

# Preface

All papers in this volume are selected from the 2014 International Forum on Materials Processing Technology (IFMPT 2014) and 2014 International Conference on Sensors, Instrument and Information Technology (ICSIIT 2014) based on their topics. The topics covered this volume include Design and Engineering Solutions in the Field of Mechanical Engineering, Engineering Solutions in Architecture and Construction, Sensors, Measurement Technologies, Processing of Signals and Data Processing, Applied Computational Algorithms and Procedures in Engineering Practice, Mechatronics, Control and Automation, Fault Diagnosis, Monitoring, Reliability and Safety of Technical and Technological Systems, Power Engineering, Biomedical Engineering, Information Technologies, Product Design, Engineering Management and Organization of Production, Innovative Technologies in Engineering Education, etc. The editors hope that those interested in the area of materials science, processing technology, manufacturing technology and automation Technology, enjoy the reading that reflect a wide range of topics.

We would like to thank all the participants for their active involvement and excellent contributions during the conference.

*The Organizing Committee*

2014 International Forum on  
Materials Processing Technology  
(IFMPT 2014)  
&  
2014 International Conference on  
Sensors, Instrument and Information Technology  
(ICSIIT 2014)

**Conference Organization**

**Co-Chairmen**

Prof. Seung-Bok Choi, Inha University, Korea

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

Prof. Prasad Yarlagadda, Queensland University of Technology, Australia

**International Scientific Committee**

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. 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. 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. 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 Univeristy, 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. 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. 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