**Preface** 

Dear Distinguished Delegates and Guests,

The Organizing Committee warmly welcomes our distinguished delegates and guests to the 2013 International Conference on Mechanical Science and Engineering (ICMSE 2013) held on March 1-3, 2013, Hong Kong, China.

ICMSE 2013 is sponsored by International Association of Management Science and Engineering Technology (IAMSET). The ICMSE 2013 is organized to gather members of our international community scientists so that researchers from around the world can present their leading-edge work, expanding our community's knowledge and insight into the significant challenges currently being addressed in that research. The conference Program Committee is itself quite diverse and truly international, with membership from the Americas, Europe, Asia, Africa and Oceania.

This proceeding records the fully refereed papers presented at the conference. The main conference themes and tracks are Artificial Intelligence and Manufacturing Engineering. The main goal of these events is to provide international scientific forums for exchange of new ideas in a number of fields that interact in-depth through discussions with their peers around the word.

The conference has solicited and gathered technical research submissions related to all aspects of major conference themes and tracks. All the submitted papers in the proceedings have been peer reviewed by the reviewers drawn from the scientific committee, external reviewers and editorial broad depending on the subject matter of the paper. Reviewing and initial selection were undertaken electronically. After the rigorous peer-review process, the summited papers were selected on the basis of originality, significance, and clarity for the purpose of the conference. The selected papers and additional late-breaking contributors to be presented as lectures will make an existing technical program.

The high quality of the program-guaranteed by the presence of an unparalleled number of internationally recognized top experts-can be assessed when reading the contents of the program. The conference will therefore be a unique event, where attendees will be able to appreciate the latest results in their field of expertise, and to acquire additional knowledge in other fields. The program has been structured to favor interactions among attendees coming from many diverse horizons, scientifically, geographically, from academia and from industry. Included in this will to favor interactions are social events at prestigious sites.

We would like to thank the program chairs, organization staff and the members of the program committees for their work. Thanks also go to Applied Mechanics and Materials Journal, for its wonderful editor service to this proceedings.

We are grateful to all those who have contributed to the success of ICMSE 2013. We hope that all participants and other interested readers benefit scientifically from the proceedings and also find it stimulating in the process. Finally, we would like to wish you success in your technical presentations and social networking.

We hope you have a unique, rewarding and enjoyable week at ICMSE 2013 in Hong Kong, China.

With our warmest regards,

ICMSE 2013 Organizing Committees March, 1-3, 2013,

Hong Kong, China.

## **Paper Reviewers**

Prof. Dean Vucinic, Vrije Universiteit Brussel, Belgium

Prof Chen Li, Zhengzhou University, China

Prof. Jinfeng Wang, Zhengzhou University, China

Prof. Dr. Emanuele Habib, University of Rome "La Sapienza", Italy

Prof. Dr. Yohei Saika, Tokyo Institute of Technology, Japan

Prof. Dr. CAO Jianguo, University of Science and Technology Beijing, China

Prof. Hamid Yaghoubi, Director of Iran Maglev Technology, Iran

Dr. Mongkol Mongkolwonrojn, University of Wisconsin-Madison, Thailand

Dr. Eng. Ahmed Kadhim Hussein, University of Babylon, Babylon City, Hilla, Iraq

Dr. Bai-Da Zhang, National University of Defense Technology, Changsha, Hunan, China

Dr. Jiafeng Yao, kumamoto University, Japan.

Prof. Boyd Louis, Researcher in IAMSET, HongKong

Prof. LIEW Kim Meow, City University of HongKong, HongKong

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