Pathway Donata Oertel
2013-03-09 A summary of how the electrical signals used to represent sounds are encoded and interpreted through the integrated roles of various nuclei. This

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volume builds on the information about the anatomy and physiology of the auditory pathway found in volumes 1 and 2 of the SHAR series. While the first two volumes describe the structure and function of auditory pathways, this one explains how these pathways lead to an animal's ability to localize and interpret sounds.

Is COVID-19 a Bioweapon? Richard M. Fleming 2021-09-07 What is the true origin of COVID-19? President Joe Biden has ordered US intelligence agencies to further investigate the origins of COVID-19. Clearly, the US government isn't decided on what really happened at the start of the pandemic. Was it truly a animal to human transmission to be blamed on a bat in a Wuhan, China wet market? Or was a much more sinister plan at work? In 2020, Dr. Richard M. Fleming began investigating SARS-CoV-2/COVID-19. Using both his "Inflammation" Theory and Patent (FMTVDM; the first method capable of measuring regional blood flow and metabolic changes occurring inside the body, which makes it possible to accurately determine what is happening inside the body as well as whether treatments prescribed for patients are working or not), he investigated COVID treatments. Simultaneously he began investigating the origins of COVID-19. This book details much of what he has found. What he discovered will shock you. By 1999, US Federal Agencies began funding Gain-of-Function research. Research that by its very nature is designed to increase the ability of pathogens to infect and harm people. In 2019, one of those pathogens was intentionally released upon the world in the Wuhan Wet Market. The key to proving and understanding this bioweapon is its spike protein. The very same spike protein now being made in millions of people after the COVID vaccines are injected into them. These vaccines are nothing more than the genetic code of this bioweapon. This book traces the publication and money trail of COVID-19; showing who is ultimately criminally responsible for the design and development of this weapon, which violates the Biological Weapons Convention (BWC) Treaty, exposing those who have committed crimes against humanity. Dr. Fleming will reveal the ultimate conspiracy: one that puts the future of the entire world at stake.

Ideologies in World Politics Klaus-Gerd Giesen 2020-09-02 Political ideologies shape the behaviour of states, international institutions, terrorist groups, political elites, non-governmental organisations, and other international actors. The book analyses how the most important of them affect today's world politics, and contribute to build a new and complex world order.

The Senses: A Comprehensive Reference 2020-09-30 *The Senses: A Comprehensive Reference*, Second Edition, is a comprehensive reference work covering the range of topics that constitute current knowledge of the neural mechanisms underlying the different senses. This important work provides the most up-to-date, cutting-edge, comprehensive reference combining volumes on all major sensory modalities in one set. Offering 264 chapters from a distinguished team of international experts, *The Senses* lays out current knowledge on the anatomy, physiology, and molecular biology of sensory organs, in a collection of comprehensive chapters spanning 4 volumes. Topics covered include the perception, psychophysics, and higher order processing of sensory information,

as well as disorders and new diagnostic and treatment methods. Written for a wide audience, this reference work provides students, scholars, medical doctors, as well as anyone interested in neuroscience, a comprehensive overview of the knowledge accumulated on the function of sense organs, sensory systems, and how the brain processes sensory input. As with the first edition, contributions from leading scholars from around the world will ensure The Senses offers a truly international portrait of sensory physiology. The set is the definitive reference on sensory neuroscience and provides the ultimate entry point into the review and original literature in Sensory Neuroscience enabling students and scientists to delve into the subject and deepen their knowledge. All-inclusive coverage of topics: updated edition offers readers the only current reference available covering neurobiology, physiology, anatomy, and molecular biology of sense organs and the processing of sensory information in the brain Authoritative content: world-leading contributors provide readers with a reputable, dynamic and authoritative account of the topics under discussion Comprehensive-style content: in-depth, complex coverage of topics offers students at upper undergraduate level and above full insight into topics under discussion

Industry 4.0 Tessaleno Devezas 2017-02-28 This book presents the latest research perspectives on how the Industry 4.0 paradigm is challenging the process of technological and structural change and how the diversification of the economy affects structural transformation. It also explores the impact of fast-growing technologies on the transformation of socioeconomic and environmental systems, and asks whether structural and technological change can generate sustainable economic growth and employment. Further, the book presents the basic innovations (new technologies, materials, energy, etc) and industrial policies that can lead to such a structural change.

Errors and Mistakes in Child Protection Biesel, Kay 2020-03-18 This comprehensive international study provides a cross-national analysis of different understandings of errors and mistakes, as well as lessons to avoid and how to handle them in child protection practice, using research and knowledge from 11 countries in Europe and North America. Divided into country-specific chapters, each examines the pathways that lead to mistakes happening, the scale of their impact, how responsibilities and responses are decided and how practice and policy subsequently change. Considering the complexities of evolving practice contexts, this authoritative, future-oriented study is an invaluable text for practitioners, researchers and policy makers wishing to understand why child protection fails – and offers a springboard for fresh thinking about strategies to reduce future risk.

From Additive Manufacturing to 3D/4D Printing Jean-Claude André 2017-12-27 With a turnover of some 5-15 billion € / year, the additive manufacturing has industrial niches bearers thanks to processes and materials more and more optimized. While some niches still exist on the application of additive techniques in traditional fields (from jewelry to food for example), several trends emerge, using new concepts: collective production, realization of

objects at once (without addition Of material), micro-fluidic, 4D printing exploiting programmable materials and materials, bio-printing, etc. There are both opportunities for new markets, promises not envisaged less than 10 years ago, but difficulties in reaching them.

Views and Estimates of Committees of the House (together with Supplemental and Minority Views) on the Congressional Budget for Fiscal Year ... United States. Congress. House. Committee on the Budget 2012

Continuing Concerns Over BioWatch and the Surveillance of Bioterrorism United States. Congress. House. Committee on Energy and Commerce. Subcommittee on Oversight and Investigations 2014

Biomedical Application of Nanoparticles Bertrand Henri Rihn 2017-09-05
Biomedical Application of Nanoparticles explores nanoparticles, their chemical and physical properties, and how they interact in biological systems with proteins, immune system and targeted cells. Risk assessment of nanoparticles for human is described, including: cellular paradigms, transcriptomics and toxicogenomics. Finally, the applications of nanoparticles in medicine and antioxidant regenerative therapeutics are presented in several chapters with emphasis on how nanoparticles enhance transport of drugs across biological membrane barriers and therefore may enhance drug bioavailability.

On Not Dying Abou Farman 2020-04-21 An ethnographic exploration of technoscientific immortality Immortality has long been considered the domain of religion. But immortality projects have gained increasing legitimacy and power in the world of science and technology. With recent rapid advances in biology, nanotechnology, and artificial intelligence, secular immortalists hope for and work toward a future without death. On Not Dying is an anthropological, historical, and philosophical exploration of immortality as a secular and scientific category. Based on an ethnography of immortalist communities—those who believe humans can extend their personal existence indefinitely through technological means—and an examination of other institutions involved at the end of life, Abou Farman argues that secular immortalism is an important site to explore the tensions inherent in secularism: how to accept death but extend life; knowing the future is open but your future is finite; that life has meaning but the universe is meaningless. As secularism denies a soul, an afterlife, and a cosmic purpose, conflicts arise around the relationship of mind and body, individual finitude and the infinity of time and the cosmos, and the purpose of life. Immortalism today, Farman argues, is shaped by these historical and culturally situated tensions. Immortalist projects go beyond extending life, confronting dualism and cosmic alienation by imagining (and producing) informatic selves separate from the biological body but connected to a cosmic unfolding. On Not Dying interrogates the social implications of technoscientific immortalism and raises important political questions. Whose life will be extended? Will these technologies be available to all, or will they reproduce racial and geopolitical hierarchies? As human life on earth is threatened in the Anthropocene, why should life be extended, and what will that

prolonged existence look like?

Convergence of Knowledge, Technology and Society Mihail C. Roco 2014-01-28 This volume aims to document the most important worldwide accomplishments in converging knowledge and technology, including converging platforms, methods of convergence, societal implications, and governance in the last ten years. Convergence in knowledge, technology, and society is the accelerating, transformative interaction among seemingly distinct scientific disciplines, technologies, and communities to achieve mutual compatibility, synergism, and integration, and through this process to create added value for societal benefit. It is a movement that is recognized by scientists and thought leaders around the world as having the potential to provide far-reaching solutions to many of today's complex knowledge, technology, and human development challenges. Four essential and interdependent convergence platforms of human activity are defined in the first part of this report: nanotechnology-biotechnology-information technology and cognitive science ("NBIC") foundational tools; Earth-scale environmental systems; human-scale activities; and convergence methods for societal-scale activities. The report then presents the main implications of convergence for human physical potential, cognition and communication, productivity and societal outcomes, education and physical infrastructure, sustainability, and innovative and responsible governance. As a whole, the report presents a new model for convergence. To effectively take advantage of this potential, a proactive governance approach is suggested. The study identifies an international opportunity to develop and apply convergence for technological, economic, environmental, and societal benefits. The panel also suggests an opportunity in the United States for implementing a program aimed at focusing disparate R and D energies into a coherent activity - a "Societal Convergence Initiative". This study received input from leading academic, industry, government, and NGO experts from the United States, Latin America, Europe, Asia, and Australia.

TechnoScienceSociety Sabine Maasen 2020-07-01 This book introduces the term of TechnoScienceSociety to focus on the ongoing technological reconfigurations of science and society. It aspires to use the breadth of Science and Technology Studies to perform a critical diagnosis of our contemporary culture. Instead of constructing technology as society's "other", the book sets out to highlight the both complex and ambivalent entanglements of technologies, sciences and socialities. It provides some tentative steps towards a diagnosis of a society in which individuals and organizations address themselves, their pasts, presents, futures, hopes and problems in technoscientific modes. Technosciences redesign matter, life, self and society. However, they do not operate independently: Technoscientific practices are deeply socially and culturally constituted. The diverse contributions highlight the ongoing technological reconfigurations of rationalities, infrastructures, modes of governance, and publics. The book aims to inspire scholars and students to think and analyze contemporary conditions in new ways drawing on, and expanding, the toolkits of Science and Technology Studies.

Intelligent Human Systems Integration Waldemar Karwowski 2017-12-30 This book reports on research on innovative human systems integration and human-machine interaction, with an emphasis on artificial intelligence and automation, as well as computational modeling and simulation. It covers a wide range of applications in the area of design, construction and operation of products, systems and services, including lifecycle development and human-technology interaction. The book describes advanced methodologies and tools for evaluating and improving interface usability, new models, as well as case studies and best practices in virtual, augmented and mixed reality systems, with a special focus on dynamic environments. It also discusses different factors concerning the human, hardware, and artificial intelligence software. Based on the proceedings of the 1st International Conference on Intelligent Human Systems Integration (IHSI 2018), held on January 7-9, 2018, in Dubai, United Arab Emirates, the book also examines the forces that are currently shaping the nature of computing and cognitive systems, such as the need for decreasing hardware costs; the importance of infusing intelligence and automation, and the related trend toward hardware miniaturization and power reduction; the necessity for a better assimilation of computation in the environment; and the social concerns regarding access to computers and systems for people with special needs. It offers a timely survey and a practice-oriented reference guide to policy- and decision-makers, human factors engineers, systems developers and users alike.

United States Code United States 2013 "The United States Code is the official codification of the general and permanent laws of the United States of America. The Code was first published in 1926, and a new edition of the code has been published every six years since 1934. The 2012 edition of the Code incorporates laws enacted through the One Hundred Twelfth Congress, Second Session, the last of which was signed by the President on January 15, 2013. It does not include laws of the One Hundred Thirteenth Congress, First Session, enacted between January 2, 2013, the date it convened, and January 15, 2013. By statutory authority this edition may be cited "U.S.C. 2012 ed." As adopted in 1926, the Code established prima facie the general and permanent laws of the United States. The underlying statutes reprinted in the Code remained in effect and controlled over the Code in case of any discrepancy. In 1947, Congress began enacting individual titles of the Code into positive law. When a title is enacted into positive law, the underlying statutes are repealed and the title then becomes legal evidence of the law. Currently, 26 of the 51 titles in the Code have been so enacted. These are identified in the table of titles near the beginning of each volume. The Law Revision Counsel of the House of Representatives continues to prepare legislation pursuant to 2 U.S.C. 285b to enact the remainder of the Code, on a title-by-title basis, into positive law. The 2012 edition of the Code was prepared and published under the supervision of Ralph V. Seep, Law Revision Counsel. Grateful acknowledgment is made of the contributions by all who helped in this work, particularly the staffs of the Office of the Law Revision Counsel and the Government Printing Office"-- Preface.

The Transformation of Social Relationships in Industry 4.0 Agnessa O. Inshakova

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2022-01-01 The dynamics of scientific and technological development of modern society is characterized by high growth rates, accompanied by the algorithmization of the digital economy raises new and transformation of existing social relations in which the boundaries between physical, digital and biological worlds are disappearing, giving rise to an objective need for a comprehensive socioeconomic and institutional transformations in society require an appropriate legal base. In modern scientific literature, the term "fourth industrial revolution" – Industry 4.0 – is used to refer to a radical change in traditional methods and forms of management associated with the introduction of innovative technologies, such as artificial intelligence, the Internet of things, unmanned vehicles, robotic systems, big data, etc. A study on the establishment of the legal concept of neo-industrial modernization, including directions and mechanisms of development of technologies of Industry 4.0, as well as preventive measures to prevent collisions through the use of all types of convergent technologies, is of great scientific and practical value because it provides additional opportunities for economic development and the formation of a fundamentally new legislative approaches to solving fundamental and applied problems in this area for the next 10 years.