

Preface

The present volume contains the proceedings of the 7th International Symposium on Intelligence Computation and Applications (ISICA 2015) held in Guangzhou, China, November 21–22, 2015. ISICA 2015 successfully attracted over 189 submissions. Through rigorous reviews, 77 high-quality papers were selected for this volume of *Communications in Computer and Information Science* (CCIS 575). ISICA conferences are one of the first series of international conferences on computational intelligence that combine elements of learning, adaptation, evolution, and fuzzy logic to create programs as alternative solutions to artificial intelligence. The past ISICA proceedings including three volumes of CCIS and four volumes of LNCS have been accepted in both the Index to Scientific and Technical Proceedings (ISTP) and Engineering Information (EI).

Following the success of the past six ISICA events, ISICA 2015 persisted in exploring new problems emerging in the fields of computational intelligence. In recent years, a number of intelligent driving systems for driverless cars have been developed. For example, at least ten of Google's self-driving cars, including six Toyota Prius, an Audi TT, and three Lexus RX450h, have undergone road safety testing. Such impressive progress makes people think that current techniques have solved all issues in the design of an intelligent driving system in the sense of overall human performance. However, it is simply not the case. There are still many unsolved problems. For example, Google's cars are not able to spot a police officer who is waving for traffic to stop on the side of road. The car's sensors cannot tell whether a road obstacle is a rock or a crumpled piece of paper. It is expected that these unsolved problems in such intelligent systems will become increasingly difficult. While it is difficult to create intelligence directly, an intelligent system should inherit the simple mechanism of evolution in which the simple models could produce the evolution of complex morphologies.

ISICA 2015 featured the most up-to-date research in the analysis and theory of evolutionary computation, neural network architectures and learning, neuro-dynamics and neuro-engineering, fuzzy logic and control, collective intelligence and hybrid systems, deep learning, knowledge discovery, learning, and reasoning. It provided a venue for fostering technical exchanges, renewing everlasting friendships, and establishing new connections.

On behalf of the Organizing Committee, we would like to thank warmly the sponsors, South China Agricultural University, Guangzhou University, Wuhan University, and China University of Geosciences, who helped in one way or another to achieve our goals for the conference. We wish to express our appreciation to Springer for publishing the proceedings of ISICA 2015. We also wish to acknowledge the dedication and commitment of both the staff at the Springer Beijing office and the CCIS editorial staff. We would like to thank the authors for submitting their work, as well as the Program Committee members and reviewers for their enthusiasm, time, and

expertise. The invaluable help of active members of the Organizing Committee, including Wei Li, Lei Yang, Lixia Zhang, Yan Chen, Lu Xiong, Lei Zuo, Liang Zhong, Weiguang Chen, and Luyan Guo, in setting up and maintaining the online submission systems, assigning the papers to the reviewers, and preparing the camera-ready version of the proceedings is highly appreciated. We would like to thank them for helping to make ISICA 2015 a success.

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