

Preface

It is our pleasure to present this special issue of *Cybernetics and Information Technologies* journal. In this issue, we have selected 15 papers which have gone through several rounds of reviews and revisions and represent a cross-section of the researches in information technology areas that cover both technical and managerial issues. The preliminary versions of these papers were presented at the *Fourth International Conference on Logistics, Informatics and Service Science (LISS'2014)*, which was jointly hosted by Beijing Jiaotong University, China and the University of California, USA in July 23 to 26, 2014 at Berkeley, USA.

Ever since the first meeting in Beijing (July 2011), LISS conferences have been a significant scientific event for the researchers and practitioners in the areas of Information Technologies, logistics and service science. Increasingly more participants from outside China attended the Conference, thus expanding its impact on the scientific world. Since 2012 the organizers of LISS have decided to publish selected best full papers presented at the Conference as special issues of respected scientific journals. The publication of extended full papers of presentations, given at the Conference provides advantages for both authors and reviewers. On one hand, the authors have the opportunity to considerably improve the quality of their work through previous deep discussions with peers during the Conference. On the other hand, we could use the precious help of our expert colleagues, who followed the presentations, in assessing the quality of the selected papers, hence achieving an even worthier evaluation of these contributions.

After receiving the camera-ready papers for **LISS'2014**, we have started to select candidates for submissions to a number of respected scientific journals. To provide an equal opportunity to all authors of invited papers from **LISS'2014**, we have announced in the conference circulars the inclusion of a Special Issue of journal *Cybernetics and Information Technologies*. From here on, authors of 34 submissions were invited to revise and extend their Conference contributions to a full paper volume according to the publishing standards, thus eventually forming a Special Issue of *Cybernetics and Information Technologies*. Based on a regular reviewing process, fifteen papers were finally accepted, representing an acceptance rate less than 45%.

The topics covered by the papers published in this Special Issue include:

- Applications of neural networks in the design of an adaptive controller (Liu), and a sparse coding model (Jiang et al.);
- Risk problems in systems of large scale engineering (Qiao et al.);
- Algorithms in class confidence classification (Jiang et al.), multi-targets tracking (Zhong et al.), oil immersed transformer temperature measurement technology (Jia et al.), fuzzy clustering recommendation (Zhang et al.), and knowledge acquisition (Liu et al.) and knowledge discovery (Wang et al.).
- IoT problems about environmental factors collection (Zhang et al.), underwater acoustic sensor networks (Cheng et al.), wireless sensor network (Xu et al.) and cotton storage platform (Zhao et al.).
- Systems analysis and design (Zheng et al.).
- Dynamical topology analysis of VANET (Zhang et al.).

The fifteen papers examine information technology in different contexts; various approaches in analytical methods, design science methods and the like have been applied in order to reach the findings presented here. Moreover, they demonstrate the practical relevance of the academic research in IT area.

To sum up, we would like to thank all those who kindly contributed to this Special Issue: the authors who submitted their papers, the reviewers for their kind help and cooperation, and the Editor-in-Chief, Prof. Danail Dochev, for his gracious invitation and continued support. We are also indebted for the assistance provided in the preparation and publication of this issue to Ms. Ruize Gao, and to the publishing and production team of *Cybernetics and Information Technologies*. We hope that you will enjoy reading these papers as much as we enjoyed reviewing, compiling and editing this Special Issue.

Shifeng Liu, Mincong Tang
Guest Editors