

Computer And Computing Technologies In Agriculture Volume Ii

Computer and Computing Technologies in Agriculture IV4th IFIP TC 12 International Conference, CCTA 2010, Nanchang, China, October 22-25, 2010, Selected Papers, Part III Springer

The papers in this volume comprise the refereed proceedings of the First International Conference on Computer and Computing Technologies in Agriculture (CCTA 2007), in Wuyishan, China, 2007. This conference is organized by China Agricultural University, Chinese Society of Agricultural Engineering and the Beijing Society for Information Technology in Agriculture. The purpose of this conference is to facilitate the communication and cooperation between institutions and researchers on theories, methods and implementation of computer science and information technology. By researching information technology development and the - sources integration in rural areas in China, an innovative and effective approach is expected to be explored to promote the technology application to the development of modern agriculture and contribute to the construction of new countryside. The rapid development of information technology has induced substantial changes and impact on the development of China's rural areas. Western thoughts have exerted great impact on studies of Chinese information technology development and it helps more Chinese and western scholars to expand their studies in this academic and application area. Thus, this conference, with works by many prominent scholars, has covered computer science and technology and information development in China's rural areas; and probed into all the important issues and the newest research topics, such as Agricultural Decision Support System and Expert System, GIS, GPS, RS and Precision Farming, CT applications in Rural Area, Agricultural System Simulation, Evolutionary Computing, etc.

The two-volume set IFIP AICT 392 and 393 constitutes the refereed post-conference proceedings of the 6th IFIP TC 5, SIG 5.1 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2012, held in Zhangjiajie, China, in October 2012. The 108 revised papers presented were carefully selected from numerous submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including Internet of things and cloud computing; simulation models and decision-support systems for agricultural production; smart sensor, monitoring, and control technology; traceability and e-commerce technology; computer vision, computer graphics, and virtual reality; the application of information and communication technology in agriculture; and universal information service technology and service systems development in rural areas. The 55 papers included in the second volume focus on GIS, GPS, RS, and Precision Farming.

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Contains a variety of cloud computing technologies and explores how the cloud can enhance business operations Cloud Technologies offers an accessible guide to cloud-based systems and clearly explains how these technologies have changed the way organizations approach and implement their computing infrastructure. The author—a noted expert on the topic—includes an overview of cloud computing and addresses business-related considerations such as service level agreements, elasticity, security, audits, and practical implementation issues. In addition, the book covers important topics such as automation, infrastructure as code, DevOps, orchestration, and edge computing. Cloud computing fundamentally changes the way organizations think about and implement IT infrastructure. Any manager without a firm grasp of basic cloud concepts is at a huge disadvantage in the modern world. Written for all levels of managers working in IT and other areas, the book explores cost savings and enhanced capabilities, as well as identifies different models for implementing cloud technologies and tackling cloud business concerns. This important book: Demonstrates a variety of cloud computing technologies and ways the cloud can enhance business operations Addresses data security concerns in cloud computing relevant to corporate data owners Shows ways the cloud can save money for a business Offers a companion website hosting PowerPoint slides Written for managers in the fields of business, IT and cloud computing, Cloud Technologies describes cloud computing concepts and related strategies and operations in accessible language.

"This book presents, discusses, shares ideas, results and experiences on the recent important advances and future challenges on enabling technologies for achieving higher performance"--Provided by publisher.

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Support System and Expert System, GIS, GPS, RS and Precision Farming, CT applications in Rural Area, Agricultural System Simulation, Evolutionary Computing, etc.

This book constitutes the refereed post-conference proceedings of the 8th IFIP WG 5.14 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2014, held in Beijing, China, in September 2014. The 81 revised papers included in this volume were carefully selected from 216 submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including intelligent sensing, monitoring and automatic control technology; key technology and models of the Internet of things; intelligent technology for agricultural equipment; computer vision; computer graphics and virtual reality; computer simulation, optimization and modeling; cloud computing and agricultural applications; agricultural big data; decision support systems and expert systems; 3s technology and precision agriculture; quality and safety of agricultural products: detection and tracing technology; and agricultural electronic commerce technology.

The two volumes IFIP AICT 478 and 479 constitute the refereed post-conference proceedings of the 9th IFIP WG 5.14 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2015, held in Beijing, China, in September 2015. The 122 revised papers included in this volume were carefully selected from 237 submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including intelligent sensing, monitoring and automatic control technology; key technology and models of the Internet of things; intelligent technology for agricultural equipment; computer vision; computer graphics and virtual reality; computer simulation, optimization and modeling; cloud computing and agricultural applications; agricultural big data; decision support systems and expert systems; 3s technology and precision agriculture; quality and safety of agricultural products; detection and tracing technology; and agricultural electronic commerce technology.

The three-volume set IFIP AICT 368-370 constitutes the refereed post-conference proceedings of the 5th IFIP TC 5, SIG 5.1 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2011, held in Beijing, China, in October 2011. The 189 revised papers presented were carefully selected from numerous submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including simulation models and decision-support systems for agricultural production, agricultural product quality testing, traceability and e-commerce technology, the application of information and communication technology in agriculture, and universal information service technology and service systems development in rural areas. The 62 papers included in the first volume focus on decision support systems, intelligent systems, and artificial intelligence applications.

Technology trends may come and go, but cloud computing technologies have been gaining consideration in the commercial world due to its ability to provide on-demand access to resources, control the software environment, and supplement existing systems. *Pervasive Cloud Computing Technologies: Future Outlooks and Interdisciplinary Perspectives* explores the latest innovations with cloud computing and the impact of these new models and technologies. This book will present case studies and research on the future of cloud computing technologies and its ability to increase connectivity of various entities of the world. It is an essential resource for technology practitioners, engineers, managers, and academics aiming to gain the knowledge of these novel and pervasive technologies.

"The main objective of this book is to assist managers in becoming aware and more knowledgeable on the economics of downtime and continuous computing technologies that help in achieving business continuity and managing efficiently information resources"--Provided by publisher.

"Calvo and Peters explain that technologists' growing interest in social good is part of a larger public concern about how our digital experience affects our emotions and our quality of life--which itself reflects an emerging focus on humanistic values in many different disciplines. Synthesizing theory, knowledge, and empirical methodologies from a variety of fields, they offer a rigorous and coherent foundational framework for positive computing. Sidebars by experts from psychology, neuroscience, human-computer interaction, and other disciplines supply essential context. Calvo and Peters examine specific well-being factors, including positive emotions, self-awareness, mindfulness, empathy, and compassion, and explore how technology can support these factors. Finally, they offer suggestions for future research and funding." --Publisher's description.

Making use of digital technology for social care is a major responsibility of the computing domain. Social care services require attention for ease in social systems, e-farming, and automation, etc. Thus, the book focuses on suggesting software solutions for supporting social issues, such as health care, learning about and monitoring for disabilities, and providing technical solutions for better living. Technology is enabling people to have access to advances so that they can have better health. To undergo the digital transformation, the current processes need to be completely re-engineered to make use of technologies like the Internet of Things (IoT), big data analytics, artificial intelligence, and others. Furthermore, it is also important to consider digital initiatives in tandem with their cloud strategy instead of treating them in isolation. At present, the world is going through another, possibly even stronger revolution: the use of recent computing models to perform complex cognitive tasks to solve social problems in ways that were previously either highly complicated or extremely resource intensive. This book not only focuses the computing technologies, basic theories, challenges, and implementation but also covers case studies. It focuses on core theories, architectures, and technologies necessary to develop and understand the computing models and their applications. The book also has a high potential to be used as a recommended textbook for research scholars and post-graduate programs. The book deals with a problem-solving approach using recent tools and technology for problems in health care, social care, etc. Interdisciplinary studies are emerging as both necessary and practical in universities. This book helps to improve computational thinking to "understand and change the world". It will be a link between computing and a variety of other fields. Case studies on social aspects of modern societies and smart cities add to the contents of the book to enhance book adoption potential. This book will be useful to undergraduates, postgraduates, researchers, and industry professionals. Every chapter covers one possible solution in detail, along with results.

Using the inspiration of Leonardo da Vinci to build a new, humanistic computing that focuses on users' needs and goals.

This book constitutes Part IV of the refereed four-volume post-conference proceedings of the 4th IFIP TC 12 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2010, held in Nanchang, China, in October 2010. The 352 revised papers presented were carefully selected from numerous submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including simulation models and decision-support systems for agricultural production, agricultural product quality testing, traceability and e-commerce technology, the application of information and communication technology in agriculture, and universal information service technology and service systems development in rural areas.

This book constitutes the refereed post-conference proceedings of the 10th IFIP WG 5.14 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2016, held in Dongying, China, in October 2016. The 55 revised papers presented were carefully reviewed and selected from 128 submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including intelligent sensing, cloud computing, key technologies of the Internet

of Things, precision agriculture, animal husbandry information technology, including Internet + modern animal husbandry, livestock big data platform and cloud computing applications, intelligent breeding equipment, precision production models, water product networking and big data , including fishery IoT, intelligent aquaculture facilities, and big data applications.

The two-volume set IFIP AICT 419 and 420 constitutes the refereed post-conference proceedings of the 7th IFIP TC 5, WG 5.14 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2013, held in Beijing, China, in September 2013. The 115 revised papers presented were carefully selected from numerous submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including Internet of things and cloud computing; simulation models and decision-support systems for agricultural production; smart sensor, monitoring, and control technology; traceability and e-commerce technology; computer vision, computer graphics, and virtual reality; the application of information and communication technology in agriculture; and universal information service technology and service systems development in rural areas.

The Cloud is an advanced and fast-growing technology in the current era. The computing paradigm has changed drastically. It provided a new insight into the computing world with new characteristics including on-demand, virtualization, scalability and many more. Utility computing, virtualization and service-oriented architecture (SoA) are the key characteristics of Cloud computing. The Cloud provides distinct IT services over the web on a pay-as-you-go and on-demand basis. Cloud Computing Technologies for Smart Agriculture and Healthcare covers Cloud management and its framework. It also focuses how the Cloud computing framework can be integrated with applications based on agriculture and healthcare. Features: Contains a systematic overview of the state-of-the-art, basic theories, challenges, implementation, and case studies on Cloud technology Discusses of recent research results and future advancement in virtualization technology Focuses on core theories, architectures, and technologies necessary to develop and understand the computing models and its applications Includes a wide range of examples that uses Cloud technology for increasing farm profitability and sustainable production Presents the farming industry with Cloud technology that allows it to aggregate, analyze, and share data across farms and the world Includes Cloud-based electronic health records with privacy and security features Offers suitable IT solutions to the global issues in the domain of agriculture and health care for society This reference book is aimed at undergraduate and post-graduate programs. It will also help research scholars in their research work. This book also benefits like scientists, business innovators, entrepreneurs, professionals, and practitioners.

This book constitutes Part III of the refereed four-volume post-conference proceedings of the 4th IFIP TC 12 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2010, held in Nanchang, China, in October 2010. The 352 revised papers presented were carefully selected from numerous submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including simulation models and decision-support systems for agricultural production, agricultural product quality testing, traceability and e-commerce technology, the application of information and communication technology in agriculture, and universal information service technology and service systems development in rural areas.

The papers in this volume comprise the refereed proceedings of the Second IFIP International Conference on Computer and Computing Technologies in Agriculture (CCTA2008), in Beijing, China, 2008. The conference on the Second IFIP International Conference on Computer and Computing Technologies in Agriculture (CCTA 2008) is cooperatively sponsored and organized by the China Agricultural University (CAU), the National Engineering Research Center for Information Technology in Agriculture (NERCITA), the Chinese Society of Agricultural Engineering (CSAE) , International Federation for Information Processing (IFIP), Beijing Society for Information Technology in Agriculture, China and Beijing Research Center for Agro-products Test and Farmland Inspection, China. The related departments of China's central government bodies like: Ministry of Science and Technology, Ministry of Industry and Information Technology, Ministry of Education and the Beijing Municipal Natural Science Foundation, Beijing Academy of Agricultural and Forestry Sciences, etc. have greatly contributed and supported to this event. The conference is as good platform to bring together scientists and researchers, agronomists and information engineers, extension servers and entrepreneurs from a range of disciplines concerned with impact of Information technology for sustainable agriculture and rural development. The representatives of all the supporting organizations, a group of invited speakers, experts and researchers from more than 15 countries, such as: the Netherlands, Spain, Portugal, Mexico, Germany, Greece, Australia, Estonia, Japan, Korea, India, Iran, Nigeria, Brazil, China, etc.

The two volumes IFIP AICT 545 and 546 constitute the refereed post-conference proceedings of the 11th IFIP WG 5.14 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2017, held in Jilin, China, in August 2017. The 100 revised papers included in the two volumes were carefully reviewed and selected from 282 submissions. They cover a wide range of interesting theories and applications of information technology in agriculture. The papers focus on four topics: Internet of Things and big data in agriculture, precision agriculture and agricultural robots, agricultural information services, and animal and plant phenotyping for agriculture.

This book constitutes Part II of the refereed four-volume post-conference proceedings of the 4th IFIP TC 12 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2010, held in Nanchang, China, in October 2010. The 352 revised papers presented were carefully selected from numerous submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including simulation models and decision-support systems for agricultural production, agricultural product quality testing, traceability and e-commerce technology, the application of information and communication technology in agriculture, and universal information service technology and service systems development in rural areas.

Emerging Technologies in Computing: Theory, Practice, and Advances reviews the past, current, and future needs of technologies in the computer science field while it also discusses the emerging importance of appropriate practices, advances, and their impact. It outlines emerging technologies and their principles, challenges, and applications as well as issues involved in the digital age. With the rapid development of technologies, it becomes increasingly important for us to remain up to date on new and emerging technologies. It draws a clear illustration for all those who have a strong interest in emerging computing technologies and their impacts on society. Features: Includes high-quality research work by academicians and industrial experts in the field of computing Offers case studies related to Artificial Intelligence, Blockchain, Internet of Things, Multimedia Big Data, Blockchain, Augmented Reality, Data Science, Robotics, Cybersecurity, 3D Printing, Voice Assistants and Chatbots, and Future Communication Networks Serves as a valuable reference guide for anyone seeking knowledge about where future computing is heading

This book constitutes the thoroughly refereed post-conference proceedings of the Third IFIP TC 12 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2009, held in Beijing, China, in October 2009. The 80 revised papers were carefully selected from numerous submissions. The papers cover a wide range of interesting theories and applications of information technology in agriculture, including simulation models and decision-support systems for agricultural production, agricultural product quality testing, traceability and e-commerce technology, the application of information and communication technology in agriculture and universal information service technology, and service systems development in rural areas.

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