

2018 Commission Work Programme Annex I New Initiatives

The essays in this open access volume identify the key ingredients for success in capitalizing on public investments in scientific projects and the development of large-scale research infrastructures. Investment in science – whether in education and training or through public funding for developing new research tools and technologies – is a crucial priority. Authors from big research laboratories/organizations, funding agencies and academia discuss how investing in science can produce societal benefits as well as identifying future challenges for scientists and policy makers. The volume cites different ways to assess the socio-economic impact of Research Infrastructures and their role as hubs of global collaboration, creativity and innovation. It highlights the different benefits stemming from fundamental research at the local, national and global level, while also inviting us to rethink the notion of “benefit” in the 21st century. Public investment is required to maintain the pace of technological and scientific advancements over the next decades. Far from advocating a radical transformation and massive expansion in funding, the authors suggest ways for maintaining a strong foundation of science and research to ensure that we continue to benefit from the outputs. The volume draws inspiration from the first “Economics of Big Science” workshop, held in Brussels in 2019 with the aim of creating a new space for dialogue and interaction between representatives of Big Science organizations, policy makers and academia. It aspires to provide useful reading for policy makers, scientists and students of science, who are increasingly called upon to explain the value of fundamental research and adopt the language and logic of economics when engaging in policy discussions. This book provides a current analysis of the legal and ethical challenges in preparing for and responding to chemical, biological, radiological, nuclear and explosive (CBRNE) crises. From past events like the Chernobyl nuclear incident in Russia or the Bhopal chemical calamity in India, to the more recent tsunami and nuclear accident in Japan or the Ebola crisis in Africa, and with the on-going threat of bioterrorism, the need to be ready to respond to CBRNE crises is uncontroversial. What is controversial is whether we are on a path that adequately prepares us for the next event. The ethical and legal scholars in this volume hold that much work remains to be done and offer this book to stimulate further reflection and dialogue around CBRNE crises. This is an indispensable book for both students and scholars of bioethics, international law, public health, as well as for regulators and administrators developing policy and legislation related to public health planning and emergency responses. This Special Issue on “LCA of Energy Systems” contains inspiring contributions on assessing the sustainability of novel technologies destined to shape the future of our energy sector. These include battery-based and plug-in hybrid electric vehicles, geothermal energy, hydropower, biomass gasification, national

electricity systems, and waste incineration. The analysis of trends and singularities will be invaluable to product designers, engineers, and policy makers. Furthermore, these exercises also contribute to refining the life cycle framework and harmonizing methodological decisions. Our hope is that this should be a step toward promoting the use of science and knowledge to shape a better world for everyone.

The Social Panorama of Latin America 2018 analyzes issues crucial to understanding and action given the structural challenges facing the countries of Latin America and the Caribbean in the current economic and social situation, especially in the context of the transformations underway in labour markets. Throughout the report, which has been published since 1991, strategies and policies are suggested for advancing toward inclusive development in accordance with the 2030 Agenda for Sustainable Development.

Offering a comprehensive exploration of EU taxation law, this engaging Research Handbook investigates the associated legal principles in the context of both direct and indirect taxation. The important issues and debates arising from these general principles are expertly unpicked, with leading scholars examining the status quo as well as setting out a clear agenda for future research.

The European Union is creating a Financial Union with a European Banking Union and a Capital Markets Union in reaction to lessons learned from incomplete financial markets integration, the Global Financial Crisis and European Sovereign Debt Crisis. This book critically analyses these projects for a more integrated, resilient and sustainable financial system at a time when the United Kingdom as the member state with the most developed capital markets and the leading global and European financial center, the City of London, is leaving the Union. Neoliberal financial globalization and markets integration policies have led to finance-led capitalism that caused the crises. By building on pre-crisis integration ideas, the Union revives and expands the reach of capital markets-based financing and shadow banking. The book discusses the consequences of deeper integration and the future of European financial centers advocating an alternative financial markets integration based on theories explaining financialization and finance-led capitalism.

This book provides a multilevel system analysis of performance in the production of global public goods, as well as a tailored analysis of the specific features of performance management systems in international organizations. The book compares performance management systems across a number of international organizations, including the European Union and the Organization for Economic Cooperation and Development (OECD).

This book explores how the EU's enforcement of competition law has moved from centralisation to decentralisation over the years, with the National Competition Authorities embracing more enforcement powers. At the same time, harmonisation has been employed as a solution to ensure that the enforcement of EU competition rules is not weakened and the internal market remains a level

when the Treaty of Rome came into force 60 years ago. It also explores the challenges that the producing and quality of acts pose for the EU's legal order, such as alterations to institutional balance and the roles of the different institutional actors and challenges to the rule of law.

Analyses banking regulation and recent international developments, including Basel IV, bank resolution and Brexit, and their impact on bank governance.

This legislative guide promotes an enabling legal environment for micro, small and medium-sized enterprises (MSMEs). It is based on the premise that it is in the interests of States and of MSMEs that such businesses operate in the formal economy. The guide also reflects the idea that entrepreneurs that have not yet commenced a business may be persuaded to do so in the formal economy if the requirements for formally starting their business are not considered overly burdensome. It includes best practices from various parts of the world and 58 recommendations aiming at assisting States in streamlining their business registration procedures.

The upswing in global investment and trade continued in the second half of 2017. At 3.8 percent, global growth in 2017 was the fastest since 2011. With financial conditions still supportive, global growth is expected to tick up to a 3.9 percent rate in both 2018 and 2019. Advanced economies will grow faster than potential this year and next; euro area economies are set to narrow excess capacity with support from accommodative monetary policy, and expansionary fiscal policy will drive the US economy above full employment. Aggregate growth in emerging market and developing economies is projected to firm further, with continued strong growth in emerging Asia and Europe and a modest upswing in commodity exporters after three years of weak performance. Global growth, however, is projected to soften beyond the next couple of years, with most advanced economies likely returning to potential growth rates well below precrisis averages. Growth is projected to remain subpar in several emerging market and developing economies, including in some commodity exporters that continue to face substantial fiscal consolidation needs. Beyond the next few quarters risks clearly lean to the downside. The current recovery offers a window of opportunity to advance policies and reforms that secure the current upswing and raise medium-term growth to the benefit of all.

Provides an unprecedented historical, theoretical and comparative analysis and appraisal of party autonomy in private international law. These issues are of great practical importance to any lawyer dealing with cross-border legal relationships, and great theoretical importance to a wide range of scholars interested in law and globalisation.

This volume deals with the law governing the administrative implementation of European Union public policy. Much of this law is specific to individual policy sectors. The volume provides a study of such specialized administrative law for more than twenty sectors. This cross-sectoral approach allows for detailed comparisons of EU administration in diverse policy fields. It identifies situations where legal structures and approaches may be unnecessarily duplicated, thus indicating where a comprehensive, general system could be advantageous for both Union law and policy achievement. The comparative nature of the study also draws attention to policy fields which have proven to be testing grounds for approaches adopted subsequently in other areas. In addition, the work highlights the distinctive, highly networked, and strongly cooperative character

of EU administration, as a reflection of, and a foundation for, the operative nature of the European Union as a whole.

This volume of Eurasian Studies in Business and Economics presents selected theoretical and empirical papers from the 25th Eurasia Business and Economics Society (EBES) Conference, held in Berlin, Germany, in May 2018. Covering diverse areas of business and management from different geographic regions, the book focuses on current topics such as consumer engagement, consumer loyalty, travel blogging, and AirBnB's marketing communication strategy, as well as healthcare project evaluation and Industry 4.0. It also includes related studies that analyze accounting and finance aspects like bank reliability and the bankruptcy risks of equity crowdfunding start-ups.

This open access book offers a critical perspective on intra-European mobility and migration by using new empirical data and theoretical discussions. It develops a theoretical and empirical analysis of the consequences of intra-European movement for sending and receiving urban regions in The Netherlands, Sweden, Austria, Turkey, Poland and Czech Republic. The book conceptualizes Central and Eastern European (CEE) migration by distinguishing between different types of CEE migrants and consequences. This involves a mapping of migration corridors within Europe, a unique empirical analysis of consequences for urban regions, and an analysis of governance responses. Next to the European and country perspectives on this phenomenon, the book focuses on the local perspective of urban regions where most mobile citizens settle (either permanently or temporarily). This way the book puts the analysis of intra-European movement in the perspective of broader theoretical debates in migration studies and beyond.

This book explores the specific role that glazing technologies play within the world of smart architecture as important components of contemporary and future sustainable architectural and technological research. Smart Architecture begins with a definition of the concept of smart in architecture and examines how innovative technologies and materials have shaped buildings over the years. The author then provides a supporting database of contemporary smart architecture mapping adopted strategies, recognizing common patterns, and evaluating current and future trends in the context of smart building envelopes, energy efficiency, and the development of high-potential innovative building components. The book proceeds with a focus on the specific role that glazing technologies play in this framework and provides a systematic methodology to quantify options for the effective integration of transparent building components within advanced and innovative building envelope systems. Presents an up-to-date examination of emerging materials for building envelope Evaluates state-of-the-art of technologies for smart adaptive building envelopes Provides a toolbox for the design and integration of transparent building components.

This book addresses the usefulness of knowledge discovery through data mining. With this aim, contributors from different fields propose concrete problems and applications showing how data mining and discovering embedded knowledge from raw data can be beneficial to social organizations, domestic spheres, and

ICT markets. Data mining or knowledge discovery in databases (KDD) has received increasing interest due to its focus on transforming large amounts of data into novel, valid, useful, and structured knowledge by detecting concealed patterns and relationships. The concept of knowledge is broad and speculative and has promoted epistemological debates in western philosophies. The intensified interest in knowledge management and data mining stems from the difficulty in identifying computational models able to approximate human behaviors and abilities in resolving organizational, social, and physical problems. Current ICT interfaces are not yet adequately advanced to support and simulate the abilities of physicians, teachers, assistants or housekeepers in domestic spheres. And unlike in industrial contexts where abilities are routinely applied, the domestic world is continuously changing and unpredictable. There are challenging questions in this field: Can knowledge locked in conventions, rules of conduct, common sense, ethics, emotions, laws, cultures, and experiences be mined from data? Is it acceptable for automatic systems displaying emotional behaviors to govern complex interactions based solely on the mining of large volumes of data? Discussing multidisciplinary themes, the book proposes computational models able to approximate, to a certain degree, human behaviors and abilities in resolving organizational, social, and physical problems. The innovations presented are of primary importance for: a. The academic research community b. The ICT market c. Ph.D. students and early stage researchers d. Schools, hospitals, rehabilitation and assisted-living centers e. Representatives from multimedia industries and standardization bodies

This volume offers a general overview on the handling and regulating electronic evidence in Europe, presenting a standard for the exchange process. Chapters explore the nature of electronic evidence and readers will learn of the challenges involved in upholding the necessary standards and maintaining the integrity of information. Challenges particularly occur when European Union member states collaborate and evidence is exchanged, as may be the case when solving a cybercrime. One such challenge is that the variety of possible evidences is so wide that potentially anything may become the evidence of a crime. Moreover, the introduction and the extensive use of information and communications technology (ICT) has generated new forms of crimes or new ways of perpetrating them, as well as a new type of evidence. Contributing authors examine the legal framework in place in various EU member states when dealing with electronic evidence, with prominence given to data protection and privacy issues. Readers may learn about the state of the art tools and standards utilized for treating and exchanging evidence, and existing platforms and environments run by different Law Enforcement Agencies (LEAs) at local and central level. Readers will also discover the operational point of view of LEAs when dealing with electronic evidence, and their requirements and expectations for the future. Finally, readers may consider a proposal for realizing a unique legal framework for governing in a uniform and aligned way the treatment and cross border exchange of electronic

evidence in Europe. The use, collection and exchange of electronic evidence in the European Union context and the rules, practises, operational guidelines, standards and tools utilized by LEAs, judges, Public prosecutors and other relevant stakeholders are all covered in this comprehensive work. It will appeal to researchers in both law and computer science, as well as those with an interest in privacy, digital forensics, electronic evidence, legal frameworks and law enforcement.

One of the central engines of the current shift towards decentralization and reorientation of healthcare services is mobile healthcare (mHealth). mHealth offers unique opportunities to reduce cost, increase efficiencies, and improve quality and access to healthcare. However, the full impact of mHealth is just beginning to be felt by the medical community and requires further examination to understand the full range of benefits it contributes to medical staff and patients. Mobile Health Applications for Quality Healthcare Delivery explores the emergence of mHealth in the healthcare setting and examines its impact on patient-centered care, including how it has reshaped access, quality, and treatment. Highlighting topics such as patient management, emergency medicine, and health monitoring, this publication supports e-health systems designers in understanding how mobile technologies can best be used for the benefit of both doctors and their patients. It is designed for healthcare professionals, administrators, students, health services managers, and academicians.

"Over recent decades, a wide variety of studies and assessment reports has portrayed a stark picture of humanity's detrimental impacts on our planet's life and environmental health. Climate change is at the heart of many of these impacts. This cannot be allowed to continue, given the relentless human population growth and ever-expanding energy and resource consumption. We have but one planet, and its ecosystem services are essential to our survival. But the doomsday scenario can still be averted; humanity stands at a crossroads where it must take the route of sustainable behavior. Decisive action can still make a significant difference to climate change. This is humanity's greatest challenge. To have any chance of success, however, the time to act can be delayed no longer. Instead, it is right now: today is the future. This book documents a wealth of ways to adjust the trajectory of climate change. It outlines measures to drive massive reductions of greenhouse gas emissions, to remove greenhouse gases from the atmosphere, and to reflect part of the incoming energy from the Sun. For all measures, the book evaluates both advantages and disadvantages. Finally, it discusses the need to protect ourselves from impacts that have become inevitable already, and looks at how society may be driven to get the job done. In short, this book provides powerful facts and arguments to support informed choices"--

Respected as the definitive textbook on the subject, this is the stand-alone guide to EU law. The world-renowned authors offer the ideal balance of commentary,

