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Computational Intelligence and Intelligent Systems

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Revised Selected Papers, Part I

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Preface

Volumes CCIS 873 and CCIS 874 comprise proceedings of the 9th International Symposium on Intelligence Computation and Applications (ISICA 2017) held in Guangzhou, China, during November 18–19, 2017. ISICA 2017 successfully attracted over 180 submissions. After rigorous reviews and plagiarism checking, 51 high-quality papers are included in CCIS 873, while another 50 papers are collected in CCIS 874. ISICA conferences are one of the first series of international conferences on computational intelligence that combines elements of learning, adaptation, evolution, and fuzzy logic to create programs as alternative solutions to artificial intelligence.

ISICA 2017 featured the most up-to-date research in 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. ISICA 2017 provided a venue to foster technical exchanges, renew everlasting friendships, and establish new connections. Prof. Yuanxiang Li, one of the pioneers in parallel and evolution computing at Wuhan University, wrote a beautiful poem in Chinese for the ISICA 2017 event. It is our pleasure to translate his poem with the title of "Computational Intelligence Debate on the Pearl River":

Wear a smile on a bright face;
Under the night light on the Pearl River;
You are like star and moon shining on the Tower Small Slim Waist;
Ride waves on the cruise ship;
Leave bridges behind in a boundless moment.

You are from far away;
A journey of thousand miles;
Meet in the Guangzhou City;
Brighten up the field of intelligent evolution;
Explore the endless road to intelligence.

Prof. Li's poem points out one of ISICA's missions of pursuing the truth that a complex system inherits the simple mechanism of evolution, while simple models may lead to the evolution of complex morphologies. Following the success of the past eight ISICA events, ISICA 2017 continued to explore the new problems emerging in the fields of computational intelligence.

On behalf of the Organizing Committee, we would like to thank warmly the sponsors, South China Agricultural University, 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 2017. 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 from the Organizing Committee, including Wei Li, Hui Wang, Lei Yang, Yan Chen, Lixia Zhang, Weiguang Chen, Zhuozhi Liang, Junlin Jin, Ying Feng, and Yunru Lu, in setting up and maintaining the online submission systems by EasyChair, assigning the papers to the reviewers, and preparing the camera-ready version of the proceedings is highly appreciated. We would like to thank them personally for helping to make ISICA 2017 a success.

March 2018

Kangshun Li
Yong Liu
Wei Li
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