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[The Future of Drone Use](#) - Bart Custers 2016-10-15

Given the popularity of drones and the fact that they are easy and cheap to buy, it is generally expected that the ubiquity of drones will significantly increase within the next few years. This raises questions as to what is technologically feasible (now and in the future), what is acceptable from an ethical point of view and what is allowed from a legal point of view. Drone technology is to some extent already available and to some extent still in development. The aim and scope of this book is to map the opportunities and threats associated with the use of drones and to discuss the ethical and legal issues of the use of drones. This book provides an overview of current drone technologies and applications and of what to expect in the next few years. The question of how to regulate the use of drones in the future is addressed, by considering conditions and contents of future drone legislation and by analyzing issues surrounding privacy and safeguards that can be taken. As such, this book is valuable to scholars in several disciplines, such as law, ethics, sociology, politics and public administration, as well as to practitioners and others who may be confronted with the use of drones in their work, such as professionals working in the military, law enforcement, disaster management and infrastructure management. Individuals and businesses with a specific interest in drone use may also find in the nineteen contributions contained in this volume unexpected perspectives on this new field of research and innovation. Bart Custers is Associate Professor and Head of Research at eLaw, the Center for Law and Digital Technologies at Leiden University, The Netherlands. He has presented his work at international conferences in the United States, China, Japan, the Middle East and throughout Europe and has published over 80 scientific, professional and popularizing publications, including three books.

Drones and Terrorism - Nicholas Grossman 2018-01-31

In warzones, ordinary commercially-available drones are used for extraordinary reconnaissance and information gathering. They can also be used for bombings - a drone carrying an explosive charge is potentially a powerful weapon. At the same time asymmetric warfare has become the norm - with large states increasingly fighting marginal terrorist groups in the Middle East and elsewhere. Here, Nicholas Grossman shows how we are entering the age of the drone terrorist - groups such as Hezbollah are already using them in the Middle East. Grossman will analyse the ways in which the United States, Israel and other advanced militaries use aerial drones and ground-based robots to fight non-state actors (e.g. ISIS, al Qaeda, the Iraqi and Afghan insurgencies, Hezbollah, Hamas, etc.) and how these groups, as well as individual terrorists, are utilizing less advanced commercially-available drones to fight powerful state opponents. Robotics has huge implications for the future of security, terrorism and international relations and this will be essential reading on the subject of terrorism and drone warfare.

The Future of Work in Asia and Beyond - Alan R. Nankervis 2020-03-31

The Future of Work in Asia and Beyond presents the findings and associated implications arising from a collaborative research study conducted on the potential impact of the Fourth Industrial Revolution (4IR - or Industry 4.0) on the labour markets, occupations and associated future workforce competencies and skills across ten countries. The 4IR concerns the digital transformation in society and business - an interface between technologies in the physical, digital and biological disciplines. The book explores many related issues: the nature of the 4IR, as well as demographic, generational and socio-cultural issues, economic and political perspectives, public and private sector similarities and differences, business strategy and

managerial implications, human resource management/planning strategies, policies and practices, industry innovations, 'best practice' cases and comparative country studies. Chapters are based on a framework which combines labour market and multiple stakeholder theories. Issues are explored through the perceptions of organisational managers based in Australia, China, India, Indonesia, Malaysia, Mauritius, Nepal, Singapore, Taiwan and Thailand to provide an analysis of organisational, industry and government preparedness for the 4IR. This book is recommended reading for anyone wanting to gain an understanding of the 4IR and a range of related challenges and issues, as well as suggested strategies for governments, education and industry that are necessary to address them.

[Academic Studies in Engineering Sciences](#) - Halil İbrahim Kurt 2020-12-15

Academic Studies in Engineering Sciences

Routledge Handbook of Contemporary Hong Kong - Tai-lok Lui 2018-07-17

When Britain and China negotiated the future of Hong Kong in the early 1980s, their primary concern was about maintaining the status quo. The rise of China in the last thirty years, however, has reshaped the Beijing-Hong Kong dynamic as new tensions and divisions have emerged. Thus, post-1997 Hong Kong is a case about a global city's democratic transition within an authoritarian state. The Routledge Handbook of Contemporary Hong Kong introduces readers to these key social, economic, and political developments. Bringing together the work of leading researchers in the field, it focuses on the process of transition from a British colony to a Special Administrative Region under China's sovereign rule. Organized thematically, the sections covered include: 'One Country, Two Systems' in practice Governance in post-colonial Hong Kong Social mobilization The changing social fabric of Hong Kong society Socio-economic development and regional integration The future of Hong Kong. This book provides a thorough introduction to Hong Kong today. As such, it will be invaluable to students and scholars of Hong Kong's politics, culture and society. It will also be of interest to those studying Chinese political development and the impact of China's rise more generally.

[Ближний Восток: Космос сегодня и завтра. Middle East: Space today and tomorrow](#) - Денис Коробушин 2019-02-03

Идея написания данной книги возникла случайно, авторы не являются арабистами, но им интересен этот регион, поэтому было решено апробировать собственную методику оценки космической деятельности, на ее основе был разработан авторский прогноз тенденций развития космической деятельности стран Ближнего Востока на долгосрочную перспективу. Книга будет полезна специалистам по Ближнему Востоку, студентам, аспирантам, политикам, экономистам, военным и всем, кто интересуется Ближним Востоком и космосом.

[Law and the Arms Trade](#) - Laurence Lustgarten 2020-09-03

This ground-breaking book offers an extensive legal analysis-grounded in public, EU, and international law-of arms trade regulation, integrated with insights drawn from international relations. The sale of weapons and related technologies is, globally, one of the most politically controversial and ethically contentious forms of commerce. Intimately connected with sustaining repressive governments and violations of international human rights and humanitarian law, arms exports are also a central element in the economic and strategic policies of the governments of all large industrial states. They have also been the source of abundant corruption, and of serious challenges to the norms and effectiveness of constitutional

accountability in democratic states. On paper, the arms trade is heavily regulated: national legislation and international treaties are in place which purport to prohibit certain transactions and limit others. Yet despite its importance, legal and international relations scholarship on the subject has been surprisingly limited. This book fills this gap in the literature by examining and comparing the export control regimes of eight leading nations - USA, Russia, the UK, France, Germany, Sweden, China, and India - with chapters contributed by leading experts in the field of law and international relations.

Journalism in the Age of Virtual Reality - John V. Pavlik 2019-09-03

With the advent of the internet and handheld or wearable media systems that plunge the user into 360o video, augmented—or virtual reality—technology is changing how stories are told and created. In this book, John V. Pavlik argues that a new form of mediated communication has emerged: experiential news. Experiential media delivers not just news stories but also news experiences, in which the consumer engages news as a participant or virtual eyewitness in immersive, multisensory, and interactive narratives. Pavlik describes and analyzes new tools and approaches that allow journalists to tell stories that go beyond text and image. He delves into developing forms such as virtual reality, haptic technologies, interactive documentaries, and drone media, presenting the principles of how to design and frame a story using these techniques. Pavlik warns that although experiential news can heighten user engagement and increase understanding, it may also fuel the transformation of fake news into artificial realities, and he discusses the standards of ethics and accuracy needed to build public trust in journalism in the age of virtual reality. *Journalism in the Age of Virtual Reality* offers important lessons for practitioners seeking to produce quality experiential news and those interested in the ethical considerations that experiential media raise for journalism and the public.

Titanium for Consumer Applications - Francis Froes 2019-11-08

Titanium for Consumer Applications is the first book to tie together the metallurgical advantages of titanium in consumer applications. The book begins with a discussion of the metallurgy and properties of titanium that is followed by six distinct sections that look at the use of titanium in consumer products, the sports industry, buildings and architecture design, arts field, aerospace, automotive, and medical applications. This book is useful for individuals involved in the manufacturing of titanium components, as well as those looking to define new applications for this versatile metal. Presents an understanding of the applications of titanium in consumer industries Discusses the properties of titanium and their unique benefits in consumer applications Reviews potential further applications of titanium within the consumer industry

Unmanned Aerial Vehicles - P. K. Garg 2021-07-15

This book provides an overview of the basic concepts and components of UAVs, the various sensors used, architecture of autonomous UAVs, communication tools and devices to acquire real-time data from UAVs, the software needed to analyze the UAV data, required rules and regulations to fly UAVs, various application areas, and future areas of research which is needed to handle relevant challenges. **FEATURES:** Explores the utilization of UAVs in different application areas, such as construction, oil and gas, mining, agriculture, forestry, search and rescue, surveillance, transportation, disaster, logistics, health, journalism, and many more Covers the theory, hardware, and software components of UAVs Includes end of chapter review questions for better understanding of the subject matter.

Agricultural Drones - K. R. Krishna 2018-03-26

Agricultural drones are expected to revolutionize the way we conduct agronomic procedures and maintain natural vegetation on earth. This book explores the increasing importance of the role of aerial robots in managing agricultural farms and natural resources. *Agricultural Drones: A Peaceful Pursuit* provides a wealth of information on drone usage in agriculture. The book discusses the advanced sensors and imaging capabilities of drones that give farmers new ways to increase yields and reduce crop damage. An introductory chapter provides historical data, with details about various models of drones as well as the most recent and popular agricultural drones in usage. The book goes on to look at such topics as the use of drones for soil fertility, production agronomy, irrigation, weed control, pest and disease control, grain yield forecasting, and economic advantages from drone use. This timely and useful volume will be a valuable resource for faculty, agricultural extension officers, and farmers and farm consultancy agencies. This book

would also serve as an excellent textbook for students in agriculture, engineering, geography, etc. Key features: • outlines the advantages of using drones in agriculture, such as for the management of soil fertility, the study of natural resources and vegetation, the maintenance of adequate irrigation, and the control of weeds and pests • covers the economic advantages of using drones in agriculture • examines the regulatory aspects of agricultural drones • provides actual examples of drone usage in agriculture *UAV-Based Remote Sensing Volume 2* - Felipe Gonzalez Toro 2018-04-27

This book is a printed edition of the Special Issue "UAV-Based Remote Sensing" that was published in *Sensors*

Barron's SAT Study Guide Premium, 2021-2022 (Reflects the 2021 Exam Update): 7 Practice Tests + Comprehensive Review + Online Practice - Sharon Weiner Green 2021-07-06

Always study with the most up-to-date prep! Look for *SAT Study Guide Premium, 2023: 8 Practice Tests + Comprehensive Review + Online Practice*, ISBN 9781506264578, on sale July 5, 2022. Publisher's Note: Products purchased from third-party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitles included with the product.

Ethics and Civil Drones - María de Miguel Molina 2017-12-05

This open access book disseminates some of the results of the European H2020 AiRT Project (Technology transfer of RPAs for the creative industry). In particular, it presents findings related to mitigating safety and security concerns when civil drones are piloted by the service sector (mainly, the creative industry). European policies regarding drones generally focus on outdoor drones, but they are also used indoors. Moreover, a number of European countries have fragmented regulations on drone use, and as a result, European institutions are attempting address these issues. This work is based on a detailed study of the European policies, a comparative analysis of the regulation in various European countries, an analysis of the drone sector in Europe, and primary data from members of the creative industry. The authors created focus groups in Spain, the UK and Belgium in order to discuss with the creative industry the concerns on safety and security when using civil drones for their work. Based on these results, the book offers advice to the European industry, as well as new insights for academics and policymakers.

Human + Machine - Paul R. Daugherty 2018-03-20

AI is radically transforming business. Are you ready? Look around you. Artificial intelligence is no longer just a futuristic notion. It's here right now--in software that senses what we need, supply chains that "think" in real time, and robots that respond to changes in their environment. Twenty-first-century pioneer companies are already using AI to innovate and grow fast. The bottom line is this: Businesses that understand how to harness AI can surge ahead. Those that neglect it will fall behind. Which side are you on? In *Human + Machine*, Accenture leaders Paul R. Daugherty and H. James (Jim) Wilson show that the essence of the AI paradigm shift is the transformation of all business processes within an organization--whether related to breakthrough innovation, everyday customer service, or personal productivity habits. As humans and smart machines collaborate ever more closely, work processes become more fluid and adaptive, enabling companies to change them on the fly--or to completely reimagine them. AI is changing all the rules of how companies operate. Based on the authors' experience and research with 1,500 organizations, the book reveals how companies are using the new rules of AI to leap ahead on innovation and profitability, as well as what you can do to achieve similar results. It describes six entirely new types of hybrid human + machine roles that every company must develop, and it includes a "leader's guide" with the five crucial principles required to become an AI-fueled business. *Human + Machine* provides the missing and much-needed management playbook for success in our new age of AI. **BOOK PROCEEDS FOR THE AI GENERATION** The authors' goal in publishing *Human + Machine* is to help executives, workers, students and others navigate the changes that AI is making to business and the economy. They believe AI will bring innovations that truly improve the way the world works and lives. However, AI will cause disruption, and many people will need education, training and support to prepare for the newly created jobs. To support this need, the authors are donating the royalties received from the sale of this book to fund education and retraining programs focused on developing fusion skills for the age of artificial intelligence.

The Global Supply Chain - Wolfgang Lehmacher 2017-01-28

This book provides readers an in-depth understanding of the inner mechanisms and principles of the global

supply chain. Authored by the Head of Supply Chain and Transport Industries at the World Economic Forum, it draws on a wealth of operational and managerial expertise in the global supply chain industry that drive the world's economies. The book analyzes the importance and impact of globally networked sourcing, production and distribution, and presents detailed information on the opportunities, limitations and challenges of linear value and supply chain systems. Building on a series of recent industry cases and with a focus on the latest developments in actual business processes and models, it reveals how the transformation toward circular supply chains and regenerative resource management forms the basis for success and sustainability in business. "The book brings together technical, social, political, and geographical trends, suggesting how supply chain management can lead the quest for many of the world's most pressing challenges." Yossi Sheffi, Professor of Engineering, MIT, Head, MIT Center for Transportation and Logistics "This book provides an essential roadmap, guiding the reader easily through complex developments and concepts." John Manners-Bell, CEO Transport Intelligence and Honorary Visiting Professor, Guildhall Business School, London "With strategic foresight, Lehmacher develops a vision of a circular economy within which consumer, manufacturer and logistics companies assume collective responsibility for sustainable value creation." Alfred Talke, Group Managing Director ALFRED TALKE Logistic Services "Those who are active in logistics and supply chain management, in practice or academia, will discover a fresh view on the whole field of activity beyond the day-to-day-business." Prof. Dr.-Ing. Thomas Wimmer, Chairman of the Executive Board, BVL International

The Digital Transformation of Logistics - Johannes Kern 2021-04-06

The digital transformation is in full swing and fundamentally changes how we live, work, and communicate with each other. From retail to finance, many industries see an inflow of new technologies, disruption through innovative platform business models, and employees struggling to cope with the significant shifts occurring. This Fourth Industrial Revolution is predicted to also transform Logistics and Supply Chain Management, with delivery systems becoming automated, smart networks created everywhere, and data being collected and analyzed universally. The Digital Transformation of Logistics: Demystifying Impacts of the Fourth Industrial Revolution provides a holistic overview of this vital subject clouded by buzz, hype, and misinformation. The book is divided into three themed-sections: Technologies such as self-driving cars or virtual reality are not only electrifying science fiction lovers anymore, but are also increasingly presented as cure-all remedies to supply chain challenges. In The Digital Transformation of Logistics: Demystifying Impacts of the Fourth Industrial Revolution, the authors peel back the layers of excitement that have grown around new technologies such as the Internet of Things (IoT), 3D printing, Robotic Process Automation (RPA), Blockchain or Cloud computing, and show use cases that give a glimpse about the fascinating future we can expect. Platforms that allow businesses to centrally acquire and manage their logistics services disrupt an industry that has been relationship-based for centuries. The authors discuss smart contracts, which are one of the most exciting applications of Blockchain, Software as a Service (SaaS) offerings for freight procurement, where numerous data sources can be integrated and decision-making processes automated, and marine terminal operating systems as an integral node for shipments. In The Digital Transformation of Logistics: Demystifying Impacts of the Fourth Industrial Revolution, insights are shared into the cold chain industry where companies respond to increasing quality demands, and how European governments are innovatively responding to challenges of cross-border eCommerce. People are a vital element of the digital transformation and must be on board to drive change. The Digital Transformation of Logistics: Demystifying Impacts of the Fourth Industrial Revolution explains how executives can create sustainable impact and how competencies can be managed in the digital age - especially for sales executives who require urgent upskilling to remain relevant. Best practices are shared for organizational culture change, drawing on studies among senior leaders from the US, Singapore, Thailand, and Australia, and for managing strategic alliances with logistics service providers to offset risks and create cross-functional, cross-company transparency. The Digital Transformation of Logistics: Demystifying Impacts of the Fourth Industrial Revolution provides realistic insights, a ready-to-use knowledge base, and a working vocabulary about current activities and emerging trends of the Logistics industry. Intended readers are supply chain professionals working for manufacturing, trading, and freight forwarding companies as well as students and all interested parties.

The Routledge Companion to Air Transport Management - Nigel Halpern 2018-01-31

The Routledge Companion to Air Transport Management provides a comprehensive, up-to-date review of air transport management research and literature. This exciting new handbook provides a unique repository of current knowledge and critical debate with an international focus, considering both developed and emerging markets, and covering key sectors of the air transport industry. The companion consists of 25 chapters that are written by 39 leading researchers, scholars and industry experts based at universities, research institutes, and air transport companies and organisations in 12 different countries in Africa, Asia-Pacific, Europe and North America to provide a definitive, trustworthy resource. The international team of contributors have proven experience of research and publication in their specialist areas, and contribute to this companion by drawing upon research published mainly in academic, industry and government sources. This seminal companion is a vital resource for researchers, scholars and students of air transport management. It is organised into three parts: current state of the air transport sectors (Part I); application of management disciplines to airlines and airports (Part II); and key selected themes (Part III).

Artificial Intelligence Applications and Innovations. AIAI 2021 IFIP WG 12.5 International Workshops - Ilias Maglogiannis 2021-06-26

This book constitutes the refereed proceedings of six International Workshops held as parallel events of the 17th IFIP WG 12.5 International Conference on Artificial Intelligence Applications and Innovations, AIAI 2021, virtually and in Hersonissos, Crete, Greece, in June 2021: the 6th Workshop on 5G-Putting Intelligence to the Network Edge, 5G-PINE 2021; Artificial Intelligence in Biomedical Engineering and Informatics Workshop, AI-BIO 2021; Workshop on Defense Applications of AI, DAAI 2021; Distributed AI for Resource-Constrained Platforms Workshop, DARE 2021; Energy Efficiency and Artificial Intelligence Workshop, EEAI 2021; and the 10th Mining Humanistic Data Workshop, MHDW 2021. The 24 full papers and 16 short papers presented at these workshops were carefully reviewed and selected from 72 submissions. The papers presented at 5G-PINE focus on the latest AI applications in the telecommunication industry and AI in modern 5G-oriented telecommunications infrastructures. The papers chosen for AI-BIO 2021 present research on the subject of AI, in its broadest sense, in biomedical engineering and health informatics. The DAAI 2021 papers aim at presenting recent evolutions in artificial intelligence applicable to defense and security applications. The papers selected for DARE 2021 address a variety of pertinent and challenging topics within the scope of distributed AI for resource-constrained platforms. The papers presented at EEAI 2021 aim to bring together interdisciplinary approaches that focus on the application of AI-driven solutions for increasing and improving energy efficiency of residential and tertiary buildings and of occupant behavior. The MHDW papers focus on topics such as recommendation systems, sentiment analysis, pattern recognition, data mining, and time series.

Asian Defence Review 2016 - Air Marshal Vinod Patney 2016-05-15

Last year, the war in Syria became a melee--the US, Russia, NATO, Saudi Arabia, Iran, Turkey, Lebanon and some others struggled to bring peace to the region. But each stakeholder hankered after a different end state--President Bashar al-Assad's continuance in power became a contentious issue. In due course of time Syria and the Islamic State in Syria (ISIS) jumped the order of priorities for the US forces in the area. In importance, they have left behind the drawdown in Afghanistan, which has been back-burnered provisionally. As it appears, garnering the support of the countries of the region like India, Japan, South Korea, the Philippines, etc. to counter the rise of China, will continue to be high on the US agenda. Likewise, lifting of sanctions against Iran, following its rapprochement with the West will influence the world in many ways. The fallout of the testing of the hydrogen bomb by North Korea, the South China Sea imbroglio and Indo-Pak relations in the wake of the Pathankot terror strike too will cast their shadows on the geo-politics of the region in 2016. Evading war and conflict in the prevailing environment is an effort; economic interests and geo-political compulsions make the choice of alignment difficult for peace-loving nations of the world. They are faced with the dilemma of evading armed conflicts. It requires a conscious and sustained effort to do so. In order to work towards such goals, it is necessary to look at the geo-political, security and military-related issues objectively. The Centre for Air Power Studies (CAPS) has been publishing the Asian Defence Review to fulfill this need. This volume, a resource base for both the professional and general readers, is the ninth in the series under this title. It aims to add to the pool of

information and knowledge in the current strategic discourse dealing with military strategy, defence, politics and trends in military capabilities that impact Asia. In particular, it covers some of the important issues related to India's security environment, the Indian Air Force, cyber warfare, nuclear security, warfare technologies, export control regimes, Russia, China and Pakistan.

Advances in Agricultural Machinery and Technologies - Guangnan Chen 2018-03-05

The agricultural industry is dealing with enormous challenges across the globe, including the limited availability of arable lands and fresh water, as well as the effect of climate change. Machinery plays a crucial role in agriculture and farming systems, in order to feed the world's growing population. In the last decade, we have witnessed major advances in agricultural machinery and technologies, particularly as manufacturers and researchers develop and apply various novel ways of automation as well as the data and information gathering and analyzing capabilities of their machinery. This book presents the state-of-the-art information on the important innovations in the agricultural and horticultural industry. It reviews and presents different novel technologies and implementation of these technologies to optimize farming processes and food production. There are four sections, each addressing a specific area of development. Section I discusses the recent development of farm machinery and technology. Section II focuses on water and irrigation engineering. Section III covers harvesting and post-harvest technology. Section IV describes computer modelling and simulation. Each section highlights current industry trends and latest research progress. This book is ideal for those working in or are associated with the fields of agriculture, agri-food chain and technology development and promotion.

No One at the Wheel - Samuel I. Schwartz 2018-11-20

The country's leading transport expert describes how the driverless vehicle revolution will transform highways, cities, workplaces and laws not just here, but across the globe. Our time at the wheel is done. Driving will become illegal, as human drivers will be demonstrably more dangerous than cars that pilot themselves. Is this an impossible future, or a revolution just around the corner? Sam Schwartz, America's most celebrated transportation guru, describes in this book the revolution in self-driving cars. The ramifications will be dramatic, and the transition will be far from seamless. It will overturn the job market for the one in seven Americans who work in the trucking industry. It will cause us to grapple with new ethical dilemmas-if a car will hit a person or a building, endangering the lives of its passengers, who will decide what it does? It will further erode our privacy, since the vehicle can relay our location at any moment. And, like every other computer-controlled device, it can be vulnerable to hacking. Right now, every major car maker here and abroad is working on bringing autonomous vehicles to consumers. The fleets are getting ready to roll and nothing will ever be the same, and this book shows us what the future has in store.

Scaling up inclusive innovations in agrifood chains in Asia and the Pacific - Gálvez, E. 2022-06-21

The publication looks at innovations happening at all stages of the food value chain: from production to manufacturing and retailing. This also includes the extended value chain, for example input supply, financial services and agribusiness support services. Yields are improving and primary production is becoming more resilient as a result of digital technologies such as precision agriculture, agricultural drones, and digital farming services and marketplaces; and novel business models such as plant factories, crowdsourcing for farmers. Data and robotics help lift productivity and food safety in the manufacturing process. Online grocery commerce and food delivery services are revolutionizing the way consumers purchase food. Distributed ledger technology, such as blockchain, allows making payments and tracing back food products along the chain in order to increase transparency and trust. New business models are springing up to shorten the chain by removing or shifting stages and to make it fairer and greener, stimulated by enabling technologies and changing customer behaviours. Innovations such as these are discussed and illustrated by almost 200 practical examples from 21 countries in the Asia-Pacific region, across various types of firms and commodities. By observing emerging trends and providing concrete examples, the book discusses the nature of these innovations, how they are affecting food systems and value chains, positively or negatively, and how to deal with trade-offs. It concludes with a reflection on the impacts of these innovations, the policy solutions identified, and lessons learned to future-proof the region's food systems, particularly in the wake of the COVID-19 pandemic.

Finnish Yearbook of International Law - Tuomas Tiittala 2019-10-03

The Finnish Yearbook of International Law aspires to honour and strengthen the Finnish tradition in international legal scholarship. Open to contributions from all over the world and from all persuasions, the Finnish Yearbook stands out as a forum for theoretically informed, high-quality publications on all aspects of public international law, including the international relations law of the European Union. The Finnish Yearbook publishes in-depth articles and shorter notes, commentaries on current developments, book reviews and relevant overviews of Finland's state practice. While firmly grounded in traditional legal scholarship, it is open for new approaches to international law and for work of an interdisciplinary nature. The Finnish Yearbook is published for the Finnish Society of International Law by Hart Publishing. Earlier volumes may be obtained from Martinus Nijhoff, an imprint of Brill Publishers.

The International Civil Operations of Unmanned Aircraft Systems under Air Law - Luis Fernando Fiallos Pazmiño 2020-12-10

Aviation Law and Policy Series # 19 The incursion of unmanned aircraft systems (UAS) is radically reshaping the future of international civil aviation. As the civil uses of UAS increase and the technology matures in parallel, questions around the associated legal implications remain unanswered, even in such fundamental legal regimes of international civil aviation as airspace, aircraft, international air navigation, international air transport, and safety. This book - the first to consider international law and regulations to cross-border civil flights of UAS - explores current legal and regulatory frameworks from the perspective of how they may facilitate the operations of UAS. The author, a well-known air law practitioner and diplomat, identifies the legal challenges and proposes sound, well-informed measures to tackle those challenges. The book explores comprehensively the means of incorporating UAS within the arena of air law while stimulating further research and debate on the topic. Analysis of the cross-border operations of UAS focuses on aspects relevant to their immediate future, and address such questions as the following: What processes are currently in place? What factors require attention? What aspects particularly influence the future of UAS? Is the current international legal framework adequate to ensure the operation and development of UAS while preserving high levels of safety? How will artificial intelligence impact the civil operations of UAS? The author's analyses draw on relevant initiatives in existing and proposed Standards and Recommended Practices for the operation of UAS on cross-border flights, as well as States' regulation of UAS within their national airspace. Also described are the main bilateral and multilateral air services and transport agreements with respect to their application to the operation of UAS. Given the escalating need to adopt a comprehensive international regulatory framework for the operation of UAS aimed at facilitating its safe and efficient integration - even as the technology advances and continues to outpace law while the potential for incidents involving UAS grows - this book is well timed to meet the challenge for States and International Civil Aviation Organization and airspace planners. Its innovative approaches to the management of the air traffic safety and security of UAS are sure to influence the development of regulations for civil UAS. The book will be welcomed by aviation regulators, interested international and regional organisations, research organisations, aviation lawyers, and academics in international law and air law.

Computational Science and Its Applications - ICCSA 2020 - Osvaldo Gervasi 2020-09-29

The seven volumes LNCS 12249-12255 constitute the refereed proceedings of the 20th International Conference on Computational Science and Its Applications, ICCSA 2020, held in Cagliari, Italy, in July 2020. Due to COVID-19 pandemic the conference was organized in an online event. Computational Science is the main pillar of most of the present research, industrial and commercial applications, and plays a unique role in exploiting ICT innovative technologies. The 466 full papers and 32 short papers presented were carefully reviewed and selected from 1450 submissions. Apart from the general track, ICCSA 2020 also include 52 workshops, in various areas of computational sciences, ranging from computational science technologies, to specific areas of computational sciences, such as software engineering, security, machine learning and artificial intelligence, blockchain technologies, and of applications in many fields.

Drones - Harrison G. Wolf 2017-04-07

This book is an everything-included approach to understanding drones, creating an organization around using unmanned aircraft, and outlining the process of safety to protect that program. It is the first-of-a-kind

safety-focused text book for unmanned aircraft operations, providing the reader with a required understanding of hazard identification, risk analysis, mitigation, and promotion. It enables the reader to speak the same language as any civil aviation authority, and gives them the toolset to create a safety risk management program for unmanned aircraft. The main items in this book break down into three categories. The first approach is understanding how the drone landscape has evolved over the last 40 years. From understanding the military components of UAS to the standards and regulations evolution, the reader garners a keen understanding of where we came from and why it matters for moving forward. The second approach is in understanding how safety risk management in aviation can be applied to drones, and how that fits into the regulatory and legislative environment internationally. Lastly, a brief synopsis of the community landscape for unmanned aircraft is outlined with interviews from important leaders and stakeholders in the marketplace. Drones fills a gap in resources within the unmanned aircraft world. It provides a robust understanding of drones, while giving the tools necessary to apply for a certificate of authorization, enabling more advanced flight operations for any company, and developing safety risk management tools for students and career professionals. It will be a mainstay in all safety program courses and will be a required tool for any and all individuals looking to operate safely and successfully in the United States.

Comparative handbook: robotic technologies law - Alain Bensoussan 2016-06-28

Studies of the overall impact of robotics on the economy have shown that investments in its various sectors - industrial, professional and service robotics - are increasing globally and the markets associated with them are valued in billions. Robotization improves the competitiveness of enterprises, while collaborative robotics reinvents methods of production. Beyond the economic outlook, service robotics, backed by the development of artificial intelligence, raises challenging ethical and social issues. The legal analysis of robotics is no mean feat because it covers a very diverse technical reality. Companies whose businesses are focused on robotic technologies and applications can be confronted with a complex legal situation resulting from the plurality of the applicable rules which have not necessarily been conceived or adopted bearing in mind their specific constraints. This situation should not hamper their development. It only implies taking cues from the economic legal norms which promote such developments and conducting an analysis of the legal risks which they face, given the applicable rules of liability. This comparative study - carried out by members of the Lexing® Network - proposes an overview, having regard to the legislation of 17 different countries, of the legal issues raised by robotics and the way the law in force responds, in a more or less satisfactory manner. Discover the authors & contributors in details under the tab 'Extraits'.

Big Data's Big Potential in Developing Economies - Nir Kshetri 2016-10-25

Big Data has the power to change all aspects of agriculture, environmental protection and healthcare, especially in developing countries, by allowing new levels of analysis and tailoring of impacts. How big data will impact will benefit smallholder farmers relative to global multinationals. The book considers how big data can change the way lenders assess creditworthiness of potential borrowers. Data privacy and security issues are important issues. The key ideas, concepts and theories presented are explored, illustrated and contrasted through in-depth case studies of developing world-based big data companies and deployment and utilization big data in agriculture, environmental protection and healthcare.

Examining Internet and Technology around the World - Laura M. Steckman 2020-12-02

This book offers comparative insights into the challenges and opportunities surrounding emerging technology and the internet as it is used and perceived throughout the world, providing students with cross-cultural and cross-national perspectives. The United Arab Emirates has a national goal of colonizing Mars by 2117, and China seeks to modernize its entire manufacturing process to produce cutting-edge technologies and research advances by 2025. How are other countries using the internet and emerging technologies to their advantage? This volume in the Global Viewpoints series examines 10 issues pertaining to the internet and technology, including access and censorship, alternative energy technologies, artificial intelligence, autonomous robots, cyberbullying, cybercrime, e-learning, GMO's, online privacy, and virtual and augmented reality. For each topic, the volume features eight country-level perspectives that span the world to allow for comparisons of different nations' specific approaches to the technology or issue. This encyclopedia takes a new direction in understanding the importance and impact of emerging technologies

on the world, showing that even when experiencing similar technologically related challenges or advances, these technologies do not form one-size-fits-all solutions for every nation and population. Even when nations develop similar technologies, human dimensions, from policy to social norms to culture, influence people and society across the world too. Shows the similarities and differences of emerging issues and successes surrounding technology development through perspectives from different world regions, allowing readers to make comparisons among the featured countries in each section Provides a brief primer on each technology and internet-related issue that functions as a baseline for each section Highlights that different countries and populations having similar societal needs often need to make dissimilar technology-related choices, usually due to varying internal and external pressures ranging from social values and political systems to economic needs and developmental goals Includes photographs that help to illuminate the text
A Roadmap to Industry 4.0: Smart Production, Sharp Business and Sustainable Development - Anand Nayyar 2019-11-27

Business innovation and industrial intelligence are paving the way for a future in which smart factories, intelligent machines, networked processes and Big Data are combined to foster industrial growth. The maturity and growth of instrumentation, monitoring and automation as key technology drivers support Industry 4.0 as a viable, competent and actionable business model. This book offers a primer, helping readers understand this paradigm shift from industry 1.0 to industry 4.0. The focus is on grasping the necessary pre-conditions, development & technological aspects that conceptually describe this transformation, along with the practices, models and real-time experience needed to achieve sustainable smart manufacturing technologies. The primary goal is to address significant questions of what, how and why in this context, such as: What is Industry 4.0? What is the current status of its implementation? What are the pillars of Industry 4.0? How can Industry 4.0 be effectively implemented? How are firms exploiting the Internet of Things (IoT), Big Data and other emerging technologies to improve their production and services? How can the implementation of Industry 4.0 be accelerated? How is Industry 4.0 changing the workplace landscape? Why is this melding of the virtual and physical world needed for smart production engineering environments? Why is smart production a game-changing new form of product design and manufacturing?

MKTG - Charles W. Lamb 2017-01-27

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Reliability and Statistics in Transportation and Communication - Igor Kabashkin 2022-02-22

This book reports on cutting-edge theories and methods for analyzing complex systems, such as transportation and communication networks and discusses multi-disciplinary approaches to dependability problems encountered when dealing with complex systems in practice. The book presents the most noteworthy methods and results discussed at the 21st International Multidisciplinary Conference on Reliability and Statistics in Transportation and Communication (RelStat), which took place remotely from Riga, Latvia, on October 14 - 15, 2021. It spans a broad spectrum of topics, from mathematical models and design methodologies, to software engineering, data security and financial issues, as well as practical problems in technical systems, such as transportation and telecommunications, and in engineering education.

Airborne Wind Energy - Roland Schmehl 2018-03-31

This book provides in-depth coverage of the latest research and development activities concerning innovative wind energy technologies intended to replace fossil fuels on an economical basis. A characteristic feature of the various conversion concepts discussed is the use of tethered flying devices to substantially reduce the material consumption per installed unit and to access wind energy at higher altitudes, where the wind is more consistent. The introductory chapter describes the emergence and economic dimension of airborne wind energy. Focusing on "Fundamentals, Modeling & Simulation", Part I includes six contributions that describe quasi-steady as well as dynamic models and simulations of airborne wind energy systems or individual components. Shifting the spotlight to "Control, Optimization & Flight

State Measurement”, Part II combines one chapter on measurement techniques with five chapters on control of kite and ground stations, and two chapters on optimization. Part III on “Concept Design & Analysis” includes three chapters that present and analyze novel harvesting concepts as well as two chapters on system component design. Part IV, which centers on “Implemented Concepts”, presents five chapters on established system concepts and one chapter about a subsystem for automatic launching and landing of kites. In closing, Part V focuses with four chapters on “Technology Deployment” related to market and financing strategies, as well as on regulation and the environment. The book builds on the success of the first volume “Airborne Wind Energy” (Springer, 2013), and offers a self-contained reference guide for researchers, scientists, professionals and students. The respective chapters were contributed by a broad variety of authors: academics, practicing engineers and inventors, all of whom are experts in their respective fields.

The Fourth Industrial Revolution - Klaus Schwab 2017-01-03

World-renowned economist Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, explains that we have an opportunity to shape the fourth industrial revolution, which will fundamentally alter how we live and work. Schwab argues that this revolution is different in scale, scope and complexity from any that have come before. Characterized by a range of new technologies that are fusing the physical, digital and biological worlds, the developments are affecting all disciplines, economies, industries and governments, and even challenging ideas about what it means to be human. Artificial intelligence is already all around us, from supercomputers, drones and virtual assistants to 3D printing, DNA sequencing, smart thermostats, wearable sensors and microchips smaller than a grain of sand. But this is just the beginning: nanomaterials 200 times stronger than steel and a million times thinner than a strand of hair and the first transplant of a 3D printed liver are already in development. Imagine “smart factories” in which global systems of manufacturing are coordinated virtually, or implantable mobile phones made of biosynthetic materials. The fourth industrial revolution, says Schwab, is more significant, and its ramifications more profound, than in any prior period of human history. He outlines the key technologies driving this revolution and discusses the major impacts expected on government, business, civil society and individuals. Schwab also offers bold ideas on how to harness these changes and shape a better future—one in which technology empowers people rather than replaces them; progress serves society rather than disrupts it; and in which innovators respect moral and ethical boundaries rather than cross them. We all have the opportunity to contribute to developing new frameworks that advance progress.

UAV Communications for 5G and Beyond - Yong Zeng 2020-12-07

To advantageously plan and design for the explosive near-future increase in the number of unmanned aerial vehicles (UAVs) and their demanding applications, integration of UAVs into cellular communication systems has seen increasing interest. This book provides a timely and comprehensive overview of the recent research efforts and results of unmanned aerial vehicles (UAVs)-integrated cellular network communications. The aim of the book is to provide a comprehensive coverage of the potential applications, networking architectures, latest research findings and key enabling technologies, experimental measurement results, as well as up-to-date industry standardizations for UAV communications in cellular systems, including the existing LTE as well as the future 5G-and-beyond systems.

Drones in Society - Ron Bartsch 2016-12-08

The integration of drones into society has attracted unprecedented attention throughout the world. The

change, for aviation, has been described as being equally as big as the arrival of the jet engine. This book examines the issues that surround this change, for our society and the legal frameworks that preserve our way of life. *Drones in Society* takes the uninitiated on a journey to understand the history of drones, the present day and the potential future in order to demystify the media hype. Written in an accessible style, *Drones in Society* will appeal to a broad range of interested readerships, among them students, safety regulators, government employees, airspace regulators, insurance brokers and underwriters, risk managers, lawyers, privacy groups and the Remotely Piloted Aircraft System (RPAS) industry generally. In a world first, this book is a light and interesting read; being both relatable and memorable while discussing complex matters of privacy, international law and the challenges ahead for us all.

Drones and the Future of Air Warfare - Michael P. Kreuzer 2016-05-26

This book examines the evolution of airpower and specifically the growth and proliferation of Remotely Piloted Aircraft (RPAs). While most existing literature examines either the law or ethics of RPAs, and some newer scholarship looks to the battlefield effectiveness (the gains from strikes versus the potential for ‘blowback, etc.’), this work investigates it from a broader military perspective. It examines the strategy for employment of RPAs across the spectrum of warfare, the potential deterrent value of RPAs in some circumstances, and the resulting ability of RPAs to fundamentally shift the character of when and how wars are fought. The central aim of this book is to evaluate the role of ‘drones’ in warfare to date, and make basic projections on how states will adopt RPAs and UCAVs in the future. At the core is the goal of answering a broad, underlying research question: How will the RPA innovation impact military strategy and international security? This book will be of much interest to students of airpower, drone warfare, military and strategic studies, security studies and IR.

How to Succeed in the African Market - Winfred Opong-Amoako 2018-03-05

Home to some of the world’s fastest-growing economies, Africa is a hot investment destination. More than 75 per cent of companies and investors in Africa are successful. Why? And how could you reap the benefits of doing business on the continent? In this book, business adviser, executive coach and author Winfred Opong-Amoako presents a detailed picture of Africa’s investment environment, outlining the risks, challenges, misconceptions and opportunities, and providing a step-by-step guide for approaching the African market. The book covers key topics such as informal trading, China’s investment in the continent and the impact of recession on long-term GDP growth, and lays out certain factors that need to be taken into consideration before investing, such as cross-border trading, corruption, permits and legal contracts. If you’re new to investment or a successful businessperson looking to expand your brand, *How to Succeed in the African Market* is an indispensable reference, giving you the information that will enable you to make informed decisions and prosper.

Advances in Sustainable Aviation - Tahir Hikmet Karakoç 2017-11-08

This book provides different engineering, management, economic solutions and methodologies regarding sustainable aviation, giving readers a great sense of how sustainable aviation works at the “systems” level. The aviation industry is one of the fastest growing in the world and can make a positive contribution to sustainability. This book presents environmental policies and their application to the aviation industry and evaluates solutions provided to address pollution. Chapters discuss novel technologies that the aviation industry can apply to reduce its environmental impact and become more energy efficient.