

Advances in Manufacturing Science and Engineering V

Part 1

Edited by
Jingtao Han, Zhengyi Jiang and Xianghua Liu



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Advances in Manufacturing Science and Engineering V

PART 1

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Edited by

Jingtao Han, Zhengyi Jiang and Xianghua Liu



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Preface

The International Conference on Manufacturing Science and Engineering is the premier forum for the presentation of new advances and research results in the fields of Manufacturing Science and Engineering. The conference brings together leading researchers, engineers and scientists in the domain of interest from around the world. The 1st ICMSE was held in Zhuhai, 2009, the 2nd in Guilin, 2011, the 3rd in Xiamen, 2012, and the 4th in Dalian, 2013. Following the style of the previous four successful congresses, the 5th International Conference on Manufacturing Science and Engineering was held in Shanghai, China, 19-20 April 2014. The program was designed to advance manufacturing technologies to the next generation through discussion of the most recent advances and future perspectives, and to engage the worldwide community in a collective effort to solve problems in manufacturing. Delegates from more than 30 countries or districts attended those conferences.

The present volumes provide up-to-date, comprehensive and worldwide state-of-the art knowledge of the manufacturing science and engineering, including: Computer Aided Design and Engineering, Mechanical Design, Innovative Design Methodology and Product Design, Optimization in Design Processes, Green Design and Green Manufacturing Technology, Kinematic and Dynamic Analysis of Machines and Mechanisms, Analysis and Control of Vibration and Noise, Design and Research of Mechanical Transmission, Fluid Mechanics and Fluid Engineering, Reliability and Fault Diagnosis in Mechanical Engineering and Manufacturing, Mechanical Structural Strength and Reliability, Inspection and Control the Quality of Manufacturing Process, Mechatronics and Robotics, Advanced CNC Technology and Equipment, Embedded Systems, Technologies of Machine Vision and Image Processing, Sensors and Technologies of Measurements, Electronics Technology and Communication, Computational Mathematics and Algorithms of Data Processing and Data Mining, Monitoring, Control Systems and Intelligent Systems, Energy and Power Engineering, Manufacturing Management and Engineering Management, Logistics and Supply Chain, Traffic and Transportation Systems, Applied Information Technologies and Knowledge Processing, Environmental Protection and Environmental Engineering, Advanced Technologies in Area of Education, etc. All papers included in those volumes have already passed the strict peer-reviewing by 2-5 expert referees and been accepted for publication. We hope that those volumes will not only provide the readers a broad overview of the latest advances but also provide the researchers a valuable summary and reference in this field.

The organization of ICMSE2014 and the publication of those volumes were made possible thanks to the tireless dedication of many people. We would like to express our sincere thanks to the session organizers, session chairs, reviewers, presenters, exhibitors and congress attendees for their efforts and enthusiastic participation in this congress.

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