

# **Advances in Intelligent Systems and Computing**

Volume 455

## **Series editor**

Janusz Kacprzyk, Polish Academy of Sciences, Warsaw, Poland  
e-mail: [kacprzyk@ibspan.waw.pl](mailto:kacprzyk@ibspan.waw.pl)

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Valentina Emilia Balas · Lakhmi C. Jain  
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# Information Technology and Intelligent Transportation Systems

Volume 2, Proceedings of the 2015  
International Conference on Information  
Technology and Intelligent Transportation  
Systems ITITS 2015, held December 12–13,  
2015, Xi'an China

*Editors*

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Romania

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School of Information Engineering  
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Xi'an  
China

Lakhmi C. Jain  
Bournemouth University  
Poole  
UK

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# Preface

These volumes constitute the Proceedings of the 2015 International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2015) held in Xi'an, China during December 12–13, 2015. The Conference ITITS 2015 was sponsored by Shaanxi Computer Society and co-sponsored by Chang'an University, Xi'an University of Technology, Northwestern Poly-technical University, CAS, Shaanxi Sirui Industries Co., Ltd.

The book covers a broad spectrum of intelligent techniques, theoretical and practical applications employing knowledge and intelligence to find solutions for intelligent transportation systems and other applications.

The conference papers included in these proceedings, published post conference, were grouped into the following parts:

Volume I—Part II: Proceedings Papers: Theory Research in Intelligent Transportation Systems

Volume I—Part III: Proceedings Papers: Application and Technologies in Intelligent Transportation

Volume II—Part I: Proceedings Papers: Management Issues on Intelligent Transportation

Volume II—Part II: Proceedings Papers: Information Technology, Electronic and Control System

In ITITS 2015, we had 12 eminent keynote speakers: Prof. Asad J. Khattak (USA), Prof. Robert L. Bertini (USA), Prof. Heng Wei (USA), Prof. Ping Yi (USA), Prof. Haizhong Wang (USA), Prof. Jonathan Corey (USA), Prof. Zhixia (Richard) Li (USA), Prof. Guohui Zhang (USA), Prof. Luke Liu (USA), Prof. Yu Zhang (USA), Prof. Valentina E. Balas (Romania), and Prof. Lakhmi C. Jain (UK). Their summaries talks are included in this book.

Intelligent transport systems vary in technologies applied, from basic management systems to more application systems, and information technology also plays tightly with intelligent transportation systems including wireless communication, computational technologies, floating car data/floating cellular data, sensing

technologies, and video vehicle detection; technologies of intelligent transportation systems also include topics from theoretic and application such as emergency vehicle notification systems, automatic road enforcement, collision avoidance systems, and some cooperative systems. The conference also fostered cooperation among organizations and researchers involved in the merging fields, invite worldwide well-known professors to further explore these topics, and discuss in-depth technical presentations with the presenters, 12 invited speakers, and over 200 participants. The conference absorbed overwhelm 330 submissions from 5 countries and regions, and each paper was under double peer reviewed by at least 3 reviewers, and more than 120 papers were accepted finally.

We would like to thank the authors of the submitted papers for keeping the quality of the ITITS 2015 conference at high levels. The editors of this book would like to acknowledge all the authors for their contributions and also the reviewers. We have received an invaluable help from the members of the International Program Committee and the chairs responsible for different aspects of the workshop.

Special thanks go to Janusz Kacprzyk (editor in chief, Springer, *Advances in Intelligent Systems and Computing Series*) for the opportunity to organize this guest-edited volumes.

We are grateful to Springer, especially to Dr. Thomas Ditzinger (senior editor, *Applied Sciences & Engineering Springer-Verlag*) for the excellent collaboration, patience, and help during the evolvement of this volume.

We hope that the volumes will provide useful information to professors, researchers, and graduated students in the area of intelligent transportation.

Arad, Romania  
Poole, UK  
Xi'an, China

Valentina Emilia Balas  
Lakhmi C. Jain  
Xiangmo Zhao

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