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Information Computing and Applications

International Conference, ICICA 2010
Tangshan, China, October 15-18, 2010
Proceedings, Part II

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Library of Congress Control Number: 2010936074

CR Subject Classification (1998): C.2, D.2, C.2.4, I.2.11, C.1.4, D.4.7

ISSN	1865-0929
ISBN-10	3-642-16338-6 Springer Berlin Heidelberg New York
ISBN-13	978-3-642-16338-8 Springer Berlin Heidelberg New York

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Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper 06/3180

Preface

This volume contains the proceedings of the International Conference on Information Computing and Applications (ICICA 2010), which was held in Tangshan, China, October 15-18, 2010.

As future-generation information technology, information computing and applications become specialized, information computing and applications including hardware, software, communications and networks are growing with ever-increasing scale and heterogeneity and becoming overly complex. The complexity is getting more critical along with the growing applications. To cope with the growing and computing complexity, information computing and applications focus on intelligent, selfmanageable, scalable computing systems and applications to the maximum extent possible without human intervention or guidance.

With the rapid development of information science and technology, information computing has become the third approach of science research. Information computing and applications is the field of study concerned with constructing intelligent computing, mathematical models, numerical solution techniques and using computers to analyze and solve natural scientific, social scientific and engineering problems. In practical use, it is typically the application of computer simulation, intelligent computing, internet computing, pervasive computing, scalable computing, trusted computing, autonomy-oriented computing, evolutionary computing, mobile computing, computational statistics, engineering computing, multimedia networking and computing, applications and other forms of computation problems in various scientific disciplines and engineering. Information computing and applications is an important underpinning for techniques used in information and computational science and there are many unresolved problems that address worth studying.

The ICICA 2010 conference provided a forum for engineers and scientists in academia, industry, and government to address the most innovative research and development including technical challenges and social, legal, political, and economic issues, and to present and discuss their ideas, results, work in progress and experience on all aspects of information computing and applications.

There was a very large number of paper submissions (782), representing 21 countries and regions, not only from Asia and the Pacific, but also from Europe, and North and South America. All submissions were reviewed by at least three Program or Technical Committee members or external reviewers. It was extremely difficult to select the presentations for the conference because there were so many excellent and interesting submissions. In order to allocate as many papers as possible and keep the high quality of the conference, we finally decided to accept 214 papers for presentations, reflecting a 27.4% acceptance rate. And 69 papers were included in this volume. We believe that all of these papers and topics not only provided novel ideas, new results, work in progress and

state-of-the-art techniques in this field, but also will stimulate the future research activities in the area of information computing and applications.

The exciting program for this conference was the result of the hard and excellent work of many others, such as Program and Technical Committee members, external reviewers and Publication Chairs under a very tight schedule. We are also grateful to the members of the Local Organizing Committee for supporting us in handling so many organizational tasks, and to the keynote speakers for accepting to come to the conference with enthusiasm. Last but not least, we hope participants enjoyed the conference program, and the beautiful attractions of Tangshan, China.

September 2010

Rongbo Zhu
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Organization

ICICA 2010 was organized by Hebei Polytechnic University, Hebei Scene Statistical Society, and sponsored by the National Science Foundation of China, Hunan Institute of Engineering. It was held in cooperation with *Lecture Notes in Computer Science* (LNCS) and *Communications in Computer and Information Science* (CCIS) of Springer.

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