

# Preface

Welcome to Seoul and to the 15th International Conference on Hybrid Intelligent Systems (HIS 2015), held at Chung-Ang University, Korea, during November 16–18, 2015.

Hybridization of intelligent systems is a promising research field of modern artificial/computational intelligence concerned with the development of the next generation of intelligent systems. A fundamental stimulus to the investigations of Hybrid Intelligent Systems (HISs) is the awareness in the academic communities that combined approaches will be necessary if the remaining tough problems in computational intelligence are to be solved. Recently, Hybrid Intelligent Systems are getting popular due to their capabilities in handling several real-world complexities involving imprecision, uncertainty, and vagueness.

HIS 2015 builds on the success of HIS 2014, which was held in Kuwait during December 14–16, 2014. HIS 2015 is the Fifteenth International conference that brings together researchers, developers, practitioners, and users of soft computing, computational intelligence, agents, logic programming, and several other intelligent computing techniques.

HIS 2015 focused on the following themes:

- Hybrid Intelligent Systems: Architectures and Applications
- Soft Computing for Image and Signal Processing
- Intelligent Internet Modeling, Communication, and Networking
- Intelligent Data mining
- Computational Biology and Bioinformatics
- Intelligent Business Information Systems
- Soft Computing for Control and Automation
- Multi-agent Systems and Applications

HIS 2015 is jointly organized by Machine Intelligence Research Labs (MIR Labs), USA, and Chung-Ang University, Korea. HIS 2015 is technically supported by IEEE Systems Man and Cybernetics Society, Technical Committee on Soft Computing.

Many people have collaborated and worked hard to produce a successful HIS 2015 conference. First and foremost, we would like to thank all the authors for submitting their papers to the conference, for their presentations and discussions during the conference. Our thanks to Program Committee members and reviewers, who carried out the most difficult work by carefully evaluating the submitted papers. We have two plenary speakers:

- Vaclav Snasel, VSB—Technical University of Ostrava, Czech Republic
- Gerardo Rubino, INRIA, France

Thanks to all the speakers for their valuable time. The themes of the contributions and scientific sessions range from theories to applications, reflecting a wide spectrum of coverage of the hybrid intelligent systems and computational intelligence areas. HIS 2015 received 90 submissions from over 25 countries, and each paper was reviewed by 5 or more reviewers in a standard peer-review process. Based on the recommendation by five independent referees, finally 26 papers were accepted for publication in the proceedings.

We would like to thank the Springer Publication team for the wonderful support for the publication of this volume.

We look forward to seeing you in Seoul, during HIS 2015.

Ajith Abraham  
Sang-Yong Han  
Salah A. Al-Sharhan  
Hong-bo Liu



<http://www.springer.com/978-3-319-27220-7>

Hybrid Intelligent Systems

15th International Conference HIS 2015 on Hybrid  
Intelligent Systems, Seoul, South Korea, November  
16-18, 2015

Abraham, A.; Han, S.Y.; Al-Sharhan, S.A.; Liu, H. (Eds.)  
2016, XIII, 316 p. 110 illus., 39 illus. in color., Softcover  
ISBN: 978-3-319-27220-7