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Preface

This book and its companion volume, LNCS vols. 7331 and 7332, constitute the proceedings of the Third International Conference on Swarm Intelligence (ICSI 2012) held during June 17–20, 2012, in Shenzhen, China. ICSI 2012 was the third international gathering in the world for researchers working on all aspects of swarm intelligence, following the successful and fruitful Beijing event (ICSI 2010) and Chongqing event (ICSI 2011), which provided a high-level academic forum for the participants to disseminate their new research findings and discuss emerging areas of research. It also created a stimulating environment for the participants to interact and exchange information on future challenges and opportunities in the field of swarm intelligence research.

ICSI 2012 received 247 submissions and 10 invited papers from about 591 authors in 24 countries and regions (Algeria, Australia, Brazil, China, France, Hong Kong, India, Islamic Republic of Iran, Japan, Republic of Korea, Kuwait, Macau, Malaysia, Mexico, Russian Federation, Saudi Arabia, Singapore, South Africa, South Sudan, Chinese Taiwan, Tunisia, Turkey, UK, USA) across six continents (Asia, Europe, North America, South America, Africa, and Oceania). Each submission was reviewed by at least two reviewers, and on average 2.6 reviewers. Based on rigorous reviews by the Program Committee members and reviewers, 145 high-quality papers were selected for publication in this proceedings volume with an acceptance rate of 56.4%. The papers are organized in 27 cohesive sections covering all major topics of swarm intelligence research and development.

In addition to the contributed papers, the ICSI 2012 technical program included three plenary speeches by Xin Yao (The University of Birmingham, UK, IEEE Fellow, Vice President of IEEE Computational Intelligence), Carlos Artemio Coello Coello (NCINVESTAV-IPNI, Mexico, IEEE Fellow), and Guang-Bin Huang (Nanyang Technological University, Singapore, inventor of Extreme Learning Machine). Besides the regular oral sessions, ICSI 2012 had one special session on “Data Fusion and Computational Intelligence” and several poster sessions focusing on diverse areas.

As organizers of ICSI 2012, we would like to express sincere thanks to Shenzhen University, Peking University, and Xi’an Jiaotong-Liverpool University for their sponsorship, as well as to the IEEE Computational Intelligence Society, World Federation on Soft Computing, and International Neural Network Society for their technical co-sponsorship. We appreciate the Natural Science Foundation of China for its financial and logistic support.

We would also like to thank the members of the Advisory Committee for their guidance, the members of the International Program Committee and additional reviewers for reviewing the papers, and the members of the Publications Committee for checking the accepted papers in a short period of time. Particularly,

we are grateful to the proceedings publisher Springer for publishing the proceedings in the prestigious series of *Lecture Notes in Computer Science*. Moreover, we wish to express our heartfelt appreciation to the plenary speakers, session chairs, and student helpers. In addition, there are still many more colleagues, associates, friends, and supporters who helped us in immeasurable ways; we express our sincere gratitude to them all. Last but not the least, we would like to thank all the speakers, authors, and participants for their great contributions that made ICSI 2012 successful and all the hard work worthwhile.

June 2012

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