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IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- Open conferences;
- Working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is less rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is in information may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly, National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.

Daoliang Li Chunjiang Zhao (Eds.)

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Revised Selected Papers



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Preface

I want to express my sincere thanks to all authors who submitted research papers to support the Third IFIP International Conference on Computer and Computing Technologies in Agriculture and the Third Symposium on Development of Rural Information (CCTA 2009) held in China, during October 14–17, 2009.

This conference was hosted by the CICTA (EU-China Centre for Information & Communication Technologies, China Agricultural University), China National Engineering Research Center for Information Technology in Agriculture, Asian Conference on Precision Agriculture, International Federation for Information Processing, Chinese Society of Agricultural Engineering, Beijing Society for Information Technology in Agriculture, and the Chinese Society for Agricultural Machinery. The platinum sponsor includes the Ministry of Science and Technology of China, Ministry of Agriculture of China, Ministry of Education of China, among others.

The CICTA (EU-China Centre for Information & Communication Technologies, China Agricultural University) focuses on research and development of advanced and practical technologies applied in agriculture and on promoting international communication and cooperation. It has successfully held three International Conferences on Computer and Computing Technologies in Agriculture, namely CCTA 2007, CCTA 2008 and CCTA 2009.

Sustainable agriculture is the focus of the whole world currently, and therefore the application of information technology in agriculture is becoming more and more important. ‘Informatized agriculture’ has been sought by many countries recently in order to scientifically manage agriculture to achieve low costs and high incomes.

The topics of CCTA 2009 covered 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. We selected 80 papers among all those submitted to CCTA 2009 for this volume. 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 hopefully accomplish great developments in these technologies of high demand.

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

January 2010

Daoliang Li
Zhao Chunjiang

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