

Preface

The Fourth International Conference on Quantitative Logic and Soft Computing (QLSC2016) was held on October 14–17, 2016, in Zhejiang Sci-Tech University, Hangzhou, China. QLSC2016 was the fourth in a series of conferences on quantitative logic and soft computing. It follows the successful QLSC2012 in Xi'an, China, QLSC2010 in Xiamen, China, and QLSC2009 in Shanghai, China. It was a major symposium for scientists, engineers, and practitioners to present their updated results, ideas, developments, and applications in all areas of quantitative logic and soft computing. It aimed to strengthen relations between industry research laboratories and universities, and to create a primary symposium for scientists in fields related to quantitative logic and soft computing worldwide as follows:

1. Quantitative logic and uncertainty logic;
2. Automata and quantification of software;
3. Fuzzy connectives and fuzzy reasoning;
4. Fuzzy logical algebras;
5. Artificial intelligence and soft computing; and
6. Fuzzy sets theory and applications.

Early in 2009, at the closing ceremony of the first QLSC conference in Shanghai, when congratulating the success of the conference our beloved Prof. Guo-Jun Wang said that QLSC is a very good and helpful opportunity for researchers in the related fields and hope that QLSC should go on continuously. It was very sad that Prof. Guo-Jun Wang left us forever in the winter of 2013; this conference was a memorial to him.

Over viewing the QLSC2016 proceedings, we have put a step forward but still have a long way to go. QLSC2016 received more than 70 submissions. Each paper has undergone a rigorous review process. Only high-quality papers are included. The proceeding contains 61 papers, including 5 invited papers or abstracts from keynote speakers. It consists of 7 parts: (1) keynote speakers; (2) quantitative logic and uncertainty logic; (3) automata and quantification of software; (4) fuzzy connectives and fuzzy reasoning; (5) fuzzy logical algebras; (6) artificial intelligence and soft computing; and (7) fuzzy sets theory and applications.

Putting together the conference proceedings was a team effort. Special thanks were due to the authors for providing all materials; to all keynote speakers for their kindness to present excellent speeches to the conference; to the program committee and external reviewers for peer-reviewing papers and providing valuable suggestions; to the organizing committee and all the local volunteers, especially for their excellent management work for QLSC2016; to Prof. Janusz Kacprzyk for his warmheartedness to suggest that the proceedings to be included in the “Advances in Intelligent Systems and Computing” series; to Dr. Thomas Ditzinger (Editor at Springer Publishing Co.) for his excellent work on the final version of this volume; to three graduate students Wen-Wen Zhang, Hong-Mei Wang, and Hao-Yue Liu for compiling work on the papers before submitted to the publisher; and to our main organizer—Zhejiang Sci-Tech University in China for the great support.

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