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Can Blockchain Revolutionize International Trade? - Emmanuelle Ganne 2018

Trade has always been shaped by technological innovation. In recent times, a new technology, Blockchain, has been greeted by many as the next big game-changer. Can Blockchain revolutionize international trade? This publication seeks to demystify the Blockchain phenomenon by providing a basic explanation of the technology. It analyses the relevance of this technology for international trade by reviewing how it is currently used or can be used in the various areas covered by WTO rules. In doing so, it provides an insight into the extent to which this technology could affect cross-border trade in goods and services, and intellectual property rights. It discusses the potential of Blockchain for reducing trade costs and enhancing supply chain transparency as well as the opportunities it provides for small-scale producers and companies. Finally, it reviews various challenges that must be addressed before the technology can be used on a wide scale and have a significant impact on international trade.

Blockchain and its Applications in Industry 4.0 - Suyel Namasudra 2023-04-10

This book discusses fundamentals of Blockchain technology and Industry 4.0. It discusses many applications of Blockchain technology in Industry 4.0, including integration of AI, IoT, and big data with Blockchain for

Industry 4.0. It provides cutting-edge research content from researchers, academicians, and other professionals from different background areas to show their state-of-the-art knowledge to use Blockchain in Industry 4.0. The book discusses advantages of Industry 4.0, such as improved productivity, improved efficiency, flexibility, agility, better user experience, and many more, and also entails some challenges too, such as trust, traceability, security, reliability, transparency, etc., for creating an application of Industry 4.0. The book helps graduate, postgraduate, doctoral students, and industrial professionals to implement Blockchain in Industry 4.0.

Big Data Analytics for Internet of Things - Tausifa Jan Saleem 2021-04-20

BIG DATA ANALYTICS FOR INTERNET OF THINGS Discover the latest developments in IoT Big Data with a new resource from established and emerging leaders in the field Big Data Analytics for Internet of Things delivers a comprehensive overview of all aspects of big data analytics in Internet of Things (IoT) systems. The book includes discussions of the enabling technologies of IoT data analytics, types of IoT data analytics, challenges in IoT data analytics, demand for IoT data analytics, computing platforms, analytical tools, privacy, and security. The distinguished editors have included resources that address key techniques in the analysis of IoT

data. The book demonstrates how to select the appropriate techniques to unearth valuable insights from IoT data and offers novel designs for IoT systems. With an abiding focus on practical strategies with concrete applications for data analysts and IoT professionals, *Big Data Analytics for Internet of Things* also offers readers: A thorough introduction to the Internet of Things, including IoT architectures, enabling technologies, and applications An exploration of the intersection between the Internet of Things and Big Data, including IoT as a source of Big Data, the unique characteristics of IoT data, etc. A discussion of the IoT data analytics, including the data analytical requirements of IoT data and the types of IoT analytics, including predictive, descriptive, and prescriptive analytics A treatment of machine learning techniques for IoT data analytics Perfect for professionals, industry practitioners, and researchers engaged in big data analytics related to IoT systems, *Big Data Analytics for Internet of Things* will also earn a place in the libraries of IoT designers and manufacturers interested in facilitating the efficient implementation of data analytics strategies.

2020 X Brazilian Symposium on Computing Systems Engineering (SBESC)
- IEEE Staff 2020-11-24

Modern computing systems are becoming increasingly diversified Nowadays we hear about Systems of Systems, Cyber Physical Systems, Ubiquitous Systems and so on Many of these systems are embedded, many are subject to real time constraints, and most of them run an operating system In this context, the term Computing Systems Engineering involves techniques related to a safe, correct and deadline compliant development methodology for these systems The Brazilian Symposium on Computing Systems Engineering (SBESC) was created highlight the fact that the design of computing systems is an increasingly multidisciplinary task

Annals of Scientific Society for Assembly, Handling and Industrial Robotics - Thorsten Schüppstuhl

2020-08-21

This Open Access proceedings present a good overview of the current research landscape of industrial robots. The objective of MHI Colloquium is a successful networking at academic and management level. Thereby the colloquium is focussing on a high level academic exchange to distribute the obtained research results, determine synergetic effects and trends, connect the actors personally and in conclusion strengthen the research field as well as the MHI community. Additionally there is the possibility to become acquainted with the organizing institute. Primary audience are members of the scientific association for assembly, handling and industrial robots (WG MHI).

2021 IEEE International Conference on Blockchain (Blockchain) - IEEE Staff
2021-12-06

The IEEE International Conference on Blockchain (Blockchain 2021) will provide a high profile, leading edge forum for researchers, engineers, and practitioners to present latest advances and innovations in key theories, infrastructure, schemes, and significant applications for the blockchain, as well as to identify emerging research topics and define the future

2019 6th International Conference on Signal Processing and Integrated Networks (SPIN) - IEEE Staff
2019-03-07

The conference will be devoted to all advancements in Signal Processing and Integrated Networks Researchers from all over the country and abroad will gather in order to introduce their recent advances in the field and thereby promote the exchange of new ideas, results and techniques The conference will be a successive catalyst in promoting research work, sharing views and getting innovative ideas in this field

Real-time Integration of IoT Sensor and IOTA Tangle for Securing IoT Infrastructure - Md Abdullah Al Mamun
2021

In recent years, the Internet of Things (IoT) has seen tremendous growth. The fast-growing IoT field is facing many security issues because

infrastructure configuration and security policies employed in this nascent field have not matured yet. In this research, we argue that the security issues on IoT can be solved using Distributed Ledger Technology (DLT). The integration of IoT devices and Distributed Ledger Technology is getting more recognition in distributed device settings. In a Distributed Ledger IoT environment, DLT manages a distributed public ledger that stores the communication and transaction data of multiple parties without requiring a trusted central authority. A prime example of the IoT and DLT integration is the IOTA Tangle. IOTA Tangle is a new and world's first distributed ledger technology specially developed for IoT devices. In its core structure, it stores data in a directed acyclic graph. IOTA is not only built to ensure secure communication among the IoT devices but also to provide some extra leverage to the IoT devices compared to the traditional blockchains. Regular blockchains have dedicated miners and they are mostly fee-dependent for making any kind of transaction. IOTA ledger is more scalable, has neither transaction fees nor traditional miners, and it also has the technology to protect the network against Quantum Computer's attack. Before widely bringing the IoT devices into the IOTA network, we need to justify the feasibility of IoT and IOTA integration making a use case prototype to ensure the security of the IoT devices in real-time experiments. Hence, the main goal of this research is to integrate IoT sensor devices and IOTA Tangle to scale up the security of the IoT infrastructure and at the same time execute an efficiency test of the network.

Iota - Introduction to the Tangle Technology: Everything You Need to Know about the Revolutionary Blockchain Alternative - Roman

Alexander 2018-02-27

IOTA - why is this crypto-currency different? IOTA is a crypto-currency which emerged in late 2015, and it aims to tackle Blockchain's main problems. Blockchain technologies

like Bitcoin suffer from various systemic problems, such as network congestion. In short, they cannot expand further and won't be able to process more transaction than the current limit of seven per second. IOTA addresses these issues and offers an entirely new technology, which is still decentralized but can process an infinite amount of transactions as well. This technology is called Tangle. The tangle is another kind of database in which participants have to confirm two other transactions if they themselves want to execute one. With this algorithm, IOTA can theoretically process an infinite amount of transactions and grows its network strength if more participants join. This is, where the Internet of Things comes in: the term describes a vision of devices with sensors and information, which interact with each other directly and form a new Internet. What would happen if intelligent cars would receive warnings from smart sensors in the streets? What if the smart home would be receiving information so that it is fully automated and heated or cooled in the cheapest way possible? To connect the mass of intelligent devices and enable communication amongst them, another Internet is necessary. IOTA enables exactly this. IOTA is still a relatively new technology, and not much information is available online, aside from blog posts, forum comments and random tweets. The following questions might occur when trying to find out more about IOTA: What are IOTAs strengths? How will it work with the Internet of Things? How does IOTA as a coin work? How to purchase IOTA? What to contemplate when investing in IOTA? For what use cases can IOTA be used? How will IOTA develop in the next time? This book will answer these questions. It will even give some programming examples as well as insights on IOTA's tangle technology - a technology that is entirely new. You can find out more by checking out the preview (10 pages). The book's content are the following:
Introduction Iota - Basics Chapter
Iota And The Blockchain Chapter

Iota's Technology Chapter How To Buy Iota Chapter Investing In Iota Chapter Security Procedures IOTA In Use: Details, Fundamentals And Use Cases Chapter 6: The Idea Behind Iota Chapter 7: Programming Iota Chapter 8: Iota Use Cases Chapter 9: Frequently Asked Questions Chapter 10: Milestones And The Future Information Management and Big Data - Juan Antonio Lossio-Ventura 2022-04-21

This book constitutes the refereed proceedings of the 8th International Conference on Information Management and Big Data, SIMBig 2021, held as a virtual event in December 2021. The 25 revised full papers and 2 revised short papers presented were carefully reviewed and selected from 67 submissions. The papers are organized in topical sections on data mining and applications; deep learning and applications; data-driven software engineering; health, NLP, and social media; image processing, machine learning, and semantic web.

Ubiquitous Networking - Halima Elbiaze 2021-12-12

This book constitutes the refereed proceedings of the 7th International Symposium on Ubiquitous Networking, UNet 2021, held in May 2021. Due to COVID-19 pandemic the conference was held virtually. The 16 revised full papers presented together with 6 invited papers and 3 special sessions were carefully reviewed and selected from 38 submissions. The papers are organized in topical sections: ubiquitous communication technologies and networking; tactile internet and internet of things; mobile edge networking and fog-cloud computing; artificial intelligence-driven communications; and data engineering, cyber security and pervasive services.

Network and System Security - Man Ho Au 2018-12-18

This book constitutes the proceedings of the 12th International Conference on Network and System Security, NSS 2018, held in Hong Kong, China, in August 2018. The 26 revised full papers and 9 short papers presented in this book were carefully reviewed and selected from 88 initial submissions. The papers cover a wide

range of topics in the field, including blockchain, mobile security, applied cryptography, authentication, biometrics, IoT, privacy, and education.

Complex, Intelligent and Software Intensive Systems - Leonard Barolli 2021-06-29

This book includes the proceedings of the 15th International Conference on Complex, Intelligent, and Software Intensive Systems, which took place in Asan, Korea, on July 1-3, 2021. Software intensive systems are systems, which heavily interact with other systems, sensors, actuators, devices, and other software systems and users. More and more domains are involved with software intensive systems, e.g., automotive, telecommunication systems, embedded systems in general, industrial automation systems, and business applications. Moreover, the outcome of web services delivers a new platform for enabling software intensive systems. Complex systems research is focused on the overall understanding of systems rather than its components. Complex systems are very much characterized by the changing environments in which they act by their multiple internal and external interactions. They evolve and adapt through internal and external dynamic interactions. The development of intelligent systems and agents, which is each time more characterized by the use of ontologies and their logical foundations build a fruitful impulse for both software intensive systems and complex systems. Recent research in the field of intelligent systems, robotics, neuroscience, artificial intelligence, and cognitive sciences is very important factor for the future development and innovation of software intensive and complex systems. The aim of the book is to deliver a platform of scientific interaction between the three interwoven challenging areas of research and development of future ICT-enabled applications: Software intensive systems, complex systems, and intelligent systems.

Enabling the Internet of Value - Nikhil Vadgama 2022-01-11

This book shows how blockchain technology can transform the Internet, connecting global businesses in disruptive ways. It offers a comprehensive and multi-faceted examination of the potential of distributed ledger technology (DLT) from a new perspective: as an enabler of the Internet of Value (IoV). The authors discuss applications of blockchain technology to the financial services domain, e.g. in real estate, insurance and the emerging Decentralised Finance (DeFi) movement. They also cover applications to the media and e-commerce domains. DLT's impacts on the circular economy, marketplace, Internet of Things (IoT) and oracle business models are also investigated. In closing, the book provides outlooks on the evolution of DLT, as well as the systemic governance and privacy risks of the IoV. The book is intended for a broad readership, including students, researchers and industry practitioners.

Knowledge Innovation Through Intelligent Software Methodologies, Tools and Techniques - H. Fujita
2020-09-30

Software methodologies, tools and techniques have become an ever more important part of our lives, and are crucial to the decision-making processes that affect us every day. This book presents papers from the 19th International Conference on New Trends in Intelligent Software Methodology Tools, and Techniques (SoMeT20), held in Kitakyushu, Japan from 22-24 September 2020. The SoMeT conferences bring together researchers and practitioners to share their original research results and experience of practical developments in software science and related new technologies, and this book explores new trends and theories that highlight the direction and development of intelligent software methodologies, tools and techniques. It covers newly developed techniques, enhanced methodologies, software related solutions and recently developed tools, as well as indicating the direction of future research, and the 40 revised papers

included here have been selected by the SoMeT20 international reviewing committee on the basis of technical soundness, relevance, originality, significance, and clarity. The book is divided into 5 chapters: artificial intelligence techniques on software engineering, and requirement engineering; software methods for informatics, medical informatics and bio-medicine applications; applied software tools, techniques and related software engineering models; intelligent-software systems design, software quality, software evolution and validation techniques; and knowledge science and intelligent computing. Providing an overview of the state-of-the-art in software science and its supporting technology, this book will be of interest to all those working in the field.

IOTA: Introducción a la Tecnología de Tangle - Roman Alexander 2018-03-09

IOTA: Qué es? Aprende todo lo que quieras saber sobre IOTA y cómo usar la nueva red troncal del Internet de las cosas a tu favor. Has mirado a IOTA y te has preguntado qué podría hacer por ti? ¿Compraste Bitcoin pero también quieres probar algo nuevo? ¿Entonces este libro es adecuado para ti! Además de Bitcoin, hay una variedad de monedas digitales con casos de uso muy diferentes. Uno de ellos es IOTA. Si no has oído hablar de él antes, tiene sentido analizarlo para comprender por qué las empresas como Bosch ya están invirtiendo en IOTA. IOTA es un desarrollo alemán que quiere reemplazar Blockchain. Mientras que las tecnologías de blockchain como Bitcoin no pueden evolucionar debido a ciertos problemas y eventualmente no pueden manejar a más usuarios, IOTA ha creado una nueva y revolucionaria base técnica: The Tangle. En este libro, te mostraré los conceptos básicos de IOTA y Tangle, así como algunos temas avanzados, como los casos de uso. Tangle es otro tipo de base de datos donde los participantes confirman las transacciones cuando quieren ejecutar una transacción ellos mismos. Como resultado: IOTA teóricamente puede procesar un número infinito de transacciones y, Como

red, se fortalece a medida que se unen más participantes. Los desarrolladores crearon IOTA para que se pudiera utilizar con otras tecnologías para mejorar aún más y satisfacer las demandas del mercado en constante crecimiento de aplicaciones criptográficas. Por ejemplo, a diferencia de Bitcoin, IOTA es cuántica segura. Aquí es exactamente es donde entra el Internet de las cosas: es la visión de una multitud de dispositivos con sensores que interactúan entre sí para formar su propia Internet. ¿Qué pasaría si los autos inteligentes fueran advertidos por otros sensores de que hubo un accidente? ¿Qué pasa si los sensores que controlan tu casa inteligente de manera ideal midieran si la casa se calienta o se enfría lo más económico posible? Para traer la variedad de dispositivos inteligentes y poder comunicarse entre sí, necesitan su propia Internet. Este internet puede ser IOTA! Si eres nuevo en el mundo de las criptomonedas y Blockchain, deberías ver este libro como un buen trampolín hacia el futuro, porque te muestra la información más importante que necesitas para obtener ganancias en este nuevo e interesante mercado. En este libro, se aprenderán las siguientes cosas: Conceptos básicos de IOTA y Blockchain Cómo IOTA cambiará la economía Comprá IOTA e invierte en IOTA IOTA: dónde se desarrollará en los próximos años. ¡Desplácese hacia arriba y compre con el botón "1Click"!

Iota: Le Manuel: Tout Sur l'Iota-Coin Et La Technologie Tangle - Roman Alexander 2018-10-25

IOTA - qu'est-ce que c'est ? Ce livre va l'expliquer. Nouvelle

Ubiquitous Networking - Halima Elbiaze 2021-12-11

This book constitutes the refereed proceedings of the 7th International Symposium on Ubiquitous Networking, UNet 2021, held in May 2021. Due to COVID-19 pandemic the conference was held virtually. The 16 revised full papers presented together with 6 invited papers and 3 special sessions were carefully reviewed and selected from 38 submissions. The papers are organized in topical sections:

ubiquitous communication technologies and networking; tactile internet and internet of things; mobile edge networking and fog-cloud computing; artificial intelligence-driven communications; and data engineering, cyber security and pervasive services.

Probability - Rick Durrett 2010-08-30

This classic introduction to probability theory for beginning graduate students covers laws of large numbers, central limit theorems, random walks, martingales, Markov chains, ergodic theorems, and Brownian motion. It is a comprehensive treatment concentrating on the results that are the most useful for applications. Its philosophy is that the best way to learn probability is to see it in action, so there are 200 examples and 450 problems. The fourth edition begins with a short chapter on measure theory to orient readers new to the subject.

Internet of Things and Big Data Analytics Toward Next-Generation Intelligence - Nilanjan Dey

2017-08-14

This book highlights state-of-the-art research on big data and the Internet of Things (IoT), along with related areas to ensure efficient and Internet-compatible IoT systems. It not only discusses big data security and privacy challenges, but also energy-efficient approaches to improving virtual machine placement in cloud computing environments. Big data and the Internet of Things (IoT) are ultimately two sides of the same coin, yet extracting, analyzing and managing IoT data poses a serious challenge. Accordingly, proper analytics infrastructures/platforms should be used to analyze IoT data. Information technology (IT) allows people to upload, retrieve, store and collect information, which ultimately forms big data. The use of big data analytics has grown tremendously in just the past few years. At the same time, the IoT has entered the public consciousness, sparking people's imaginations as to what a fully connected world can offer. Further, the book discusses the analysis of real-time big data to derive

actionable intelligence in enterprise applications in several domains, such as in industry and agriculture. It explores possible automated solutions in daily life, including structures for smart cities and automated home systems based on IoT technology, as well as health care systems that manage large amounts of data (big data) to improve clinical decisions. The book addresses the security and privacy of the IoT and big data technologies, while also revealing the impact of IoT technologies on several scenarios in smart cities design. Intended as a comprehensive introduction, it offers in-depth analysis and provides scientists, engineers and professionals the latest techniques, frameworks and strategies used in IoT and big data technologies.

Advancing Computational Intelligence Techniques for Security Systems

Design - Uzzal Sharma 2022-08-17
Security systems have become an integral part of the building and large complex setups, and intervention of the computational intelligence (CI) paradigm plays an important role in security system architecture. This book covers both theoretical contributions and practical applications in security system design by applying the Internet of Things (IoT) and CI. It further explains the application of IoT in the design of modern security systems and how IoT blended with computational intelligence can make any security system improved and realizable. Key features: Focuses on the computational intelligence techniques of security system design Covers applications and algorithms of discussed computational intelligence techniques Includes convergence-based and enterprise integrated security systems with their applications Explains emerging laws, policies, and tools affecting the landscape of cyber security Discusses application of sensors toward the design of security systems This book will be useful for graduate students and researchers in electrical, computer engineering, security system design and engineering.

Fog Computing in the Internet of

Things - Amir M. Rahmani 2017-05-29
This book describes state-of-the-art approaches to Fog Computing, including the background of innovations achieved in recent years. Coverage includes various aspects of fog computing architectures for Internet of Things, driving reasons, variations and case studies. The authors discuss in detail key topics, such as meeting low latency and real-time requirements of applications, interoperability, federation and heterogeneous computing, energy efficiency and mobility, fog and cloud interplay, geo-distribution and location awareness, and case studies in healthcare and smart space applications.

Blockchain Applications in IoT Security - Patel, Harshita 2020-09-18

Like many other scientific innovations, scientists are looking to protect the internet of things (IoT) from unfortunate losses, theft, or misuse. As one of the current hot trends in the digital world, blockchain technology could be the solution for securing the IoT. Blockchain Applications in IoT Security presents research for understanding IoT-generated data security issues, existing security facilities and their limitations and future possibilities, and the role of blockchain technology. Featuring coverage on a broad range of topics such as cryptocurrency, remote monitoring, and smart computing, this book is ideally designed for security analysts, IT specialists, entrepreneurs, business professionals, academicians, researchers, students, and industry professionals seeking current studies on the limitations and possibilities behind competitive blockchain technologies.

Blockchain Technology - Sonali Vyas 2022-04-13

This book is for anyone who wants to gain an understanding of Blockchain technology and its potential. The book is research-oriented and covers different verticals of Blockchain technology. It discusses the characteristics and features of Blockchain, includes techniques, challenges, and future trends, along

with case studies for deeper understanding. **Blockchain Technology: Exploring Opportunities, Challenges, and Applications** covers the core concepts related to Blockchain technology starting from scratch. The algorithms, concepts, and application areas are discussed according to current market trends and industry needs. It presents different application areas of industry and academia and discusses the characteristics and features of this technology. It also explores the challenges and future trends and provides an understanding of new opportunities. This book is for anyone at the beginner to intermediate level that wants to learn about the core concepts related to Blockchain technology.

Decentralised Internet of Things -

Mohammad Ayoub Khan 2020-02-13

This book presents practical as well as conceptual insights into the latest trends, tools, techniques and methodologies of blockchains for the Internet of Things. The decentralised Internet of Things (IoT) not only reduces infrastructure costs, but also provides a standardised peer-to-peer communication model for billions of transactions. However, there are significant security challenges associated with peer-to-peer communication. The decentralised concept of blockchain technology ensures transparent interactions between different parties, which are more secure and reliable thanks to distributed ledger and proof-of-work consensus algorithms. Blockchains allow trustless, peer-to-peer communication and have already proven their worth in the world of financial services. The blockchain can be implanted in IoT systems to deal with the issues of scale, trustworthiness and decentralisation, allowing billions of devices to share the same network without the need for additional resources. This book discusses the latest tools and methodology and concepts in the decentralised Internet of Things. Each chapter presents an in-depth investigation of the potential of blockchains in the Internet of Things, addressing the state-of-the-

art in and future perspectives of the decentralised Internet of Things. Further, industry experts, researchers and academicians share their ideas and experiences relating to frontier technologies, breakthrough and innovative solutions and applications.

Blockchain Technology and Computational Excellence for Society 5.0 - Khan, Shahnawaz 2022-01-14

Blockchain is the most disruptive technology to emerge in the last decade. The evolution of cryptocurrencies has carried with it a revolution in digital economics that has catapulted the application of blockchain technology to a new level across a variety of industries, including banking, security, networking, and more. **Blockchain Technology and Computational Excellence for Society 5.0** closes the gap in existing literature by presenting a selection of chapters that not only shape the research domain, but also present supportive real-life problems and pragmatic solutions. This book presents a variety of highly relevant themes, concepts, and applications in blockchain, discussing topics such as cyber security, digital currencies, and intelligent networks, fueling awareness and interest. With its insight into various platforms, techniques, and tools, this book serves as a valuable resource for academicians, researchers, research scholars, postgraduates, professors, computer scientists, and technology enthusiasts.

Blockchain across Oracle - Robert van Mülken 2018-10-15

Learn what the Blockchain is, what the differences between available blockchain platforms are, how to work with Oracle's Blockchain Cloud Service, and how Blockchain can change the direction of your Oracle work and the focus of your customers. **Key Features** A professional orientation of the Blockchain for Oracle developers and customers Learn what the Blockchain is and how it will affect for you and your customers Learn how blockchain will disrupt traditional cross-organizational applications Implement

your own Blockchain on Oracle and develop your first smart contract Industry directions of the Blockchain to help you decide where to develop your skills Book Description Blockchain across Oracle gives you the professional orientation to Blockchain that you need as an Oracle developer in today's changing world. Written and prepared for you by Oracle Developer Champion Robert van Mülken, this book gets you up to speed with the details of the Blockchain - core concepts, how to implement Oracle's Blockchain Cloud Service, industry implications for the Blockchain, and how the Blockchain will affect your Oracle customers. Robert van Mülken introduces you to the history and concepts of the Blockchain. You'll really get to understand the Blockchain inside and out, as an Oracle developer or solution architect. You'll understand the Blockchain flow, and how the hashes and chains create a new decentralised paradigm for you as an Oracle developer. You'll gain insights into how the Blockchain affects Oracle developers and customers in this modern and disruptive era. You'll see how the Blockchain concepts work in this new world where Assets, Transactions, Security, and Privacy, can all be sustained across a decentralized system for your customers. Then you'll find a detailed look at the cutting-edge Oracle middleware solutions. You'll learn about Hyperledger Fabric, the opensource Blockchain framework used by Oracle as its core, and how to set up your own Oracle Blockchain Network. You'll design and develop a smart contract, and learn how to run it on the Oracle Blockchain Cloud Service. The final part of the book looks at how the Blockchain will affect your customers across various industry sectors. By studying industry trends in the financial services sector, healthcare industry, and the transport industry, you'll discover how the options and possibilities for you and your clients are being transformed by the Blockchain across Oracle. You'll complete this professional

orientation by looking at Blockchain trends and future directions. What you will learn A full introduction to the Blockchain How the Blockchain affects Oracle developers and customers Core concepts including blocks, hashes, and chains, assets, transactions, and consensus How to work with Oracle Cloud to implement a Blockchain Network Design, develop, and run smart contracts on the Oracle Blockchain Cloud Service Blockchain security and privacy for Oracle developers and clients Public and private Blockchain decisions for Oracle architects and developers Industry analysis across finance, governance, and healthcare sectors Industry trends and the future of the Blockchain technology Who this book is for This book is a professional orientation for all Oracle developers, solution architects, and decisions makers involved in Oracle system and future development. *Valuation of Crypto Assets. A Conceptual Framework and Case Application to the IOTA Token* - Abdulkarim Ajouaou Saidi 2019-08-09 Master's Thesis from the year 2018 in the subject Business economics - Controlling, grade: 2.0, Berlin School of Economics and Law, language: English, abstract: This thesis aims at elaborating fundamental valuation techniques for crypto assets. Since research in this field is still at the very beginning this work intends to provide investors, financial analysts, token issuers, researchers or crypto enthusiasts a framework of how to determine the fundamental value of this emerging asset class. To do so, three main research questions are formulated: 1. How can the fundamental value of crypto assets be determined? 2. Which valuation techniques can be applied to the different token types? 3. What is the fundamental value of the IOTA token? In order to answer the questions, the thesis will progress in the following manner: First, the reader will be introduced to distributed ledger technology (DLT) and blockchain, which represent the underlying technology of crypto assets. In the next step the term 'crypto asset'

will be defined. It will be elaborated to what extent crypto assets can be considered as a new asset class and how crypto assets can be classified into different types. The terminological part will end up with a discussion of the fundamental value of this new asset class. The main body of the thesis consists of two parts, a theoretical (conceptual) and a practical (applicational) part. The theoretical part aims to collect and evaluate all current valuation methods for crypto assets. Different absolute as well as relative valuation techniques will be elaborated, namely the Discounted Cash Flow (DCF) model and CAPM, the asset rotation theory, the Equation of Exchange, the NVT ratio, Metcalfe's Law, the cost of production approach as well as the accessibility discount. The second part of the main body comprises a case application of one valuation model, namely the Equation of Exchange, to the IOTA token.

Research Anthology on Convergence of Blockchain, Internet of Things, and Security - Management Association, Information Resources 2022-07-08

The rise of technology has proven to be a threat to personal data, cyberspace protection, and organizational security. However, these technologies can be used to enhance the effectiveness of institutional security. Through the use of blockchain and the internet of things (IoT), organizations may combat cybercriminals and better protect their privacy. The *Research Anthology on Convergence of Blockchain, Internet of Things, and Security* describes the implementation of blockchain and IoT technologies to better protect personal and organizational data as well as enhance overall security. It also explains the tools, applications, and emerging innovations in security and the ways in which they are enhanced by blockchain and IoT. Covering topics such as electronic health records, intrusion detection, and software engineering, this major reference work is an essential resource for business leaders and executives, IT managers, computer

scientists, hospital administrators, security professionals, law enforcement, students and faculty of higher education, librarians, researchers, and academicians.

Blockchain - Matevž Pustišek
2021-11-22

Blockchains are seen as a technology for the future, which reduce the cost of trust and revolutionize transactions between individuals, companies and governments. The sense of using blockchains is to minimize the probability of errors, successful frauds and paper-intensive processes. For these reasons, blockchains already have and will have a significant impact to the society and every day's life, especially in field of Machine to Machine (M2M) communications, which are one of the basic technologies for Internet of Things (IoT). Therefore, blockchains with their inherent property to provide security, privacy and decentralized operation are engine for today's and future reliable, autonomous and trusted IoT platforms. Specially, a disruptive role of ledger technologies in future smart personal mobility systems, which combine smart car industry, smart energy/smart cities will be explained in the book, considering its importance for development of new industrial and business models.

Hybrid Intelligent Systems - Ajith Abraham 2020-08-12

This book highlights the recent research on hybrid intelligent systems and their various practical applications. It presents 34 selected papers from the 18th International Conference on Hybrid Intelligent Systems (HIS 2019) and 9 papers from the 15th International Conference on Information Assurance and Security (IAS 2019), which was held at VIT Bhopal University, India, from December 10 to 12, 2019. A premier conference in the field of artificial intelligence, HIS - IAS 2019 brought together researchers, engineers and practitioners whose work involves intelligent systems, network security and their applications in industry. Including contributions by authors from 20 countries, the book offers a valuable reference guide for all

researchers, students and practitioners in the fields of Computer Science and Engineering.
Networked Systems - Karima Echihabi
2022-01-02

This book constitutes the revised selected papers of the 9th International Conference on Networked Systems, NETYS 2021, held virtually in May 2021. The 15 revised full papers and 2 short papers presented were carefully reviewed and selected from 32 submissions. The papers are organized in the following thematic blocks: distributed systems, blockchain, and verification.

Blockchain for Distributed Systems Security - Sachin S. Shetty
2019-03-05

AN ESSENTIAL GUIDE TO USING BLOCKCHAIN TO PROVIDE FLEXIBILITY, COST-SAVINGS, AND SECURITY TO DATA MANAGEMENT, DATA ANALYSIS, AND INFORMATION SHARING Blockchain for Distributed Systems Security contains a description of the properties that underpin the formal foundations of Blockchain technologies and explores the practical issues for deployment in cloud and Internet of Things (IoT) platforms. The authors—noted experts in the field—present security and privacy issues that must be addressed for Blockchain technologies to be adopted for civilian and military domains. The book covers a range of topics including data provenance in cloud storage, secure IoT models, auditing architecture, and empirical validation of permissioned Blockchain platforms. The book's security and privacy analysis helps with an understanding of the basics of Blockchain and it explores the quantifying impact of the new attack surfaces introduced by Blockchain technologies and platforms. In addition, the book contains relevant and current updates on the topic. This important resource: Provides an overview of Blockchain-based secure data management and storage for cloud and IoT Covers cutting-edge research findings on topics including invariant-based supply chain protection, information sharing framework, and trust worthy information federation Addresses security and privacy concerns in

Blockchain in key areas, such as preventing digital currency miners from launching attacks against mining pools, empirical analysis of the attack surface of Blockchain, and more Written for researchers and experts in computer science and engineering, Blockchain for Distributed Systems Security contains the most recent information and academic research to provide an understanding of the application of Blockchain technology.

Beyond Blockchain - J B 2020-01-26
The whole automotive branch is on the cusp of starting to become electrified. It is expected that around three to four times the amount of copper and a multiple of cobalt are required to manufacture a pure electronic car in comparison to a car with a combustion engine. The situation is also reflected in the price of the raw materials. Copper prices increased by over 50% in the past years and cobalt even tripled based on the levels of 2016. While only a high technological process can be used to mine lithium, cobalt and copper can be found directly within the soil and therefore it does not require a plant to obtain smaller amounts of the raw materials. The possibility of simple and zero-cost production combined with high metal prices makes it very profitable for small miners to search for those minerals by hand. This so-called artisanal mining is very common especially in undeveloped countries with low economic status and a high poverty rate. Artisanal mining in such areas is practiced under inhumane conditions, oftentimes even including child labor. The question arises how EV supply chains can be traced down to prohibit unethically sourced material from entering the supply chain. Simultaneously another megatrend which is mentioned in the media a lot of times in the past couple of years is distributed ledger technologies (DLTs), mostly known due to the term blockchain and the cryptocurrency Bitcoin. One technology which is standing out is the IOTA Tangle. The Tangle has a different approach to most known blockchain architectures and claims

to solve the problems they face. The question arises if the IOTA Tangle could solve the problem of electronic vehicle supply chains, while being cost-effective and scalable at the same time, suiting the requirements of today's supply chains. Therefore, the following research questions are addressed: -What potentials do Distributed Ledger Technologies (DLT) have and what is the reason for that?-How does the IOTAs Tangle differ from blockchain solutions, what makes its design unique and what are the advantages?-What could be an effective process for companies to trace electronic vehicle supply chains utilizing the IOTA Tangle to solve the problems of artisanal mining

Enabling Distributed Intelligence in the Internet of Things with IOTA Tangle and Mobile Agents - Tariq Alsboui 2022

Advances in Industry 4.0 - M. Niranjnamurthy 2022-07-05

This book presents the emerging technologies of Industry 4.0. It describes the growing trend towards automation and data exchange in the manufacturing industry, with a focus on the internet of things (IoT), the industrial internet of things (IIoT), cyberphysical systems (CPS), smart factories, cloud computing, cognitive computing, and artificial intelligence.

Intelligent Computing - Kohei Arai 2020-07-03

This book focuses on the core areas of computing and their applications in the real world. Presenting papers from the Computing Conference 2020 covers a diverse range of research areas, describing various detailed techniques that have been developed and implemented. The Computing Conference 2020, which provided a venue for academic and industry practitioners to share new ideas and development experiences, attracted a total of 514 submissions from pioneering academic researchers, scientists, industrial engineers and students from around the globe. Following a double-blind, peer-review process, 160 papers (including 15 poster papers) were selected to be

included in these proceedings. Featuring state-of-the-art intelligent methods and techniques for solving real-world problems, the book is a valuable resource and will inspire further research and technological improvements in this important area.

Blockchain 3.0 - Filippo Teodoro 2018-01-09

This book is about the latest development in Distributed Ledger Technology. This book looks at the Tangle or IOTA in great detail. Most people have heard of Bitcoin and blockchain, but did you know that Bitcoin runs on Blockchain 1.0? And it is outdated technology. Blockchain technology has many limitations. For instance, Ethereum is a more advanced blockchain, often referred to as Blockchain 2.0. It overcomes some of the challenges faced by Blockchain 1.0. Yet even Blockchain 2.0 is now ancient technology, thanks to the development of the Tangle. The Tangle is a modern distributed ledger that overcomes all the challenges faced by blockchain. It is a very fast network that is very different from blockchain and is technology for the future. This network was just developed in 2014 and has been around since 2015. However, it has caught the attention of some of the world's largest technology companies including Microsoft and Volkswagen have partnered with Tangle to conduct major experiments that may just take the world onto another completely different level. You will learn about some of the exciting applications that can run on the Tangle or Blockchain 3.0. Tangle is very important in providing the best solution for the Internet of Things. There are many gadgets and devices we use today that are connected to the Internet. The Tangle provides the right platform to share, collate, disseminate and store data. Other applications include machine to machine communications, masked authenticated messaging and so much more. This book will teach you about the exciting features of the Tangle network and its cryptocurrency, the Iota. The Tangle eliminates the need for miners and is absolutely free to

use. It is very scalable and can adapt to any project or need in society. It also gets faster and more efficient as it grows bigger, making it a versatile, exciting network for most modern applications. If you are interested in technology and wish to learn more about the latest cryptocurrency in the market as well as the best-decentralized network, then you should get this book.

Networked Systems - Mohamed Faouzi Atig 2019-09-13

This book constitutes the revised selected papers of the 7th International Conference on Networked Systems, NETYS 2019, held in Marrakech, Morocco, in June 2019. The 23 revised full papers and 3 short papers presented were carefully reviewed and selected from 60 submissions. The papers are organized in the following topics: formal verification, distributed systems, security, concurrency, and networks.

Mathematical Research for Blockchain Economy - Panos Pardalos 2020-02-13

This book presents the best papers from the 1st International Conference on Mathematical Research for Blockchain Economy (MARBLE) 2019, held in Santorini, Greece. While most blockchain conferences and forums are dedicated to business applications, product development or Initial Coin Offering (ICO) launches, this conference focused on the mathematics behind blockchain to bridge the gap between practice and theory. Every year, thousands of blockchain projects are launched and circulated in the market, and there is a tremendous wealth of blockchain applications, from finance to healthcare, education, media, logistics and more. However, due to theoretical and technical barriers, most of these applications are impractical for use in a real-world business context. The papers in this book reveal the challenges and limitations, such as scalability, latency, privacy and security, and showcase solutions and developments to overcome them.