

# **Advanced Materials, Structures and Mechanical Engineering**

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## **Part 2**

**Edited by**  
**H.M. Song, J.W. Hu and H.K. Son**



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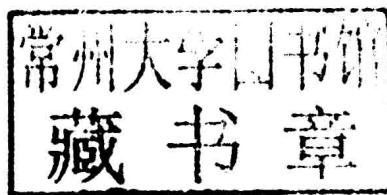
**H.-M. Song, J.W. Hu and H.K. Son**



# **Advanced Materials, Structures and Mechanical Engineering**

## **PART 2**

Selected, peer reviewed papers from the  
2014 International Conference on  
Advanced Materials, Structures and Mechanical Engineering  
(ICAMSME 2014),  
May 3-4, 2014, Incheon, South-Korea



*Edited by*

**H.M. Song, J.W. Hu and H.K. Son**



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## Preface

The 2014 International Conference on Advanced Materials, Structures and Mechanical Engineering (ICAMSME 2014) will take place in Incheon, at Incheon National University (INU), South-Korea, May 3-4, 2014. This conference is sponsored by Incheon Disaster Prevention Research Center (IDPRC) in INU. The ICAMSME is an annual international conference aimed at presenting current research being carried out in the fields of materials, structures and mechanical engineering. The idea of the conference is for the scientists, scholars, engineers and students from universities, research institutes and industries all around the world to present on-going research activities. This allows for the free exchange of ideas and challenges among the conference participants and encourages future collaboration between members of these groups. The conference will also foster cooperation among organizations and researchers involved in the merging fields and will provide in-depth technical presentations with abundant opportunities for individual discussions with the presenters.

The book is a collection of accepted papers. All these accepted papers were subjected to strict peer-reviewing by 2-3 expert referees including preliminary review process conducted by conference editors and committee members before their publication by Trans Tech Publication (TTP). This book is separated into four main chapters including Mechanical Engineering and Fabrication, Material Science and Technology, Structural Engineering System and Analysis, and Other related topics. The committee of ICAMSME 2014 should show our sincere thank to all authors for their high-quality research papers and careful presentations. All reviewers should be also thanked for their careful comments and advices. Thanks are finally given to TTP as well for producing this volume.

**The Organizing Committee of ICAMSME 2014**

**Committee Chair Prof. J.W. Hu**



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