

# **PROGRESS IN INTELLIGENCE COMPUTATION AND APPLICATIONS**

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**Sanyou Zeng   Yong Liu   Qiuming Zhang   Lishan Kang**

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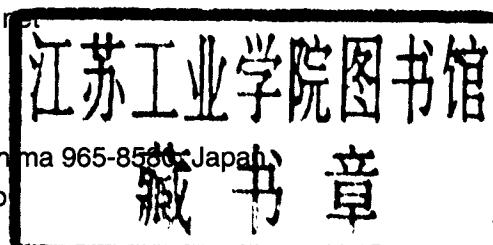
**Volume Editors**

**Sanyou Zeng**

China University of Geosciences  
School of Computer Science  
Wuhan, Hubei, 430074, P. R. China  
E-mail: sanyou-zeng@263.net

**Yong Liu**

The University of Aizu  
Tsuruga, Ikki-machi, Aizu-Wakamatsu, Fukushima 965-8580, Japan  
E-mail: yliu@u-aizu.ac.jp



**Qiuming Zhang**

China University of Geosciences  
School of Computer Science  
Wuhan, Hubei, 430074, P. R. China  
E-mail: qmzhang@cug.edu.cn

**Lishan Kang**

China University of Geosciences  
School of Computer Science  
Wuhan, Hubei, 430074, P. R. China  
E-mail: kang\_whu@yahoo.com

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# Preface

We are proud to introduce the proceedings of the Second International Symposium on Intelligence Computation and Applications (ISICA 2007) held in the China University of Geosciences (Wuhan), China, on 21-23 September 2007. ISICA 2007 successfully attracted nearly 1000 submissions. After rigorous reviews, 157 high-quality papers were included in the proceedings of ISICA 2007.

The first International Symposium on Intelligence Computation and Applications (ISICA 2005) was a great success with over 100 participants, including a number of invited speakers. ISICA 2005 was held in Wuhan on April 4-6, 2005, organized by the China University of Geosciences, and sponsored by the China Association Aerospace and the China Nature Science Foundation. The proceedings of ISICA 2005 have a number of unique features including uniqueness, newness, successfulness, and broadness. The proceedings of ISICA 2005 have also been accepted into the Index to Scientific and Technical Proceedings.

Following the success of ISICA 2005, ISICA 2007 focuses on the research of computational intelligence in analyzing and processing massive or real-time data that are beyond the scope of traditional computations. ISICA 2007 features the most up-to-date research in multiobjective evolutionary optimization, evolutionary algorithms and operators, evolutionary optimization, evolutionary learning, neural networks, ant colony and artificial immune systems, particle swarm optimization, pattern recognition, data mining, intelligent systems, and evolutionary design.

Finally, we would like to thank the sponsors, who helped in one way or another to achieve our goals for the conference. These sponsors are China University of Geosciences and Chinese Society of Astronautics. We also like to thank all the authors for submitting their work, as well as the Program Committee members and reviewers for their enthusiasm, time and expertise. Our sincere thanks go to the publisher, CHINA UNIVERSITY OF GEOSCIENCES PRESS, for publishing the proceedings of ISICA 2007. We appreciate the invaluable help of Qiuming Zhang, Siqing Xue, Ziyi Chen, Yan Guo, Xuesong Yan, Xiang Li, Zhenhua Li, Guang Chen, Rui Wang, Hui Wang, Hui Shi, Tao Hu, Zhenhua Cai, Gang Liu *etc* for setting up and maintaining the online submission systems, for assigning the papers to the reviewers, for the preparation of the camera-ready version of the proceedings.

We are sure that ISICA 2007 provides a venue to foster technical exchanges, renew everlasting friendships, and establish new connections, and brings together researchers and practitioners in the areas of computational intelligence.

Lishan Kang  
Professor of China University of Geosciences  
Program Committee Chair of the ISICA 2007 Symposium  
September 2007, Wuhan, China

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## *Section 1*

### *Evolutionary Algorithms and Operators*