The Swirlds Hashgraph Consensus Algorithm Fair Fast

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A practical, informative guide to banks' major weakness Legal Data for Banking defines the legal data domain in the context of financial institutions, and describes how banks can leverage these assets to optimise business lines and effectively manage risk. Legal data is at the heart of post-2009 regulatory reform, and practitioners need to deepen their grasp of legal data management in order to remain compliant with new rules focusing on transparency in trade and risk reporting. This book provides essential information for IT, project management and data governance leaders, with detailed discussion of current and best practices. Many banks are experiencing recurrent pain points related to legal data management issues, so clear explanations of the required processes, systems and strategic governance provide immediately-relevant relief. The recent financial crisis following the collapse of major banks had roots in poor risk data management, and the regulators' unawareness of accumulated systemic risk stemming from contractual obligations between firms. To avoid repeating history, today's banks must be proactive in legal data management; this book provides the critical knowledge practitioners need to put the necessary systems and practices in place. Learn how current legal data management practices are hurting banks Understand the systems, structures and strategies required to manage risk and optimise business lines Delve into the regulations surrounding risk aggregation, netting, collateral enforceability and more Gain practical insight on legal data technology,

systems and migration The legal contracts between firms contain significant obligations that underpin the financial markets; failing to recognise these terms as valuable data assets means increased risk exposure and untapped business lines. Legal Data for Banking provides critical information for the banking industry, with actionable guidance for implementation.

Wireless Algorithms, Systems, and Applications15th International Conference, WASA 2020, Qingdao, China, September 13–15, 2020, Proceedings, Part IISpringer Nature

This book aims to provide an international forum for scholarly researchers, practitioners and academic communities to explore the role of information and communication technologies and its applications in technical and scholarly development. The conference attracted a total of 464 submissions, of which 152 submissions (including 4 poster papers) have been selected after a double-blind review process. Academic pioneering researchers, scientists, industrial engineers and students will find this series useful to gain insight into the current research and next-generation information science and communication technologies. This book discusses the aspects of communication, data science, ambient intelligence, networking, computing, security and Internet of things, from classical to intelligent scope. The authors hope that readers find the volume interesting and valuable; it gathers chapters addressing tate-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research.

Wie das maschinelle Lernen und die Distributed-Ledger-Technologie voneinander profitieren

Second International Conference on Image Processing and Capsule Networks

Cryptofinance and Mechanisms of Exchange

Political and Economic Implications of Blockchain Technology in Business and Healthcare

Third International Workshop, 2019

Euro-Par 2020: Parallel Processing Workshops

Trends and Applications

Proceedings of the Future Technologies Conference (FTC) 2020, Volume 2

This book constitutes the post-conference proceedings of the 17th International Conference on Information Security and Cryptology, Inscrypt 2021, in August 2021. Due the COVID-19, the conference was held online The 28 full papers presented were carefully reviewed and selected from 81 submissions. The papers presents papers about research advances in all areas of information security, cryptology, and their applications.

Besides love, money and health are the most valuable human yearnings. Therefore, blockchain technology is paramount: a new foundation of confidence for human valuable transactions. Like information sharing was catalyzed on the pre-blockchain internet, transactions are now triggered on the new internet of value. In this second digital inflection point, economic media encompasses value beside information, and individuals can privately transact digital assets for the first time in history. Decentralized but structured organizations running on blockchain networks reduce transaction costs and are particularly competitive insofar as they guarantee data authenticity, confidentiality, and integrity, providing functional autonomy with disintermediation and smart contracts. Everything changed after user data were made public on the internet and privately traded by big tech companies, and nothing will be the same once that data is made private on the internet and publicly transacted by their rightful owners. While the internet of information reshaped the world, the internet of value will reform it, and everything will depend politically on this being done freely. Political and Economic Implications of Blockchain Technology in Business and Healthcare provides relevant theoretical frameworks on the civilizational impact of blockchain technology, which redesigns human interactions concerning value transactions. It gives ideas, concepts, and instruments to advance the knowledge on cryptoeconomics and decentralized governance in the new distributed trust paradigm. The chapters explore the ethical repercussions and profound political-economic consequences to society, providing insights into business applications focusing on the healthcare sector. In a blockchain era affected by the post-COVID-19 new normal, which mixes politics, economics, and health, this book is essential for students and researchers in social and life sciences; professionals and policymakers working in the fields of public and business administration; and healthcare workers and researchers, academicians, and students interested in blockchain technology and its political and economic impacts in the industry and society.

This book provides the state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research. The fifth 2020 Future Technologies Conference was organized virtually and received a total of 590 submissions from academic pioneering researchers, scientists, industrial engineers, and students from all over the world. The submitted papers covered a wide range of important topics including but not limited to computing, electronics, artificial intelligence, robotics, security and communications and their applications to the real world. After a double-blind peer review process, 210 submissions (including 6 poster papers) have been selected to be included in these proceedings. One of the meaningful and valuable dimensions of this conference is the way it brings together a large group of technology geniuses in one venue to not only present breakthrough research in future technologies, but also to promote discussions and debate of relevant issues, challenges, opportunities and research findings. The authors hope that readers find the book interesting, exciting and inspiring.

This book constitutes the proceedings of the 13th International Conference on Network and System Security, NSS 2019, held in Sapporo, Japan, in December 2019. The 36 full papers and 7 short papers presented together with 4 invited papers in this book were carefully reviewed and selected from 89 initial submissions. The papers cover a wide range of topics in the field, including authentication, access control, availability, integrity, privacy, confidentiality, dependability and sustainability of computer networks and systems.

Cryptographic Consensus Technology and the New Prospect

Third International Workshop, DaLí 2020, Prague, Czech Republic, October 9-10, 2020, Revised Selected Papers

Rethinking the Regulation of Cryptoassets

Proceedings of 10th Computer Science On-line Conference 2021, Vol. 1

Multidisciplinary Perspectives on the Design of Blockchains and Distributed Ledgers

13th International Conference, NSS 2019, Sapporo, Japan, December 15-18, 2019, Proceedings

Principles, Technologies and Applications

This book presents selected papers from the Third International Workshop on Vehicular Ad-hoc Networks for Smart Cities, Paris, 2019. Future smart cities are well placed to profit from extraordinary mobile infrastructures. IWVSC'2019 brings together experts from both academia and industry to discuss recent developments in vehicular networking technologies and their interaction with future smart cities in order to promote further research activities and challenges.

Present book covers new paradigms in Blockchain, Big Data and Machine Learning concepts including applications and case studies. It explains dead fusion in realizing the privacy and security of blockchain based data analytic environment. Recent research of security based on big data, blockchain and machine learning has been explained through actual work by practitioners and researchers, including their technical evaluation and comparison with existing technologies. The theoretical background and experimental case studies related to real-time environment are covered as well. Aimed at Senior undergraduate students, researchers and professionals in computer science and engineering and electrical engineering, this book: Converges Blockchain, Big Data and Machine learning in one volume. Connects Blockchain technologies with the data centric applications such Big data and E-Health. Easy to understand examples on how to create your own blockchain supported by case studies of blockchain in different industries. Covers big

data analytics examples using R. Includes lllustrative examples in python for blockchain creation.

The two-volume set LNCS 12385 + 12386 constitutes the proceedings of the 15th International Conference on Wireless Algorithms, Systems, and Applications, WASA 2020, which was held during September 13-15, 2020. The conference was planned to take place in Qingdao, China; due to the COVID-19 pandemic it was held virtually. The 67 full and 14 short papers presented in these proceedings were carefully reviewed and selected from 216 submissions. The papers focus on data path algorithms; control path algorithms; network protocol design; network security; network services; and cloud computing.

Explore foundational concepts in blockchain theory with an emphasis on recent advances in theory and practice In Wireless Blockchain: Principles, Technologies and Applications, accomplished researchers and authors Bin Cao, Lei Zhang, Mugen Peng, and Muhammad Ali Imran deliver a robust and accessible exploration of recent developments in the theory and practice of blockchain technology, systems, and potential application in a variety of industrial sectors, including manufacturing, entertainment, public safety, telecommunications, public transport, healthcare, financial services, automotive, and energy utilities. The book presents the concept of wireless blockchain networks with different network topologies and communication protocols for various commonly used blockchain applications. Youll discover how these variations and how communication networks affect blockchain consensus performance, including scalability, throughput, latency, and security levels. Youll learn the state-of-the-art in blockchain technology and find insights on how blockchain runs and co-works with existing systems, including 5G, and how blockchain runs as a service to support all vertical sectors efficiently and effectively. Readers will also benefit from the inclusion of: A thorough introduction to the Byzantine Generals problem, the fundamental theory of distributed system security and the foundation of blockchain technology An overview of advances in blockchain systems, their history, and likely future trends Practical discussions of Proof-of-Work systems as well as various Proof-of-X alternatives, including Proof-of-Stake, Proof-of-Importance, and Proof-of-Authority A concise examination of smart contracts, including trusted transactions, smart contract functions, design processes, and related applications in 5G/B5G A treatment of the theoretical relationship between communication networks and blockchain Perfect for electrical engineers, industry professionals, and students and researchers in electrical engineering, computer science, and mathematics, Wireless

Blockchain: Principles, Technologies and Applications will also earn a place in the libraries of communication and computer system stakeholders, regulators, legislators, and research agencies.

Confederated International Conferences: CoopIS, C&TC, and ODBASE 2018, Valletta, Malta, October 22-26, 2018, Proceedings, Part II

ICIPCN 2021

Their Individual and Combined Importance in the Digital Economy

Security in Autonomous Driving

Volume II

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Critical Infrastructure Protection XIII

17th EAI International Conference, CollaborateCom 2021, Virtual Event, October 16-18, 2021, Proceedings, Part II

This book constitutes revised selected papers from the workshops held at the 26th International Conference on Parallel and Distributed Computing, Euro-Par 2020, which took place in Warsaw, Poland, in August 2020. The workshops were held virtually due to the coronavirus pandemic. The 27 full papers presented in this volume were carefully reviewed and selected from 50 submissions. Euro-Par is an annual, international conference in Europe, covering all aspects of parallel and distributed processing. These range from theory to practice, from small to the largest parallel and distributed systems and infrastructures, from fundamental computational problems to full-edged applications, from architecture, compiler, language and interface design and implementation to tools, support infrastructures, and application performance aspects.

Handbook of Research on Blockchain Technology presents the latest information on the adaptation and implementation of Blockchain technologies in real world business, scientific, healthcare and biomedical applications. The book's editors present the rapid advancements in existing business models by applying Blockchain techniques. Novel architectural solutions in the deployment of Blockchain comprise the core aspects of this book. Several use cases with IoT, biomedical engineering, and smart cities are also incorporated. As Blockchain is a relatively new technology that exploits decentralized networks and is used in many sectors for reliable, cost-effective and rapid business transactions, this book is a welcomed addition on existing knowledge. Financial services, retail, insurance, logistics, supply chain,

public sectors and biomedical industries are now investing in Blockchain research and technologies for their business growth. Blockchain prevents double spending in financial transactions without the need of a trusted authority or central server. It is a decentralized ledger platform that facilitates verifiable transactions between parties in a secure and smart way. Presents the evolution of blockchain, from fundamental theories, to present forms Explains the concepts of blockchain related to cloud/edge computing, smart healthcare, smart cities and Internet of Things (IoT) Provides complete coverage of the various tools, platforms and techniques used in blockchain Explores smart contract tools and consensus algorithms Covers a variety of applications with real world case studies in areas such as biomedical engineering, supply chain management, and tracking of goods and delivery

This book constitutes the post-conference proceedings of the 15th International Conference on Information Security and Cryptology, Inscrypt 2019, held in Nanjing, China, in December 2019. The 23 full papers presented together with 8 short papers and 2 invited papers were carefully reviewed and selected from 94 submissions. The papers cover topics in the fields of post-quantum cryptology; AI security; systems security; side channel attacks; identity-based cryptography; signatures; cryptanalysis; authentication; and mathematical foundations.

As technology continues to revolutionise today's economy, Big Data, Blockchain and Cryptocurrency are rapidly transforming themselves into mainstream functions within the financial services industry. This book examines each concept individually, analysing the opportunities and challenges they bring and exploring the potential for future development. The authors further evaluate the fusion of these three important products of the FinTech revolution, illustrating their combined influence on the digital economy. Providing a comprehensive analysis of three innovative technologies, this timely book will appeal to scholars researching innovation in the finance industry and financial services technology more specifically.

Advances in Artificial Intelligence and Security

11th EAI International Conference, WiSATS 2020, Nanjing, China, September 17-18, 2020, Proceedings, Part II

Artificial Intelligence in Intelligent Systems

17th International Conference, Inscrypt 2021, Virtual Event, August 12–14, 2021, Revised Selected Papers

Dynamic Logic. New Trends and Applications
Blockchain und maschinelles Lernen
On the Move to Meaningful Internet Systems. OTM 2018 Conferences
Business Transformation through Blockchain

A FINANCIAL TIMES BOOK OF THE MONTH FROM THE WALL STREET JOURNAL: "Nothing Mr. Gilder says or writes is ever delivered at anything less than the fullest philosophical decibel... Mr. Gilder sounds less like a tech guru than a poet, and his words tumble out in a romantic cascade." "Google's algorithms assume the world's future is nothing more than the next moment in a random process. George Gilder shows how deep this assumption goes, what motivates people to make it, and why it's wrong: the future depends on human action." — Peter Thiel, founder of PayPal and Palantir Technologies and author of Zero to One: Notes on Startups, or How to Build the Future The Age of Google, built on big data and machine intelligence, has been an awesome era. But it's coming to an end. In Life after Google, George Gilder—the peerless visionary of technology and culture—explains why Silicon Valley is suffering a nervous breakdown and what to expect as the post-Google age dawns. Google's astonishing ability to "search and sort" attracts the entire world to its search engine and countless other goodies—videos, maps, email, calendars....And everything it offers is free, or so it seems. Instead of paying directly, users submit to advertising. The system of "aggregate and advertise" works—for a while—if you control an empire of data centers, but a market without prices strangles entrepreneurship and turns the Internet into a wasteland of ads. The crisis is not just economic. Even as advances in artificial intelligence induce delusions of omnipotence and transcendence, Silicon Valley has pretty much given up on security. The Internet firewalls supposedly protecting all those passwords and personal information have proved hopelessly permeable. The crisis cannot be solved within the current computer and network architecture. The future lies with the "cryptocosm"—the new architecture of the blockchain and its derivatives. Enabling cryptocurrencies such as bitcoin and ether, NEO and Hashgraph, it will provide the Internet a secure global payments system, ending the aggregate-and-advertise Age of Google. Silicon Valley, long dominated by a few giants, faces a "great unbundling," which will disperse computer power and commerce and transform the economy and the Internet. Life after Google is almost here. For fans of "Wealth and Poverty," "Knowledge and Power," and "The Scandal of Money."

This book describes how the rapid advancement in encryption and network computing gave birth to new tools and products that have influenced the local and global economy alike. One recent and notable example is the emergence of virtual currencies (such as Bitcoin) also known as cryptocurrencies. Virtual currencies introduced a fundamental transformation that affected the way goods, services and assets are exchanged. As a result of its

distributed ledgers based on blockchain, cryptocurrencies not only offer some unique advantages to the economy, investors, and consumers, but also pose considerable risks to users and challenges for regulators when fitting the new technology into the old legal framework. The core of this proposed book is to present and discuss the evidence on financial asset capabilities of virtual currencies. The contributors of this volume analyze several interesting and timely issues such as the particularities of virtual currencies and their statistical characteristics; the diversification benefits of virtual currencies; the behavior and dependence structure between virtual currencies and the financial markets; the economic implications of virtual currencies, their effects, their price risk, and contagion spillovers in a unified and comprehensive framework; the future of virtual currencies and their distributed ledgers technology.

This two-volume set of LNCS 12489 and 12490 constitutes the thoroughly refereed conference proceedings of the 21th International Conference on Intelligent Data Engineering and Automated Learning, IDEAL 2020, held in Guimaraes, Portugal, in November 2020.* The 93 papers presented were carefully reviewed and selected from 134 submissions. These papers provided a timely sample of the latest advances in data engineering and machine learning, from methodologies, frameworks, and algorithms to applications. The core themes of IDEAL 2020 include big data challenges, machine learning, data mining, information retrieval and management, bio-/neuro-informatics, bio-inspiredmodels, agents and hybrid intelligent systems, real-world applications of intelligent techniques and AI. * The conference was held virtually due to the COVID-19 pandemic.

This book constitutes the proceedings of the 6th International Conference on Interactive Collaborative Robotics, ICR 2021, held in St. Petersburg, Russia, in October 2021. The 19 papers presented were carefully reviewed and selected from 40 submissions. Challenges of human-robot interaction, robot control and behavior in social robotics and collaborative robotics, as well as applied robotic and cyber-physical systems are mainly discussed in the papers.

40th Annual International Cryptology Conference, CRYPTO 2020, Santa Barbara, CA, USA, August 17–21, 2020, Proceedings, Part III

Proceedings of the 2021 Future of Information and Communication Conference (FICC), Volume 2

13th IFIP WG 11.10 International Conference, ICCIP 2019, Arlington, VA, USA, March 11–12, 2019, Revised Selected Papers

Building Decentralized Trust

Advances in Information and Communication

Handbook of Research on Blockchain Technology

Fusing Big Data, Blockchain and Cryptocurrency

The Fall of Big Data and the Rise of the Blockchain Economy

This book constitutes the refereed proceedings of the artificial intelligence in intelligent systems section of the 10th Computer Science Online Conference 2021 (CSOC 2021), held online in April 2021. Artificial intelligence in intelligent systems topics are presented in this book. Modern hybrid and bio-inspired algorithms and their application are discussed in selected papers.

Advances in artificial intelligence, sensor computing, robotics, and mobile systems are making autonomous systems a reality. At the same time, the influence of edge computing is leading to more distributed architectures incorporating more autonomous elements. The flow of information is critical in such environments, but the real time, distributed nature of the system components complicates the data protection mechanisms. Policy-based management has proven useful in simplifying the complexity of management in domains like networking, security, and storage; it is expected that many of those benefits would carry over to the task of managing big data and autonomous systems. This book aims at providing an overview of recent work and identifying challenges related to the design of policy-based approaches for managing big data and autonomous systems. An important new direction explored in the book is to make the major elements of the system self-describing and self-managing. This would lead to architectures where policy mechanisms are tightly coupled with the system elements. In such integrated architectures, we need new models for information assurance, traceability of information, and better provenance on information flows. In addition when dealing with devices with actuation capabilities and, thus, being able to make changes to physical spaces, safety is critical. With an emphasis on policy-based mechanisms for governance of data security and privacy, and for safety assurance, the papers in this volume follow three broad themes: foundational principles and use-cases for the autonomous generation of policies; safe autonomy; policies and autonomy in federated environments.

The information infrastructure – comprising computers, embedded devices, networks and software systems – is vital to operations in every sector: chemicals, commercial facilities, communications, critical manufacturing, dams, defense industrial base, emergency services, energy, financial services, food and agriculture, government facilities, healthcare and public health, information technology, nuclear reactors, materials and waste, transportation systems, and water and wastewater systems. Global business and industry, governments, indeed society itself, cannot function if major components of the critical information infrastructure are degraded, disabled or destroyed. Critical Infrastructure Protection XIII describes original research results and innovative applications in the interdisciplinary field of critical infrastructure protection. Also, it highlights the importance of weaving science, technology and policy in crafting sophisticated, yet practical, solutions that will help secure information, computer and network assets in the various critical infrastructure sectors. Areas of coverage

include: Themes and Issues; Infrastructure Protection; Vehicle Infrastructure Security; Telecommunications Infrastructure Security; Cyber-Physical Systems Security; and Industrial Control Systems Security. This book is the thirteenth volume in the annual series produced by the International Federation for Information Processing (IFIP) Working Group 11.10 on Critical Infrastructure Protection, an international community of scientists, engineers, practitioners and policy makers dedicated to advancing research, development and implementation efforts focused on infrastructure protection. The book contains a selection of sixteen edited papers from the Thirteenth Annual IFIP WG 11.10 International Conference on Critical Infrastructure Protection, held at SRI International, Arlington, Virginia, USA in the spring of 2019. Critical Infrastructure Protection XIII is an important resource for researchers, faculty members and graduate students, as well as for policy makers, practitioners and other individuals with interests in homeland security.

Conference on Cryptologic Research, CRYPTO 2020, which was held during August 17–21, 2020. Crypto has traditionally been held at UCSB every year, but due to the COVID-19 pandemic it will be an online event in 2020. The 85 papers presented in the proceedings were carefully reviewed and selected from a total of 371 submissions. They were organized in topical sections as follows: Part I: Security Models; Symmetric and Real World Cryptography; Hardware Security and Leakage Resilience; Outsourced encryption; Constructions. Part II: Public Key Cryptanalysis; Lattice Algorithms and Cryptanalysis; Lattice-based and Post Quantum Cryptography; Multi-Party Computation. Part III: Multi-Party Computation; Secret Sharing; Cryptanalysis; Delay functions; Zero Knowledge.

Advances in Cryptology – CRYPTO 2020

The Semantic Web

18th International Conference, ESWC 2021, Virtual Event, June 6–10, 2021, Proceedings

Blockchain, Big Data and Machine Learning

Vehicular Ad-hoc Networks for Smart Cities

Life After Google

15th International Conference, WASA 2020, Qingdao, China, September 13–15, 2020, Proceedings, Part II

Intelligent Data Engineering and Automated Learning – IDEAL 2020

This two-volume set LNICST 357-358 constitutes the post-conference proceedings of the 11th EAI International Conference on Wireless and Satellite Services, WiSATS 2020, held in Nanjing, China, in September 2020. The 91 full papers and workshop papers were carefully reviewed and selected from 200 submissions. Part I - LNICST 357 - details original research and results of wireless and satellite technology for a smarter global communication architecture. The theme of WISATS 2020 is "Intelligent Wireless and Satellite Communications for Beyond 5G". Part II – LNICST 358 - presents 6 workshop papers: High Speed Space

Communication and Space Information Networks (HSSCSIN); Integrated Space and Onboard Networks (ISON); Intelligent Satellite Operations, Managements, and Applications (ISOMA); Intelligent Satellites in Future Space Networked System (ISFSNS); Satellite Communications, Networking and Applications (SCNA); Satellite Internet of Things; Trusted Data Sharing, Secure Communication (SIOTTDSSC).

?The 3-volume set CCIS 1422, CCIS 1423 and CCIS 1424 constitutes the refereed proceedings of the 7th International Conference on Artificial Intelligence and Security, ICAIS 2021, which was held in Dublin, Ireland, in July 2021. The total of 131 full papers and 52 short papers presented in this 3-volume proceedings was carefully reviewed and selected from 1013 submissions. The papers were organized in topical sections as follows: Part I: artificial intelligence; Part II: artificial intelligence; big data; cloud computing and security; Part III: cloud computing and security; encryption and cybersecurity; information hiding; IoT security.

This book provides a comprehensive overview of various aspects of the development of smart cities from a secure, trusted, and reliable data transmission perspective. It presents theoretical concepts and empirical studies, as well as examples of smart city programs and their capacity to create value for citizens. The contributions offer a panorama of the most important aspects of smart city evolution and implementation within various frameworks, such as healthcare, education, and transportation. Comparing current advanced applications and best practices, the book subsequently explores how smart environments and programs could help improve the quality of life in urban spaces and promote cultural and economic development.

This book constitutes the proceedings of the Third International Workshop on Dynamic Logic, DaLí 2019, held in Prague, Czech Republic in October 2020. Due to COVID-19 the workshop has been held online. The 17 full papers presented together with 6 short papers were carefully reviewed and selected from 31 submissions. The theoretical relevance and practical potential of dynamic logic is a topic of interest in a number of scientific venues, from wide-scope software engineering conferences to modal logic specific events. The DaLí 2020 workshop is exclusively dedicated to Dynamic logic and aims at filling this gap and creating a heterogeneous community of colleagues, from Academia to Industry, from Mathematics to Computer Science.

Euro-Par 2020 International Workshops, Warsaw, Poland, August 24–25, 2020, Revised Selected Papers

Software Engineering and Algorithms

6th International Conference, ICR 2021, St. Petersburg, Russia, September 27–30, 2021, Proceedings

Policy-Based Autonomic Data Governance

Legal Data for Banking

Business Optimisation and Regulatory Compliance

Wireless and Satellite Systems

The Making of Virtual Currency

This book constitutes the refereed proceedings of the Software Engineering and Algorithms section of the 10th Computer Science On-line Conference 2021 (CSOC 2021), held on-line in April 2021. Software engineering research and its applications to intelligent algorithms take an essential role in computer science research. In this book, modern research methods, application of machine and statistical learning in the software engineering research are presented.

In recent years, the surge of blockchain technology has been rising due to is proven reliability in ensuring secure and effective transactions, even between untrusted parties. Its application is broad and covers public and private domains varying from traditional communication networks to more modern networks like the internet of things and the internet of energy crossing fog and edge computing, among others. As technology matures and its standard use cases are established, there is a need to gather recent research that can shed light on several aspects and facts on the use of blockchain technology in different fields of interest. Enabling Blockchain Technology for Secure Networking and Communications consolidates the recent research initiatives directed towards exploiting the advantages of blockchain technology for benefiting several areas of applications that vary from security and robustness to scalability and privacy-preserving and more. The chapters explore the current applications of blockchain for networking and communications, the future potentials of blockchain technology, and some not-yet-prospected areas of research and its application. This book is ideal for practitioners, stakeholders, researchers, academicians, and students interested in the concepts of blockchain technology and the potential and pitfalls of its application in different utilization domains.

The second volume of this edited collection offers a number of contributions from leading scholars investigating Blockchain and its implications for business. Focusing on the transformation of the overall value chain, the sections cover the foundations of Blockchain and its sustainability, social and legal applications. It features a variety of use cases, from tourism to healthcare. Using a number of theoretical and methodological approaches, this innovative publication aims to further the cause of this ground-breaking technology and its use within information technology, supply chain and wider business management research.

This book constitutes the refereed proceedings of the 18th International Semantic Web Conference, ESWC 2021, held virtually in June 2021. The 41 full papers and 2 short papers presented were carefully reviewed and selected from 167 submissions. The papers were submitted to three tracks: the research track, the resource track and the in-use track. These tracks showcase research and development activities, services and applications, and innovative research outcomes making their way into industry. The research track caters to both long-standing and emerging research topics in the form of the following subtracks: ontologies and reasoning; knowledge graphs (understanding, creating, and exploiting); semantic data management, querying and distributed data; data dynamics, quality, and trust; matching, integration, and fusion; NLP and information retrieval; machine learning; science data and scholarly communication; and problems to solve before you die.

Information Security and Cryptology

Proceedings of 10th Computer Science On-line Conference 2021, Vol. 2

ICCWS 2019 14th International Conference on Cyber Warfare and Security
Interactive Collaborative Robotics
7th International Conference, ICAIS 2021, Dublin, Ireland, July 19-23, 2021, Proceedings, Part III
Wireless Blockchain
15th International Conference, Inscrypt 2019, Nanjing, China, December 6–8, 2019, Revised Selected Papers
Network and System Security

This thought-provoking book challenges the way we think about regulating cryptoassets. Bringing a timely new perspective, Syren Johnstone critiques the application of a financial regulation narrative to cryptoassets, questioning the assumptions on which it is based and whether regulations developed in the 20th century remain fit to apply to a technology emerging in the 21st.
Innovative as it is, the blockchain technology is getting more and more attention and an increasing number of applications have emerged. This book elaborates on both the design thinking ideas and technical details in blockchain and smart contracts to help readers delve into the conceptual framework and understand why blockchain is designed as such and how it makes the current system decentralised yet effective. Having this understanding lays the ground for further analysis of blockchain-based solutions and innovative fintech applications.Topics covered in this book include blockchain structure, blockchain ecosystem, design thinking for blockchain, smart contract, fintech and financial services, solution-based problem solving, fintech valuation, and current issues faced such as privacy protection and solution selection, with the aid of real-life examples and hands-on exercises.Blockchain and Smart Contracts serves as a valuable guide for researchers and practitioners who have interests in the blockchain, smart contract, fintech innovation and applications, design thinking, and technical details. This book is particularly written for anyone who has no technical background and is searching for an initiation into the deep end of blockchain. Those with business, finance and economic interests will find this interesting and easy to digest.
This double volumes LNCS 11229–11230 constitutes the refereed proceedings of the Confederated International Conferences: Cooperative Information Systems, CoopIS 2018, Ontologies, Databases, and Applications of Semantics, ODBASE 2018, and Cloud and Trusted Computing, C&TC, held as part of OTM 2018 in October 2018 in Valletta, Malta. The 64 full papers presented together with 22 short papers were carefully reviewed and selected from 173 submissions. The OTM program every

year covers data and Web semantics, distributed objects, Web services, databases, informationsystems, enterprise workflow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing.

This book includes the papers presented in 2nd International Conference on Image Processing and Capsule Networks [ICIPCN 2021]. In this digital era, image processing plays a significant role in wide range of real-time applications like sensing, automation, health care, industries etc. Today, with many technological advances, many state-of-the-art techniques are integrated with image processing domain to enhance its adaptiveness, reliability, accuracy and efficiency. With the advent of intelligent technologies like machine learning especially deep learning, the imaging system can make decisions more and more accurately. Moreover, the application of deep learning will also help to identify the hidden information in volumetric images. Nevertheless, capsule network, a type of deep neural network, is revolutionizing the image processing domain; it is still in a research and development phase. In this perspective, this book includes the state-of-the-art research works that integrate intelligent techniques with image processing models, and also, it reports the recent advancements in image processing techniques. Also, this book includes the novel tools and techniques for deploying real-time image processing applications. The chapters will briefly discuss about the intelligent image processing technologies, which leverage an authoritative and detailed representation by delivering an enhanced image and video recognition and adaptive processing mechanisms, which may clearly define the image and the family of image processing techniques and applications that are closely related to the humanistic way of thinking.

Blockchain And Smart Contracts: Design Thinking And Programming For Fintech
ICCWS 2019
Wireless Algorithms, Systems, and Applications
21st International Conference, Guimaraes, Portugal, November 4-6, 2020, Proceedings, Part I
Blockchain Technology for Smart Cities
Enabling Blockchain Technology for Secure Networking and Communications
Collaborative Computing: Networking, Applications and Worksharing

Autonomous driving is an emerging field. Vehicles are equipped with different systems such as radar, lidar, GPS etc. that enable the vehicle to make decisions and navigate without user's input, but there are still concerns regarding safety and security. This book analyses the security needs and solutions which are beneficial to autonomous driving.

This volume brings together a multidisciplinary group of scholars from diverse fields including computer science, engineering, archival science, law, business, psychology, economics, medicine and more to discuss the trade-offs between different "layers" in designing the use of blockchain/Distributed Ledger Technology (DLT) for social trust, trust in data and records, and trust in systems. Blockchain technology has emerged as a solution to the problem of trust in data and records, as well as trust in social, political and economic institutions, due to its profound potential as a digital trust infrastructure. Blockchain is a DLT in which confirmed and validated sets of transactions are stored in blocks that are chained together to make tampering more difficult and render records immutable. This book is dedicated to exploring and disseminating the latest findings on the relationships between socio-political and economic data, record-keeping, and technical aspects of blockchain.

Durch Bitcoin wurde die Blockchain als zugrundeliegende Technologie bekannt. Sie zählt zu den Distributed-Ledger-Technologien, die zukünftig viele Bereiche des wirtschaftlichen Handels beeinflussen werden. So bergen dezentrale autonome Anwendungen enormes Potenzial, nicht nur Prozesse, sondern auch Vertragsabstimmungen zu automatisieren. Beispielsweise kann ein automatisiertes wirtschaftliches Handeln zwischen Maschinen ermöglicht werden. Um einen derart hohen Automatisierungsgrad zu erreichen, müssen datenbasierte Entscheidungen autonom – ohne menschliches Zutun – getroffen werden. Maschinelle Lernverfahren können dabei eine zentrale Komponente bei der Entscheidungsfindung einnehmen. Das Buch stellt erstmalig die komplementären Themengebiete Distributed-Ledger-Technologie und maschinelles Lernen gegenüber und zeigt auf, welches Potenzial freigesetzt werden kann, wenn beide Technologien zielführend miteinander verbunden werden. Das Buch ist eine unverzichtbare Lektüre für diejenigen, die sich tiefgreifendes Wissen in der Kombination beider Themengebiete aufbauen wollen, indem einerseits die theoretischen Grundlagen und andererseits auch mögliche Anwendungsszenarien dargestellt werden.