Foreword

This volume consists of five papers selected from the 64 papers presented during the sixth international conference **Bio-Inspired Computing – Theory and Applications (BIC-TA)**, held from 27 to 29 of September 2011 in Penang, Malaysia.

This series of meetings was initiated in 2006 in Wuhan, China, and the next editions have taken place in Zhengzhou, China - 2007, Adelaide, Australia - 2008, Beijing, China - 2009, Liverpool, UK and Changsha, China - 2010. The 2012 edition will be organized by the ABV-Indian Institute of Information Technology and Management Gwalior, India, while the 2013 edition is planned to be held in Anhui, China.

The conference aims to bring together people interested in natural computing, in the general sense. The topics of the conference are as follows (but not limited to):

1. **Theories, Methodologies and Experimental Results**: Neural Networks, Evolutionary Computing and Genetic Algorithms, DNA and Molecular Computing, Biological Computing, Swarm Intelligence, Autonomy-Oriented Computing, Cellular and Molecular Automata, Complex Systems, Computational Neuroscience;

2. **Applications**: Computational Neuroscience, Artificial Life and Artificial Immune Systems, Signal Processing and Pattern Recognition, Data Fusion, Knowledge Discovery and Data Mining, Expert Systems, Computer Security, Computer Vision, DNA Nanotechnology, Web and Networks, Multi-Objective Optimization, Bioinformatics and Cheminformatics, Parallel Computing, Natural Language Processing.

The papers selected for this volume deal with three of the main topics of BIC-TA, *i.e.*, DNA computing, membrane computing (P systems), and evolutionary computing. Besides the refereeing for the conference, they have been read once again, in a post-conference version, by two referees, and are improved both according to the discussions held during the meeting and according to the new referee reports.

Another selection of BIC-TA 2011 papers will appear as a special issue of International Journal of Natural Computing Research

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