

# Preface

This volume contains invited and contributed papers from 2014 International Conference on Sensors, Instrument and Information Technology (ICSIIT 2014) held in Guangzhou, on 18–19 January 2014. This conference series deals with recent advances in sensors, instrument and information technology studies and bring together contributions from academics and industrial researchers with a diverse background and experiences from the computer and engineering communities.

The technical papers included in this volume on the following topics: Design and Research of Sensors, Technologies of Measurements, Equipment and Instruments for Measurements, Testing, Monitoring, Detecting: Theory and Applications, Signal and Data Processing, Computational Mathematics and Artificial Intelligence, Communications and Network Technologies, Database Systems, Computer Software Engineering, Computer Design and Researches in the Field of Engineering, Robotics, Control and Automation Systems, Electronic Devices and Embedded Systems, Applied Information Technologies in Engineering Management, etc.

We hope that our community will find these proceedings of interest and will use them as reference text in their future work.

*The Organizing Committee of ICSIIT 2014*

# Conference Organization

## Co-Chairmen

Prof. Prasad Yarlagadda, Queensland University of Technology, Australia

Prof. Seung-Bok Choi, Inha University, Korea

Prof. Yun-Hae Kim, Korea Maritime University, Korea

## International Scientific Committee

Prof. Zhaohui Zhang, Beijing Jiaotong University, China

Prof. Xiaobo Zhou, University of Colorado at Colorado Springs, USA

Prof. Yun-Hae Kim, Korea Maritime University, Korea

Prof. Carlos Caceres, The University of Queensland, Australia

Prof. Shahrum Abdullah, University Kebangsaan Malaysia

Dr. Xiangping Bu, Wayne State University, USA

Prof. Sagar Kamarthi, Northeastern University, USA

Prof. Phil Koshy, McMaster University, Hamilton, Ontario, Canada

Prof. Kambakar P Rajurka University of Nebraska-Lincoln, USA

Prof. Nabil Gindy, University of Nottingham, UK

Prof. Heinz-Gunter, Brokmeier, Technische Universitat Clausthal

Prof. Zhengyi Jiang, University of Wollongong, AU

Prof. Niels Bay, University of Denmark, Denmark

Prof. Viktor P. Astakhov, General Motor Business Unit of PSMi

Prof. Cesar de Sa, Jose, University of Porto, Portugal

Prof. Cheng Kai, Brunel University, UK

Prof. Yusuf Altintas, University of British Columbia, Canada

Prof. V.K. Jain, Indian Institute of Technology, Kanpur, UP, India

Prof. Walid Mahmoud Shewakh, Beni Suef university, Egypt

Prof. Wenjun Meng, Taiyuan University of Sci. and Tech., China

Prof. Haoran Geng, University of Jinan, China

Prof. Nabil Gindy, University of Nottingham, UK

Prof. Toshio Haga, Osaka Institute of Technology, Japan

Prof. Yong Guan, Iowa State University, USA

Prof. Jong Kook Lee, Chosun University, Korea

Prof. Yong-Lin Kuo, National Taiwan Univ. of Sci. and Tech., Taiwan

Prof. Mao-Hsiung Chiang, National Taiwan University, Taiwan

Prof. Yi-Sheng Huang, National Ilan University, Taiwan

Prof. Yao-Wen Chang, National Taiwan University, Taiwan

Prof. Wenbo Du, Beijing University of Technology, China

Prof. Hongzhen Guo, Northwestern Polytechnical University, China

Prof. Wenji Xu, Dalian University of Technology, China

Prof. Qiang Wang, Jinan University, China

Prof. Sihai Jiao, Research Institute, Baosteel, China

Prof. Xiaoping Zhou, Hubei University Of Technology, China

Prof. Jian Gao, Guangdong University of Technology, China

Prof. Jun Xiao, Wuhan University of Technology, China

Prof. Ligang Yao, Fuzhou University, China