

Preface

The 8th International Conference on Computer and Computing Technologies in Agriculture (CCTA 2014) was held in Beijing, China, during September 16-19, 2014.

This conference was hosted by the China Agricultural University; Chinese Academy of Agricultural Mechanization Sciences; Chinese Academy of Agricultural Engineering; Beijing Academy of Agriculture and Forestry Science; and East China Jiaotong University. It was sponsored by the International Commission of Agricultural and Biosystems Engineering, Session VII; Chinese Society for Agricultural Machinery (CSAM); Chinese Society of Agricultural Engineering (CSAE); WG 5.14, International Federation for Information Processing; National Natural Science Foundation of China; Da Bei Nong Agricultural Education Fund; and the Wang Kuancheng Education Foundation.

In recent years, modern information technology and intelligent equipment techniques have spread into all the pre-/inter-/post-production processes in agriculture and are becoming an important means of transforming traditional agriculture and developing modern agriculture. This international academic exchange plays an important role in improving the innovation and development of intelligent agricultural information technology and in promoting the wide application of the Internet of Things and computing technology. CCTA aims to provide an academic platform for the integration of information on agricultural modernization, to share new research theories, methods, and achievements of sci-tech innovation and industrial technology progress, and to promote the understanding and cooperation among international communities and scientists. Eight International Conferences on Computer and Computing Technologies in Agriculture have been held since 2007.

The topics of CCTA 2014 cover the interesting theory and applications of all kinds of technology in agriculture, including intelligent sensing, monitoring, and automatic control technology models; the key technology and model of the Internet of Things; agricultural intelligent equipment technology; 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 system; technology and precision agriculture; the quality and safety of agricultural products; detection and tracing technology; and agricultural electronic commerce technology.

We selected the 81 best papers among the 216 papers submitted to CCTA 2014 for these proceedings. All papers underwent two reviews from the Special Interest Group on Advanced Information Processing in Agriculture (AIPA), IFIP. In these proceedings, creative thoughts and inspirations can be discovered, discussed, and disseminated. It is always exciting to have experts,

professionals, and scholars with creative contributions getting together to share inspiring ideas and accomplish great developments in the field.

I would like to express my sincere thanks to all authors who submitted research papers to the conference. Finally, I would also like to express my sincere thanks to all speakers, session chairs, and attendees, both national and international, for their active participation and support of this conference.

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VIII

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Selected Papers

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