

## A Structured Approach To Gdpr Compliance And

Understanding cybersecurity principles and practices is vital to all users of IT systems and services, and is particularly relevant in an organizational setting where the lack of security awareness and compliance amongst staff is the root cause of many incidents and breaches. If these are to be addressed, there needs to be adequate support and provision for related training and education in order to ensure that staff know what is expected of them and have the necessary skills to follow through. Cybersecurity Education for Awareness and Compliance explores frameworks and models for teaching cybersecurity literacy in order to deliver effective training and compliance to organizational staff so that they have a clear understanding of what security education is, the elements required to achieve it, and the means by which to link it to the wider goal of good security behavior. Split across four thematic sections (considering the needs of users, organizations, academia, and the profession, respectively), the chapters will collectively identify and address the multiple perspectives from which action is required. This book is ideally designed for IT consultants and specialist staff including chief information security officers, managers, trainers, and organizations.

This volume constitutes the refereed proceedings of the 26th European Conference on Systems, Software and Services Process Improvement, EuroSPI conference, held in Edinburgh, Scotland, in September 2019. The 18 revised full papers presented were carefully reviewed and selected from 28 submissions. They are organized in topical sections: Visionary Papers, SPI and Safety and Security, SPI and Assessments, SPI and Future Qualification & Team Performance, and SPI Manifesto and Culture. The selected workshop papers are also presented and organized in following topical sections: GamifySPI, Digitalisation of Industry, Infrastructure and E-Mobility. -Best Practices in Implementing Traceability. -Good and Bad Practices in Improvement. -Functional Safety and Cybersecurity. -Experiences with Agile and Lean. -Standards and Assessment Models. -Team Skills and Diversity Strategies. -Recent Innovations.

This book shares original innovations, research, and lessons learned regarding teaching and technological perspectives on trust-based learning systems. Both perspectives are crucial to enhancing the e-Assessment process. In the course of the book, diverse areas of the computer sciences (machine learning, biometric recognition, cloud computing, and learning analytics, amongst others) are addressed. In addition, current trends, privacy, ethical issues, technological solutions, and adaptive educational models are described to provide readers with a global view on the state of the art, the latest challenges, and potential solutions in e-Assessment. As such, the book offers a valuable reference guide for industry, educational institutions, researchers, developers, and practitioners seeking to promote e-Assessment processes.

Today we hear more and more often about data protection: but what does it mean? The “protection” concerns natural persons and therefore, their data. The book takes us on a journey through the legislation on the protection of natural persons with regard to the processing of personal data provided for by the eu Regulation 2016/679 (gdpr), helping us to understand its historical evolution, the ethical and legal principles that guide it and the obligations related to the processing. We should not overlook the

issue of information security, also given the most current methods of communication and the development of new tools that offer us connection possibilities through smartphones, e-mail and social networks, however, posing severe risks, especially for minors. The new technological frontiers (Blockchain, IoT, Big Data, Artificial Intelligence, Drones, Robotics) deserve attention mainly because of the impact on the natural persons and their data; adequate awareness is increasingly necessary also for a correct ethical approach to the issue. The book presents a new and innovative approach to data protection according to the relational model, which we defined dappremo (acronym of Data Protection and Privacy Relationships Model) based on high mathematics as a function of reality analysis.

This book contains selected papers presented at the 13th IFIP WG 9.2, 9.6/11.7, 11.6/SIG 9.2.2 International Summer School on Privacy and Identity Management, held in Vienna, Austria, in August 2018. The 10 full papers included in this volume were carefully reviewed and selected from 27 submissions. Also included are reviewed papers summarizing the results of workshops and tutorials that were held at the Summer School as well as papers contributed by several of the invited speakers. The papers combine interdisciplinary approaches to bring together a host of perspectives: technical, legal, regulatory, socio-economic, social, societal, political, ethical, anthropological, philosophical, historical, and psychological.

Ontologies are the corner stone of data modeling and knowledge representation, and engineering an ontology is a complex task in which domain knowledge, ontological accuracy and computational properties need to be carefully balanced. As with any engineering task, the identification and documentation of common patterns is important, and Ontology Design Patterns (ODPs) provide ontology designers with a strong connection to requirements and a better communication of their semantic content and intent. This book, *Advances in Pattern-Based Ontology Engineering*, contains 23 extended versions of selected papers presented at the annual Workshop on Ontology Design and Patterns (WOP) between 2017 and 2020. This yearly event, which attracts a large number of researchers and professionals in the field of ontology engineering and ontology design patterns, covers issues related to quality aspects of ontology engineering and ODPs for data and knowledge representation, and is usually co-located with the International Semantic Web Conference (ISWC), apart from WOP 2020, which was held virtually due to the COVID-19 pandemic. Topics covered by the papers collected here focus on recent advances in ontology design and patterns, and range from a method to instantiate content patterns, through a proposal on how to document a content pattern, to a number of patterns emerging in ontology modeling in various situations and applications. The book provides an overview of important advances in ontology engineering and ontology design patterns, and will be of interest to all those working in the field.

The field of semantic computing is highly diverse, linking areas such as artificial intelligence, data science, knowledge discovery and management, big data analytics, e-commerce, enterprise search, technical documentation, document management, business intelligence, and enterprise vocabulary management. As such it forms an essential part of the computing technology that underpins all our lives today. This volume presents the proceedings of SEMANTiCS 2021, the 17th International Conference on Semantic Systems. As a result of the continuing Coronavirus restrictions, SEMANTiCS 2021 was held in a hybrid form in

Amsterdam, the Netherlands, from 6 to 9 September 2021. The annual SEMANTiCS conference provides an important platform for semantic computing professionals and researchers, and attracts information managers, ITarchitects, software engineers, and researchers from a wide range of organizations, such as research facilities, NPOs, public administrations and the largest companies in the world. The subtitle of the 2021 conference's was "In the Era of Knowledge Graphs", and 66 submissions were received, from which the 19 papers included here were selected following a rigorous single-blind reviewing process; an acceptance rate of 29%. Topics covered include data science, machine learning, logic programming, content engineering, social computing, and the Semantic Web, as well as the additional sub-topics of digital humanities and cultural heritage, legal tech, and distributed and decentralized knowledge graphs. Providing an overview of current research and development, the book will be of interest to all those working in the field of semantic systems.

This book constitutes extended, revised, and selected papers from the 10th International Symposium of Artificial Intelligence supported by the Japanese Society for Artificial Intelligence, JSAI-isAI 2018. It was held in November 2018 in Yokohama, Japan. The 28 paper full papers and 5 short papers were carefully selected from 97 submissions. The papers selected cover topics in Artificial Intelligence, such as AI and law, business intelligence, human intelligence, logic and engineering, and data analytics and applications.

This book discusses the necessity and perhaps urgency for the regulation of algorithms on which new technologies rely; technologies that have the potential to re-shape human societies. From commerce and farming to medical care and education, it is difficult to find any aspect of our lives that will not be affected by these emerging technologies. At the same time, artificial intelligence, deep learning, machine learning, cognitive computing, blockchain, virtual reality and augmented reality, belong to the fields most likely to affect law and, in particular, administrative law. The book examines universally applicable patterns in administrative decisions and judicial rulings. First, similarities and divergence in behavior among the different cases are identified by analyzing parameters ranging from geographical location and administrative decisions to judicial reasoning and legal basis. As it turns out, in several of the cases presented, sources of general law, such as competition or labor law, are invoked as a legal basis, due to the lack of current specialized legislation. This book also investigates the role and significance of national and indeed supranational regulatory bodies for advanced algorithms and considers ENISA, an EU agency that focuses on network and information security, as an interesting candidate for a European regulator of advanced algorithms. Lastly, it discusses the involvement of representative institutions in algorithmic regulation.

This book constitutes the thoroughly refereed post-conference proceedings of the JSAI-isAI 2015 Workshops LENLS 12, JURISIN 9, AAA 2015, HAT-MASH 2015, TSDAA 2015, ASD-HR 2015, and SKL 2015, held in Kanagawa, Japan, in November 2015. The 39 regular papers presented in this volume were carefully reviewed and selected from 114

submissions. LENLS 12 (Logic and Engineering of Natural Language Semantics) is an annual international workshop on formal semantics and pragmatics and focused on discourse particles; disjunction; truth; copredication; expressive content; categorial grammar; dependent type semantics; sequent calculus; and various aspects of formal pragmatics. JURISIN 9 (Juris-Informatics) is the 9th event in the series. The purpose of this workshop is to discuss fundamental and practical issues such as law, social science, information and intelligent technology, logic and philosophy, including the conventional "AI and law" area. AAA 2015 (Argument for Agreement and Assurance) has the goal of deepening a mutual understanding and exploring a new research field involving researchers/practitioners in formal and informal logic, artificial intelligence, and safety engineering working on agreement and assurance through argument. HAT-MASH 2015 (Healthy Aging Tech Mashup Service, Data and People) provides a forum to discuss important research questions and practical challenges in healthy aging and elderly care support to promote transdisciplinary approaches. TSDAA 2015 (Workshop on Time Series Data Analysis and its Applications) aims at providing an interdisciplinary forum for discussion of different approaches and techniques of time series data analysis and their implementation in various real life applications. ASD-HR 2015 (Autism Spectrum Disorders Using a Humanoid Robot) presents the studies in the interdisciplinary field of research including both engineering and medical sides. SKL 2015 (Skill Science) discusses the theoretical foundations of skill science as well as practical and engineering issues.

The aim of the book is to create a bridge between two "lands" that are usually kept separate: technical tools and legal rules should be bound together for moulding a special "toolbox" to solve present and future issues. The volume is intended to contribute to this "toolbox" in the area of software services, while addressing how to make legal studies work closely with engineers' and computer scientists' fields of expertise, who are increasingly involved in tangled choices on daily programming and software development. In this respect, law has not lost its importance and its own categories in the digital world, but as well as any social science needs to experience a new realistic approach amid technological development and individuals' fundamental rights and freedoms.

This book is a collection of peer-reviewed best selected research papers presented at 3rd International Conference on Computer Networks and Inventive Communication Technologies (ICCNCT 2020). The book covers new results in theory, methodology, and applications of computer networks and data communications. It includes original papers on computer networks, network protocols and wireless networks, data communication technologies, and network security. The proceedings of this conference is a valuable resource, dealing with both the important core and the specialized issues in the areas of next generation wireless network design, control, and management, as well as in the areas of protection, assurance, and trust in information security practice. It is a reference for researchers, instructors, students, scientists,

engineers, managers, and industry practitioners for advance work in the area.

This volume LNCS 12926 constitutes the papers of the 10th International Conference on Electronic Government and the Information Systems Perspective, EGOVIS 2021, held in September 2021 as part of the DEXA 2021 conference. The event was held virtually due to COVID-19 pandemic. The 13 full papers presented were carefully reviewed and selected from 21 submissions and focus on information systems and ICT aspects of e-government. The papers are organized in 3 topical sections: e-government theoretical background and cases; identity management and legal issues; artificial intelligence and machine learning in e-government context.

How should a free society protect privacy? Dramatic changes in national security law and surveillance, as well as technological changes from social media to smart cities mean that our ideas about privacy and its protection are being challenged like never before. In this interdisciplinary book, Chris Berg explores what classical liberal approaches to privacy can bring to current debates about surveillance, encryption and new financial technologies. Ultimately, he argues that the principles of classical liberalism – the rule of law, individual rights, property and entrepreneurial evolution – can help extend as well as critique contemporary philosophical theories of privacy.

The General Data Protection Regulation is the latest, and one of the most stringent, regulations regarding Data Protection to be passed into law by the European Union. Fundamentally, it aims to protect the Rights and Freedoms of all the individuals included under its terms; ultimately the privacy and security of all our personal data. This requirement for protection extends globally, to all organisations, public and private, wherever personal data is held, processed, or transmitted concerning any EU citizen. Cyber Security is at the core of data protection and there is a heavy emphasis on the application of encryption and state of the art technology within the articles of the GDPR. This is considered to be a primary method in achieving compliance with the law. Understanding the overall use and scope of Cyber Security principles and tools allows for greater efficiency and more cost effective management of Information systems. GDPR and Cyber Security for Business Information Systems is designed to present specific and practical information on the key areas of compliance to the GDPR relevant to Business Information Systems in a global context. Key areas covered include: ? Principles and Rights within the GDPR ? Information Security ? Data Protection by Design and Default ? Implementation Procedures ? Encryption methods ? Incident Response and Management ? Data Breaches

This book deals with methodological issues in the field of management and industrial engineering. It aims to answer the following questions that researchers face every time they look to develop their research: How can we design a research project? What kind of paradigm should we follow? Should we develop a qualitative / phenomenological research or a quantitative / positivistic one? What technics for data collections can we use? Should we use the entire population or a

sample? What kind of sampling techniques can we have? This book provides discussion and the exchange of information on principles, strategies, models, techniques, applications and methodological options possible to develop in research in management and industrial engineering. It communicates the latest developments and thinking on the research methodologies subject in the different areas, worldwide. It seeks cultural and geographic diversity in studies highlighting research methodologies that can be used in these different study areas. This book has a special interest in research on important issues that transcend the boundaries of single academic subjects. It presents contributions that challenge the paradigms and assumptions of individual disciplines or functions, with chapters grounded in conceptual and / or empirical literature. The main aim of this book is to provide a channel of communication to disseminate knowledge between academics and researchers, with a special focus on the management and industrial engineering fields. This book can serve as a useful reference for academics, researchers, managers, engineers, and other professionals in related matters with research methodologies. Contributors have identified the theoretical and practical implications of their methodological options to the development and improvement of their different study and research areas.

There is a broad consensus amongst law firms and in-house legal departments that next generation “Legal Tech” – particularly in the form of Blockchain-based technologies and Smart Contracts – will have a profound impact on the future operations of all legal service providers. Legal Tech startups are already revolutionizing the legal industry by increasing the speed and efficiency of traditional legal services or replacing them altogether with new technologies. This on-going process of disruption within the legal profession offers significant opportunities for all business. However, it also poses a number of challenges for practitioners, trade associations, technology vendors, and regulators who often struggle to keep up with the technologies, resulting in a widening regulatory “gap.” Many uncertainties remain regarding the scope, direction, and effects of these new technologies and their integration with existing practices and legacy systems. Adding to the challenges is the growing need for easy-to-use contracting solutions, on the one hand, and for protecting the users of such solutions, on the other. To respond to the challenges and to provide better legal communications, systems, and services Legal Tech scholars and practitioners have found allies in the emerging field of Legal Design. This collection brings together leading scholars and practitioners working on these issues from diverse jurisdictions. The aim is to introduce Blockchain and Smart Contract technologies, and to examine their on-going impact on the legal profession, business and regulators.

Accessible and concise, this exciting new textbook examines data analytics from a managerial and organizational perspective and looks at how they can help managers become more effective decision-makers. The book successfully combines theory with practical application, featuring case studies, examples and a ‘critical incidents’ feature that make these topics engaging and relevant for students of business and management. The book features chapters on cutting-edge topics, including: • Big data • Analytics • Managing emerging technologies and decision-making • Managing the ethics, security, privacy and legal aspects of data-driven decision-making The book is accompanied by an Instructor’s Manual, PowerPoint slides and access to journal articles. Suitable for management students studying business analytics and decision-making at undergraduate, postgraduate and MBA levels.

The ten-volume set LNCS 12949 – 12958 constitutes the proceedings of the 21st International Conference on Computational Science and Its

Applications, ICCSA 2021, which was held in Cagliari, Italy, during September 13 – 16, 2021. The event was organized in a hybrid mode due to the Covid-19 pandemic. The 466 full and 18 short papers presented in these proceedings were carefully reviewed and selected from 1588 submissions. Part VIII of the set includes the proceedings of the following workshops: ?International Workshop on Privacy in the Cloud/Edge/IoT World (PCEIoT 2021); International Workshop on Processes, methods and tools towards RE-Silient cities and cultural heritage prone to SOD and ROD disasters (RES 2021); International Workshop on Risk, resilience and sustainability in the efficient management of water resources: approaches, tools, methodologies and multidisciplinary integrated applications (RRS 2021); International Workshop on Scientific Computing Infrastructure (SCI 2021); International Workshop on Smart Cities and User Data Management (SCIDAM 2021).

Information about people is becoming increasingly valuable. Enabled by new technologies, organizations collect and process personal data on a large scale. Free flow of data across Europe is vital for the common market, but it also presents a clear risk to the fundamental rights of individuals. This issue was addressed by the Council of the European Union and the European Parliament with the introduction of the General Data Protection Regulation (GDPR). For many organizations processing personal data, the GDPR came as a shock. Not so much its publication in the spring of 2016, but rather the articles that appeared about it in professional journals and newspapers leading to protests and unrest. “The heavy requirements of the law would cause very expensive measures in companies and organizations”, was a concern. In addition, companies which failed to comply “would face draconian fines”. This book is intended to explain where these requirements came from and to prove that the GDPR is not incomprehensible, that the principles are indeed remarkably easy to understand. It will help anyone in charge of, or involved in, the processing of personal data to take advantage of the innovative technologies in processing without being unduly hindered by the limitations of the GDPR. The many examples and references to EDPB (European Data Protection Board) publications, recent news articles and case law clarify the requirements of the law and make them accessible and understandable. “Leo’s book can provide very effective support to you and your colleagues in reaching this understanding and applying it in practice.” Fintan Swanton, Managing Director of Cygnus Consulting Ltd., Ireland.

These proceedings represent the work of contributors to the 19th European Conference on Cyber Warfare and Security (ECCWS 2020), supported by University of Chester, UK on 25-26 June 2020. The Conference Co-chairs are Dr Thaddeus Eze and Dr Lee Speakman, both from University of Chester and the Programme Chair is Dr Cyril Onwubiko from IEEE and Director, Cyber Security Intelligence at Research Series Limited. ECCWS is a well-established event on the academic research calendar and now in its 19th year the key aim remains the opportunity for participants to share ideas and meet. The conference was due to be held at University of Chester, UK, but due to the global Covid-19 pandemic it was moved online to be held as a virtual event. The scope of papers will ensure an interesting conference. The subjects covered illustrate the wide range of topics that fall into this important and ever-growing area of research.

This book constitutes the thoroughly refereed proceedings of the CAiSE Forum 2020 which was held as part of the 32nd International Conference on Advanced Information Systems Engineering, CAiSE 2020, in June 2020. The conference was held virtually due to the COVID-19 pandemic. The CAiSE Forum is a place within the CAiSE conference for presenting and discussing new ideas and tools related to information systems engineering. Intended to serve as an interactive platform, the Forum aims at the presentation of emerging new topics and controversial positions, as well as demonstration of innovative systems, tools and applications. This year’s theme was “Responsible Information Systems”. The 12 full papers presented in this volume were carefully reviewed and selected from 19 submissions.

This book constitutes extended, revised and selected papers from the 22nd International Conference on Enterprise Information Systems, ICEIS 2020, held online during May 5-7, 2020. The 41 papers presented in this volume were carefully reviewed and selected for inclusion in this book from a total of 255 submissions. They were organized in topical sections as follows: database and information systems integration; artificial intelligence and decision support systems; information systems analysis and specification; software agents and internet computing; human-computer interaction; and enterprise architecture.

The role of the IT solutions is to enforce the correct handling of personal data using processes developed by the establishment. Each element of the solution stack must address the objectives as appropriate to the data that it handles. Typically, personal data exists either in the form of structured data (like databases) or unstructured data (like files, text, documents, and so on.). This IBM Redbooks publication specifically deals with unstructured data and storage systems used to host unstructured data. For unstructured data storage in particular, some key attributes enable the overall solution to support compliance with the EU General Data Protection Regulation (GDPR). Because personal data subject to GDPR is commonly stored in an unstructured data format, a scale out file system like IBM Spectrum Scale provides essential functions to support GDPR requirements. This paper highlights some of the key compliance requirements and explains how IBM Spectrum Scale helps to address them.

Hallinan argues that the substantive framework presented by the GDPR offers an admirable base-line level of protection for the range of genetic privacy rights engaged by biobanking.

This book constitutes the refereed proceedings of the 17th International Conference on Trust, Privacy and Security in Digital Business, TrustBus 2020, held in Bratislava, Slovakia, in September 2020. The conference was held virtually due to the COVID-19 pandemic. The 11 full and 4 short papers presented were carefully reviewed and selected from 28 submissions. The papers are organized in the following topical sections: blockchain, cloud security/hardware; economics/privacy; human aspects; privacy; privacy and machine learning; trust.

An exploration of the current state of global trade law in the era of Big Data and AI. This title is also available as Open Access on Cambridge Core.

This book constitutes the refereed proceedings of the 13th IFIP WG 11.11 International Conference on Trust Management, IFIPTM 2019, held in Copenhagen, Denmark, in July 2019. The 7 revised full papers, 3 short papers, and 6 work-in-progress papers presented were carefully reviewed and selected from 32 submissions. The papers cover a broad range of topics related to trust, security and privacy and focus on trust in information technology and identity management, socio-technical and sociological trust, and emerging technology for trust.

This book constitutes the proceedings of the 19th IFIP WG 8.5 International Conference on Electronic Government, EGOV 2020, held in Linköping, Sweden, in August/September 2020, in conjunction with the IFIP WG 8.5 IFIP International Conference on Electronic Participation (ePart 2020) and the International Conference for E-Democracy and Open Government Conference (CeDEM 2020). The conference was held virtually due to the COVID-19 pandemic. The

30 full papers presented were carefully reviewed and selected from 118 submissions. The papers are clustered under the following topical sections: e-government foundations; e-government services and open government; open data: social and technical aspects; AI, data analytics, and automated decision making; and smart cities.

Following the implementation of the new General Data Protection Regulation on 25 May 2018, organizations should now be fully compliant with their national interpretation of this far-reaching data protection standard. The reality is that most are not; whether through their inappropriate use of online cookies or ineffective physical data security, businesses continue to struggle with the increasing pressure from regulators to apply the Regulation. Non-compliance is widely due to misinterpretation, lack of real-world thinking, and challenges in balancing costs against business practicalities. This book provides insight into how to achieve effective compliance in a realistic, no-nonsense and efficient way. The authors have over 100 years' collective international experience in security, compliance and business disciplines and know what it takes to keep companies secure and in-line with regulators' demands. Whether your organization needs to swiftly adopt GDPR standards or apply them in "Business as Usual" this book provides a wide range of recommendations and explicit examples. With the likelihood of high-profile penalties causing major reputational damage, this book explains how to reduce risk, run a remedial project, and take immediate steps towards mitigating gaps. Written in plain English, it provides an invaluable international reference for effective GDPR adoption.

Examines the interplay between artificial intelligence and international economic law, and its effects on global economic order. This title is also available as Open Access.

This volume constitutes the refereed proceedings of the 28th European Conference on Systems, Software and Services Process Improvement, EuroSPI 2021, held in Krems, Austria, in September 2021\*. The 42 full papers and 9 short papers presented were carefully reviewed and selected from 100 submissions. The volume presents core research contributions and selected industrial contributions. Core research contributions: SPI and emerging software and systems engineering paradigms; SPI and team skills and diversity; SPI and recent innovations; SPI and agile; SPI and standards and safety and security norms; SPI and good/bad SPI practices in improvement; SPI and functional safety and cybersecurity; digitalisation of industry, infrastructure and e-mobility. Selected industrial contributions: SPI and emerging software and systems engineering paradigms; SPI and recent innovations; SPI and agile; SPI and standards and safety and security norms; SPI and good/bad SPI practices in improvement; SPI and functional safety and cybersecurity; digitalisation of industry, infrastructure and e-mobility; virtual reality. \*The conference was partially held virtually due to the COVID-19 pandemic.

GdprHow to Achieve and Maintain ComplianceRoutledge

This book constitutes the refereed proceedings of the 9th International Conference on Electronic Government and the Information Systems Perspective, EGOVIS 2020, held in Bratislava, Slovakia, in September 2020. The 15 full and one short papers presented were carefully reviewed and selected from 24 submissions. The papers are organized in the following topical sections: Knowledge representation and modeling in e-Government; e-Government theoretical background; E-Government cases - data and knowledge management; identity management and legal issues; artificial intelligence and machine learning in e-Government context.

This book constitutes extended selected papers from the 17th Conference on Advanced Information Technologies for Management, AITM 2019, and the 14th Conference on Information Systems Management, ISM 2019, held as part of the Federated Conference on Computer Science and Information Systems, FedCSIS, which took place in Leipzig, Germany, in September 2019. The total of 7 full and 6 short papers presented in this volume were carefully reviewed and selected from a total of 45 submissions. The papers selected to be included in this book contribute to the understanding of relevant trends of current research on and future directions of information technology for management in business and public organizations. They were organized in topical sections named: information technology assessment for future development; methods and models for designing information technology, and aspects of implementing information technology.

This volume constitutes the refereed proceedings of the 6th International Conference on Modelling and Development of Intelligent Systems, MDIS 2019, held in Sibiu, Romania, in October 2019. The 13 revised full papers presented in the volume were carefully reviewed and selected from 31 submissions. The papers are organized in topical sections on adaptive systems; conceptual modelling; data mining; intelligent systems for decision support; machine learning.

This book analyses the legal approach to personal data taken by different fields of law. An increasing number of business models in the digital economy rely on personal data as a key input. In exchange for sharing their data, online users benefit from personalized and innovative services. But companies' collection and use of personal data raise questions about privacy and fundamental rights. Moreover, given the substantial commercial and strategic value of personal data, their accumulation, control and use may raise competition concerns and negatively affect consumers. To establish a legal framework that ensures an adequate level of protection of personal data while at the same time providing an open and level playing field for businesses to develop innovative data-based services is a challenging task. With this objective in mind and against the background of the uniform rules set by the EU General Data Protection Regulation, the contributions to this book examine the significance and legal treatment of personal data in competition law, consumer protection law, general civil law and intellectual property law. Instead of providing an isolated analysis of the different

areas of law, the book focuses on both synergies and tensions between the different legal fields, exploring potential ways to develop an integrated legal approach to personal data.

For several years now, both eHealth applications and digitalization have been seen as fundamental to the new era of health informatics and public health. The current pandemic situation has also highlighted the importance of medical informatics for the scientific process of evidence-based reasoning and decision making at all levels of healthcare. This book presents the accepted full papers, short papers, and poster papers delivered as part of the 31st Medical Informatics in Europe Conference (MIE 2021), held virtually from 29-31 May 2021. MIE 2021 was originally due to be held in Athens, Greece, but due to the continuing pandemic situation, the conference was held as a virtual event. The 261 papers included here are grouped into 7 chapters: biomedical data, tools and methods; supporting care delivery; health and prevention; precision medicine and public health; human factors and citizen centered digital health; ethics, legal and societal aspects; and posters. Providing a state-of-the-art overview of medical informatics from around the world, the book will be of interest to all those working with eHealth applications and digitalization to improve the delivery of healthcare today.

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