

Big Data Networking Springer

This book constitutes the proceedings of the 9th International Conference on Big Data, BigData 2020, held as part of SCF 2020, during September 18-20, 2020. The conference was planned to take place in Honolulu, HI, USA and was changed to a virtual format due to the COVID-19 pandemic. The 16 full and 3 short papers presented were carefully reviewed and selected from 52 submissions. The topics covered are Big Data Architecture, Big Data Modeling, Big Data As A Service, Big Data for Vertical Industries (Government, Healthcare, etc.), Big Data Analytics, Big Data Toolkits, Big Data Open Platforms, Economic Analysis, Big Data for Enterprise Transformation, Big Data in Business Performance Management, Big Data for Business Model Innovations and Analytics, Big Data in Enterprise Management Models and Practices, Big Data in Government Management Models and Practices, and Big Data in Smart Planet Solutions.

This book presents conjectural advances in big data analysis, machine learning and computational intelligence, as well as their potential applications in scientific computing. It discusses major issues pertaining to big data analysis using computational intelligence techniques, and the conjectural elements are supported by simulation and modelling applications to help address real-world problems. An extensive bibliography is provided at the end of each chapter. Further, the main content is supplemented by a wealth of figures, graphs, and tables, offering a valuable guide for researchers in the field of big data analytics and computational intelligence. The book, gathering the proceedings of the Future of Information and Communication Conference (FICC) 2018, is a remarkable collection of chapters covering a wide range of topics in areas of information and communication technologies and their applications to the real world. It includes 104 papers and posters by pioneering academic researchers, scientists, industrial engineers, and students from all around the world, which contribute to our understanding of relevant trends of current research on communication, data science, ambient intelligence, networking, computing, security and Internet of Things. This book collects state of the art chapters on all aspects of information science and communication technologies, from classical to intelligent, and covers both theory and applications of the latest technologies and methodologies. Presenting state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research, this book is an interesting and useful resource.

This book reports on the latest advances in mobile technologies for collecting, storing and processing mobile big data in connection with wireless communications. It presents novel approaches and applications in which mobile big data is being applied from an engineering standpoint and addresses future theoretical and practical challenges related to the big data field from a mobility perspective. Further, it provides an overview of new methodologies designed to take mobile big data to the Cloud, enable the processing of real-time streaming events on-the-move and enhance the integration of resource availability through the ' Anywhere, Anything, Anytime ' paradigm. By providing both academia and industry researchers and professionals with a timely snapshot of emerging mobile big data-centric systems and highlighting related pitfalls, as well as potential solutions, the book fills an important gap in the

literature and fosters the further development in the area of mobile technologies for exploiting mobile big data.

A Hands-On Approach for Application Development

Big Data Applications and Use Cases

Computing Systems and Approaches

Proceedings of ICCBI 2020

Network Data Analytics

Big Data

Big Data and Social Media Analytics

This illuminating text/reference surveys the state of the art in data science, and provides practical guidance on big data analytics. Expert perspectives are provided by authoritative researchers and practitioners from around the world, discussing research developments and emerging trends, presenting case studies on helpful frameworks and innovative methodologies, and suggesting best practices for efficient and effective data analytics. Features: reviews a framework for fast data applications, a technique for complex event processing, and agglomerative approaches for the partitioning of networks; introduces a unified approach to data modeling and management, and a distributed computing perspective on interfacing physical and cyber worlds; presents techniques for machine learning for big data, and identifying duplicate records in data repositories; examines enabling technologies and tools for data mining; proposes frameworks for data extraction, and adaptive decision making and social media analysis.

This book constitutes refereed proceedings of the First International First International Conference on Big Data, Machine Learning, and Applications, BigDML 2019, held in Silchar, India, in December. The 6 full papers and 3 short papers were carefully reviewed and selected from 152 submissions. The papers present research on such topics as computing methodology; machine learning; artificial intelligence; information systems; security and privacy.

This book provides a review of advanced topics relating to the theory, research, analysis and implementation in the context of big data platforms and their applications, with a focus on methods, techniques, and performance evaluation. The explosive growth in the volume, speed, and variety of data being produced every day requires a continuous increase in the processing speeds of servers and of entire network infrastructures, as well as new resource management models. This poses significant challenges (and provides striking development opportunities) for data intensive and high-performance computing, i.e., how to efficiently turn extremely large datasets into valuable information and meaningful knowledge. The task of context data management is further complicated by the variety of sources such data derives from, resulting in different data formats, with varying storage, transformation, delivery, and archiving requirements. At the same time rapid responses are needed for real-time applications. With the emergence of cloud infrastructures, achieving highly scalable data management in such contexts is a critical problem, as the overall application performance is highly dependent on the properties of the data management service. The objective of this book is to introduce the basic concepts of big data computing and then to describe the total solution of big data problems using HPCC, an open-source computing platform. The book comprises 15 chapters broken into three parts. The first

part, Big Data Technologies, includes introductions to big data concepts and techniques; big data analytics; and visualization and learning techniques. The second part, LexisNexis Risk Solution to Big Data, focuses on specific technologies and techniques developed at LexisNexis to solve critical problems that use big data analytics. It covers the open source High Performance Computing Cluster (HPCC Systems®) platform and its architecture, as well as parallel data languages ECL and KEL, developed to effectively solve big data problems. The third part, Big Data Applications, describes various data intensive applications solved on HPCC Systems. It includes applications such as cyber security, social network analytics including fraud, Ebola spread modeling using big data analytics, unsupervised learning, and image classification. The book is intended for a wide variety of people including researchers, scientists, programmers, engineers, designers, developers, educators, and students. This book can also be beneficial for business managers, entrepreneurs, and investors.

Big Data and Internet of Things: A Roadmap for Smart Environments

Body Area Networks. Smart IoT and Big Data for Intelligent Health

Mobile Big Data

Computer Networks, Big Data and IoT

Trending Applications

Advances in Information and Communication Networks

Big Data – BigData 2020

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.

This book explores the changes in political communication in light of the development of a public opinion mediated by web 2.0 technologies. One of the most important changes in political communication is related to the process of disintermediation, i.e. the process by which digital technologies allow citizens to compete in the public space with those agents who, traditionally, co-opted public

opinion. However, while disintermediation has undeniably generated a number of advances, having linked citizens to the public debate, the authors highlight some aspects where disintermediation is moving away from a rational and inclusive public space. They argue that these aspects, related to the immediacy, polarization and incivility of the communication, obscure the possibilities for democratization of digital political communication.

This book presents current progress on challenges related to Big Data management by focusing on the particular challenges associated with context-aware data-intensive applications and services. The book is a state-of-the-art reference discussing progress made, as well as prompting future directions on the theories, practices, standards and strategies that are related to the emerging computational technologies and their association with supporting the Internet of Things advanced functioning for organizational settings including both business and e-science. Apart from inter-operable and inter-cooperative aspects, the book deals with a notable opportunity namely, the current trend in which a collectively shared and generated content is emerged from Internet end-users. Specifically, the book presents advances on managing and exploiting the vast size of data generated from within the smart environment (i.e. smart cities) towards an integrated, collective intelligence approach. The book also presents methods and practices to improve large storage infrastructures in response to increasing demands of the data intensive applications. The book contains 19 self-contained chapters that were very carefully selected based on peer review by at least two expert and independent reviewers and is organized into the three sections reflecting the general themes of interest to the IoT and Big Data communities: Section I: Foundations and Principles Section II: Advanced Models and Architectures Section III: Advanced Applications and Future Trends The book is intended for researchers interested in joining interdisciplinary and transdisciplinary works in the areas of Smart Environments, Internet of Things and various computational technologies for the purpose of an integrated collective computational intelligence approach into the Big Data era.

This book constitutes the refereed proceedings of the 7th International Conference on Information Management and Big Data, SIMBig 2020, held in Lima, Peru, in October 2020.* The 32 revised full papers and 7 revised short papers presented were carefully reviewed and selected from 122 submissions. The papers address topics such as natural language processing and text mining; machine learning; image processing; social networks; data-driven software engineering; graph mining; and Semantic Web, repositories, and visualization.

***The conference was held virtually.**

Intelligent Edge, Fog and Mist Computing

Frameworks and Methodologies

Personalized Privacy Protection in Big Data

Case Studies, Methods, Techniques, and Performance Evaluation

Proceedings of IDSCS 2021

Big Data Platforms and Applications

Proceedings of the 2018 Future of Information and Communication Conference (FICC), Vol. 1

This encyclopedia will be an essential resource for our times, reflecting the fact that we currently are living in an expanding data-driven world.

Technological advancements and other related trends are contributing to the production of an astoundingly large and exponentially increasing

collection of data and information, referred to in popular vernacular as “Big Data.” Social media and crowdsourcing platforms and various applications — “apps” — are producing reams of information from the instantaneous transactions and input of millions and millions of people around the globe. The Internet-of-Things (IoT), which is expected to comprise tens of billions of objects by the end of this decade, is actively sensing real-time intelligence on nearly every aspect of our lives and environment. The Global Positioning System (GPS) and other location-aware technologies are producing data that is specific down to particular latitude and longitude coordinates and seconds of the day. Large-scale instruments, such as the Large Hadron Collider (LHC), are collecting massive amounts of data on our planet and even distant corners of the visible universe. Digitization is being used to convert large collections of documents from print to digital format, giving rise to large archives of unstructured data. Innovations in technology, in the areas of Cloud and molecular computing, Artificial Intelligence/Machine Learning, and Natural Language Processing (NLP), to name only a few, also are greatly expanding our capacity to store, manage, and process Big Data. In this context, the Encyclopedia of Big Data is being offered in recognition of a world that is rapidly moving from gigabytes to terabytes to petabytes and beyond. While indeed large data sets have long been around and in use in a variety of fields, the era of Big Data in which we now live departs from the past in a number of key respects and with this departure comes a fresh set of challenges and opportunities that cut across and affect multiple sectors and disciplines, and the public at large. With expanded analytical capacities at hand, Big Data is now being used for scientific inquiry and experimentation in nearly every (if not all) disciplines, from the social sciences to the humanities to the natural sciences, and more. Moreover, the use of Big Data has been well established beyond the Ivory Tower. In today’s economy, businesses simply cannot be competitive without engaging Big Data in one way or another in support of operations, management, planning, or simply basic hiring decisions. In all levels of government, Big Data is being used to engage citizens and to guide policy making in pursuit of the interests of the public and society in general. Moreover, the changing nature of Big Data also raises new issues and concerns related to, for example, privacy, liability, security, access, and even the veracity of the data itself. Given the complex issues attending Big Data, there is a real need for a reference book that covers the subject from a multi-disciplinary, cross-sectoral, comprehensive, and international perspective. The Encyclopedia of Big Data will address this need and will be the first of such reference books to do so. Featuring some 500 entries, from “Access” to “Zillow,” the Encyclopedia will serve as a fundamental resource for researchers and students, for decision makers and leaders, and for business analysts and purveyors. Developed for those in academia, industry, and government, and others with a general interest in Big Data, the encyclopedia will be aimed especially at those involved in its collection, analysis, and use. Ultimately, the Encyclopedia of Big Data will provide a common platform and language

covering the breadth and depth of the topic for different segments, sectors, and disciplines.

This book is a collection of chapters written by experts on various aspects of big data. The book aims to explain what big data is and how it is stored and used. The book starts from the fundamentals and builds up from there. It is intended to serve as a review of the state-of-the-practice in the field of big data handling. The traditional framework of relational databases can no longer provide appropriate solutions for handling big data and making it available and useful to users scattered around the globe. The study of big data covers a wide range of issues including management of heterogeneous data, big data frameworks, change management, finding patterns in data usage and evolution, data as a service, service-generated data, service management, privacy and security. All of these aspects are touched upon in this book. It also discusses big data applications in different domains. The book will prove useful to students, researchers, and practicing database and networking engineers.

This book targets an audience with a basic understanding of deep learning, its architectures, and its application in the multimedia domain. Background in machine learning is helpful in exploring various aspects of deep learning. Deep learning models have a major impact on multimedia research and raised the performance bar substantially in many of the standard evaluations. Moreover, new multi-modal challenges are tackled, which older systems would not have been able to handle. However, it is very difficult to comprehend, let alone guide, the process of learning in deep neural networks, there is an air of uncertainty about exactly what and how these networks learn. By the end of the book, the readers will have an understanding of different deep learning approaches, models, pre-trained models, and familiarity with the implementation of various deep learning algorithms using various frameworks and libraries.

This book introduces the latest research findings in cloud, edge, fog, and mist computing and their applications in various fields using geospatial data. It solves a number of problems of cloud computing and big data, such as scheduling, security issues using different techniques, which researchers from industry and academia have been attempting to solve in virtual environments. Some of these problems are of an intractable nature and so efficient technologies like fog, edge and mist computing play an important role in addressing these issues. By exploring emerging advances in cloud computing and big data analytics and their engineering applications, the book enables researchers to understand the mechanisms needed to implement cloud, edge, fog, and mist computing in their own endeavours, and motivates them to examine their own research findings and developments.

Digital Political Participation, Social Networks and Big Data
First International Conference, BigDML 2019, Silchar, India, December
16–19, 2019, Revised Selected Papers
A Roadmap from Models to Technologies

A Primer

7th Annual International Conference, SIMBig 2020, Lima, Peru, October 1-3, 2020, Proceedings

High-Performance Big-Data Analytics

Big Data for the Greater Good

This book offers a basic understanding of the Internet of Things (IoT), its design issues and challenges for healthcare applications. It also provides details of the challenges of healthcare big data, role of big data in healthcare and techniques, and tools for IoT in healthcare. This book offers a strong foundation to a beginner. All technical details that include healthcare data collection unit, technologies and tools used for the big data analytics implementation are explained in a clear and organized format.

This handbook offers comprehensive coverage of recent advancements in Big Data technologies and related paradigms. Chapters are authored by international leading experts in the field, and have been reviewed and revised for maximum reader value. The volume consists of twenty-five chapters organized into four main parts. Part one covers the fundamental concepts of Big Data technologies including data curation mechanisms, data models, storage models, programming models and programming platforms. It also dives into the details of implementing Big SQL query engines and big stream processing systems. Part Two focuses on the semantic aspects of Big Data management including data integration and exploratory ad hoc analysis in addition to structured querying and pattern matching techniques. Part Three presents a comprehensive overview of large scale graph processing. It covers the most recent research in large scale graph processing platforms, introducing several scalable graph querying and mining mechanisms in domains such as social networks. Part Four details novel applications that have been made possible by the rapid emergence of Big Data technologies such as Internet-of-Things (IOT), Cognitive Computing and SCADA Systems. All parts of the book discuss open research problems, including potential opportunities, that have arisen from the rapid progress of Big Data technologies and the associated increasing requirements of application domains. Designed for researchers, IT professionals and graduate students, this book is a timely contribution to the growing Big Data field. Big Data has been recognized as one of leading emerging technologies that will have a major contribution and impact on the various fields of science and various aspect of the human society over the coming decades. Therefore, the content in this book will be an essential tool to help readers understand the development and future of the field.

Big data has become an important success driver in airline network planning. Maximilian Schosser explores the status quo of network planning across a case study group consisting of nine airlines representing different business models. The author describes 23 big data opportunities for airline network planning and

evaluates them based on their specific value contribution for airline network planning. Subsequently, he develops a financial evaluation methodology for big data opportunities based on key performance indicators for airline network planning departments.

This book presents best selected research papers presented at the International Conference on Computer Networks, Big Data and IoT (ICCBI 2020), organized by Vaigai College Engineering, Madurai, Tamil Nadu, India, during 15–16 December 2020. The book covers original papers on computer networks, network protocols and wireless networks, data communication technologies and network security. The book is a valuable resource and reference for researchers, instructors, students, scientists, engineers, managers and industry practitioners in those important areas.

Encyclopedia of Big Data Technologies

Data Science

Handbook of Big Data Technologies

Big Data Technologies and Applications

Foundations of Data Science Based Healthcare Internet of Things

Theory, Algorithms, and Applications

Data Science and Big Data Analytics

This book highlights some of the most fascinating current uses, thought-provoking changes, and biggest challenges that Big Data means for our society. The explosive growth of data and advances in Big Data analytics have created a new frontier for innovation, competition, productivity, and well-being in almost every sector of our society, as well as a source of immense economic and societal value. From the derivation of customer feedback-based insights to fraud detection and preserving privacy; better medical treatments; agriculture and food management; and establishing low-voltage networks – many innovations for the greater good can stem from Big Data. Given the insights it provides, this book will be of interest to both researchers in the field of Big Data, and practitioners from various fields who intend to apply Big Data technologies to improve their strategic and operational decision-making processes. This book presents the original articles that have been accepted in the 2019 INNS Big Data and Deep Learning (INNS BDDL) international conference, a major event for researchers in the field of artificial neural networks, big data and related topics, organized by the International Neural Network Society and hosted by the University of Genoa. In 2019 INNS BDDL has been held in Sestri Levante (Italy) from April 16 to April 18. More than 80 researchers from 20 countries participated in the INNS BDDL in April 2019. In addition to regular sessions, INNS BDDL welcomed around 40 oral communications, 6 tutorials have been presented together with 4 invited plenary speakers. This book covers a broad range of topics in big data and deep learning, from theoretical aspects to state-of-the-art applications. This book is directed to both Ph.D. students and Researchers in the field in order to provide a general picture of the state-of-the-art on the topics addressed by the conference.

In order to carry out data analytics, we need powerful and flexible computing software.

However the software available for data analytics is often proprietary and can be expensive.

This book reviews Apache tools, which are open source and easy to use. After providing an overview of the background of data analytics, covering the different types of analysis and the basics of using Hadoop as a tool, it focuses on different Hadoop ecosystem tools, like Apache Flume, Apache Spark, Apache Storm, Apache Hive, R, and Python, which can be used for different types of analysis. It then examines the different machine learning techniques that are

useful for data analytics, and how to visualize data with different graphs and charts. Presenting data analytics from a practice-oriented viewpoint, the book discusses useful tools and approaches for data analytics, supported by concrete code examples. The book is a valuable reference resource for graduate students and professionals in related fields, and is also of interest to general readers with an understanding of data analytics.

Big Data and Networks Technologies Springer

Encyclopedia of Big Data

Second International Conference, ICBDS 2020, Singapore, Singapore, December 20–22, 2020, Revised Selected Papers

15th EAI International Conference, BODYNETS 2020, Tallinn, Estonia, October 21, 2020, Proceedings

Big Data and Security

Big Data Concepts, Theories, and Applications

Guide to Big Data Applications

Big Data to Improve Strategic Network Planning in Airlines

This edited book provides techniques which address various aspects of big data collection and analysis from social media platforms and beyond. It covers efficient compression of large networks, link prediction in hashtag graphs, visual exploration of social media data, identifying motifs in multivariate data, social media surveillance to enhance search and rescue missions, recommenders for collaborative filtering and safe travel plans to high risk destinations, analysis of cyber influence campaigns on YouTube, impact of location on business rating, bibliographical and co-authorship network analysis, and blog data analytics. All these trending topics form a major part of the state of the art in social media and big data analytics. Thus, this edited book may be considered as a valuable source for readers interested in grasping some of the most recent advancements in this high trending domain.

This book reviews the state of the art in big data analysis and networks technologies. It addresses a range of issues that pertain to: signal processing, probability models, machine learning, data mining, databases, data engineering, pattern recognition, visualization, predictive analytics, data warehousing, data compression, computer programming, smart cities, networks technologies, etc. Data is becoming an increasingly decisive resource in modern societies, economies, and governmental organizations. In turn, data science inspires novel techniques and theories drawn from mathematics, statistics, information theory, computer science, and the social sciences. All papers presented here are the product of extensive field research involving applications and techniques related to data analysis in general, and to big data and networks technologies in particular. Given its scope, the book will appeal to advanced undergraduate and graduate students, postdoctoral researchers, lecturers and industrial researchers,

as well general readers interested in big data analysis and networks technologies.

This book constitutes the refereed proceedings of the 5th International Conference on Soft Computing in Data Science, SCDS 2019, held in Iizuka, Japan, in August 2019. The 30 revised full papers presented were carefully reviewed and selected from 75 submissions. The papers are organized in topical sections on information and customer analytics; visual data science; machine and deep learning; big data analytics; computational and artificial intelligence; social network and media analytics. This book presents the best-selected papers presented at the International Conference on Data Science, Computation and Security (IDSCS-2021), organized by the Department of Data Science, CHRIST (Deemed to be University), Pune Lavasa Campus, India, during April 16–17, 2021. The proceeding is targeting the current research works in the areas of data science, data security, data analytics, artificial intelligence, machine learning, computer vision, algorithms design, computer networking, data mining, big data, text mining, knowledge representation, soft computing, and cloud computing.

Data Science for Social Good

Information Management and Big Data

Disintermediation in the Era of Web 2.0

Proceedings of the INNS Big Data and Deep Learning Conference INNSBDDL2019, held at Sestri Levante, Genova, Italy 16–18 April 2019

Big Data, Machine Learning, and Applications

Intelligence in Big Data Technologies—Beyond the Hype

Philanthropy and Social Impact in a Complex World

The book offers a timely snapshot of neural network technologies as a significant component of big data analytics platforms. It promotes new advances and research directions in efficient and innovative algorithmic approaches to analyzing big data (e.g. deep networks, nature-inspired and brain-inspired algorithms); implementations on different computing platforms (e.g. neuromorphic, graphics processing units (GPUs), clouds, clusters); and big data analytics applications to solve real-world problems (e.g. weather prediction, transportation, energy management). The book, which reports on the second edition of the INNS Conference on Big Data, held on October 23–25, 2016, in Thessaloniki, Greece, depicts an interesting collaborative adventure of neural networks with big data and other learning technologies.

The Encyclopedia of Big Data Technologies provides researchers, educators, students and industry professionals with a comprehensive authority over the most relevant Big Data Technology concepts. With over 300 articles written by worldwide subject matter experts from both industry and academia, the encyclopedia covers topics such as big data storage systems, NoSQL database, cloud computing, distributed systems, data processing, data management, machine learning and social technologies, data science. Each peer-reviewed, highly structured entry provides the reader with basic terminology, subject overviews, key research results, application examples, future directions, cross references and a bibliography. The entries are

expository and tutorial, making this reference a practical resource for students, academics, or professionals. In addition, the distinguished, international editorial board of the encyclopedia consists of well-respected scholars, each developing topics based upon their expertise.

This book presents a detailed review of high-performance computing infrastructures for next-generation big data and fast data analytics. Features: includes case studies and learning activities throughout the book and self-study exercises in every chapter; presents detailed case studies on social media analytics for intelligent businesses and on big data analytics (BDA) in the healthcare sector; describes the network infrastructure requirements for effective transfer of big data, and the storage infrastructure requirements of applications which generate big data; examines real-time analytics solutions; introduces in-database processing and in-memory analytics techniques for data mining; discusses the use of mainframes for handling real-time big data and the latest types of data management systems for BDA; provides information on the use of cluster, grid and cloud computing systems for BDA; reviews the peer-to-peer techniques and tools and the common information visualization techniques, used in BDA.

This book gathers the outcomes of the second ECCOMAS CM3 Conference series on transport, which addressed the main challenges and opportunities that computation and big data represent for transport and mobility in the automotive, logistics, aeronautics and marine-maritime fields. Through a series of plenary lectures and mini-forums with lectures followed by question-and-answer sessions, the conference explored potential solutions and innovations to improve transport and mobility in surface and air applications. The book seeks to answer the question of how computational research in transport can provide innovative solutions to Green Transportation challenges identified in the ambitious Horizon 2020 program. In particular, the respective papers present the state of the art in transport modeling, simulation and optimization in the fields of maritime, aeronautics, automotive and logistics research. In addition, the content includes two white papers on transport challenges and prospects. Given its scope, the book will be of interest to students, researchers, engineers and practitioners whose work involves the implementation of Intelligent Transport Systems (ITS) software for the optimal use of roads, including safety and security, traffic and travel data, surface and air traffic management, and freight logistics.

Recent Advances in Big Data and Deep Learning

Data Science and Big Data Computing

Cloud Computing for Geospatial Big Data Analytics

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

ACM-WIR 2018

Soft Computing in Data Science

Proceedings of the 2nd INNS Conference on Big Data, October 23-25, 2016,

Thessaloniki, Greece

This handbook brings together a variety of approaches to the uses of big data in multiple fields, primarily science, medicine, and business. This single resource features contributions from researchers around the world from a variety of fields, where they share their findings and experience. This book is intended to help spur further innovation in big data. The research is presented in a way that allows readers,

regardless of their field of study, to learn from how applications have proven successful and how similar applications could be used in their own field. Contributions stem from researchers in fields such as physics, biology, energy, healthcare, and business. The contributors also discuss important topics such as fraud detection, privacy implications, legal perspectives, and ethical handling of big data.

This book presents the data privacy protection which has been extensively applied in our current era of big data. However, research into big data privacy is still in its infancy. Given the fact that existing protection methods can result in low data utility and unbalanced trade-offs, personalized privacy protection has become a rapidly expanding research topic. In this book, the authors explore emerging threats and existing privacy protection methods, and discuss in detail both the advantages and disadvantages of personalized privacy protection.

Traditional methods, such as differential privacy and cryptography, are discussed using a comparative and intersectional approach, and are contrasted with emerging methods like federated learning and generative adversarial nets. The advances discussed cover various applications, e.g. cyber-physical systems, social networks, and location-based services. Given its scope, the book is of interest to scientists, policy-makers, researchers, and postgraduates alike.

This book constitutes the refereed proceedings of the Second International Conference on Big Data and Security, ICBDS 2020, held in Singapore, Singapore, in December 2020. The 44 revised full papers and 8 short papers were carefully reviewed and selected out of 153 submissions. The papers included in this book are organized according to the topical sections on cybersecurity and privacy, big data, blockchain and internet of things, and artificial intelligence/ machine learning security. This book presents different use cases in big data applications and related practical experiences. Many businesses today are increasingly interested in utilizing big data technologies for supporting their business intelligence so that it is becoming more and more important to understand the various practical issues from different practical use cases. This book provides clear proof that big data technologies are playing an ever increasing important and critical role in a new cross-discipline research between computer science and business.

9th International Conference, Held as Part of the Services Conference Federation, SCF 2020, Honolulu, HI, USA, September 18-20, 2020, Proceedings

Big Data and Networks Technologies
Data Science and Security

Proceedings of ICBDDC 2019

5th International Conference, SCDS 2019, Iizuka, Japan, August 28-29, 2019, Proceedings

Digital Innovations in Surface and Air Transport Systems

This book is a compendium of the proceedings of the International Conference on Big-Data and Cloud Computing. The papers discuss the recent advances in the areas of big data analytics, data analytics in cloud, smart cities and grid, etc. This volume primarily focuses on the application of knowledge which promotes ideas for solving problems of the society through cutting-edge big-data technologies. The essays featured in this proceeding provide novel ideas that contribute for the growth of world class research and development. It will be useful to researchers in the area of advanced engineering sciences.

This book constitutes the refereed post-conference proceedings of the 15th International Conference on Body Area Networks, BodyNets 2020, held in Tallinn, Estonia, in October 2020. The conference was held virtually due to the COVID-19 pandemic. The 15 papers presented were selected from 30 submissions and issue new technologies to provide trustable measuring and communications mechanisms from the data source to medical health databases. Wireless body area networks (WBAN) are one major element in this process. Not only on-body devices but also technologies providing information from inside a body are in the focus of this conference. Dependable communications combined with accurate localization and behavior analysis will benefit WBAN technology and make the healthcare processes more effective.

This book provides a comprehensive picture of mobile big data starting from data sources to mobile data driven applications. Mobile Big Data comprises two main components: an overview of mobile big data, and the case studies based on real-world data recently collected by one of the largest mobile network carriers in China. In the first component, four areas of mobile big data life cycle are surveyed: data source and collection, transmission, computing platform and applications. In the second component, two case studies are provided, based on the signaling data collected in the cellular core network in terms of subscriber privacy evaluation and demand forecasting for network management. These cases respectively give a vivid demonstration of what mobile big data looks like, and how it can be analyzed and mined to generate useful and meaningful information and knowledge. This book targets researchers, practitioners and professors relevant to this field. Advanced-level students studying computer science and electrical engineering will also be interested in this book as supplemental reading.

This book covers three major parts of Big Data: concepts, theories and applications. Written by world-renowned leaders in Big Data, this book explores the problems, possible solutions and directions for Big Data in research and practice. It also focuses on high level concepts such as definitions of Big Data from different angles; surveys in research and applications; and existing tools, mechanisms, and systems in practice. Each chapter is independent from the other chapters, allowing users to read any chapter directly. After examining the

practical side of Big Data, this book presents theoretical perspectives. The theoretical research ranges from Big Data representation, modeling and topology to distribution and dimension reducing. Chapters also investigate the many disciplines that involve Big Data, such as statistics, data mining, machine learning, networking, algorithms, security and differential geometry. The last section of this book introduces Big Data applications from different communities, such as business, engineering and science. Big Data Concepts, Theories and Applications is designed as a reference for researchers and advanced level students in computer science, electrical engineering and mathematics. Practitioners who focus on information systems, big data, data mining, business analysis and other related fields will also find this material valuable.

Advances in Big Data

Computation and Big Data for Transport