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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 Yingyi Chen (Eds.)

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Preface

I would like to express my sincere thanks to all authors who submitted research papers to support the 5th International Conference on Computer and Computing Technologies in Agriculture (CCTA 2011) held in Beijing, China, during October 29–31, 2011.

This conference was hosted by China Agricultural University; the IFIP TC5 Special Interest Group (SIG) on Advanced Information Processing for Agriculture (AIPA); National Natural Science Foundation of China; and China-EU Centre for Information and Communication Technologies (CICTA).

Proper scale management is not only a necessary approach in agro-modernization and agro-industrialization but also required for the development of agricultural productivity. Therefore, the application of different technologies in agriculture has become especially important. ‘Informatized agriculture’ and the ‘Internet of Things’ are hot research topics in many countries aiming to scientifically manage agriculture to yield high incomes with low costs. CICTA covers the research and development of advanced and practical technologies applied to agriculture and promotes international communication and cooperation; it has successfully held five International Conferences on Computer and Computing Technologies in Agriculture since 2007.

The topics of CCTA 2011 covered a wide range of the interesting theory and applications of all kinds of technology in agriculture, including the Internet of Things; 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 system development in rural areas.

We selected the 189 best papers among all those submitted to CCTA 2011 for these proceedings. The papers are divided into three themes. It is always exciting to have experts, professionals and scholars with creative contributions getting together and sharing some inspiring ideas and hopefully accomplishing great developments in high-demand technologies.

Finally, I would like also to express my sincere thanks to all authors, speakers, Session Chairs and attendees, from home and abroad, for their active participation and support of this conference.

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