

# **Vehicle & Mechanical Engineering and Information Technology**

Edited by  
X. D. Yu



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Selected, peer reviewed papers from the  
2012 International Conference on  
Vehicle & Mechanical Engineering and Information Technology  
(VMEIT 2012),  
September 7-9, 2012, Shenyang, Liaoning, China

*Edited by*

**X. D. Yu**



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Trans Tech Publications Inc.  
PO Box 699, May Street  
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USA

Phone: +1 (603) 632-7377  
Fax: +1 (603) 632-5611  
e-mail: [sales-usa@ttp.net](mailto:sales-usa@ttp.net)

# Preface

It is our pleasure to welcome you to the 2012 International Conference on Vehicle & Mechanical Engineering and Information Technology (VMEIT 2012) in Shenyang, China. VMEIT 2012 is the first conference dedicated to issues related to mechanical engineering and materials research. A major goal and feature of it is to bring academic scientists, engineers, industry researchers together to exchange and share their experiences and research results about most aspects of mechanical engineering and materials research, and discuss the practical challenges encountered and the solutions adopted.

We hope you will have a technically rewarding experience, and use this occasion to meet old friends and make many new ones. Don't miss the opportunity to explore in Shenyang, China. And don't forget to take a sample of the many and diverse attractions in the rest of the China.

VMEIT 2012 promises to be both stimulating and informative with a wonderful array of keynote and invited speakers from all over the world. Delegates will have a wide range of sessions to choose from and will have a difficult decision in deciding which sessions to attend.

The program consists of invited sessions, and technical workshops and discussions with eminent speakers covering a wide range of topics in mechanical engineering and materials research. This rich program provides all attendees with the opportunities to meet and interact with one another. We hope your experience with VMEIT 2012 is a fruitful and long lasting one. With your support and participation, the conference will continue its success for a long time.

We would like to thank the organization staff, the members of the program committees and reviewers. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra helps in the review process, and the authors for contributing their research result to the conference. Special thanks go to TTP Publisher.

We wish all attendees of t VMEIT 2012 an enjoyable scientific gathering in Shenyang, China. We look forward to seeing all of you next year at the conference.

Program Committee Chair  
Prof. C. F. Liu