

# Preface

Mechanical engineering is a discipline of engineering that applies the principles of physics and materials science for analysis, design, manufacturing, and maintenance of mechanical systems. Mechanical engineering and Materials are employed to design and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, transport systems, aircraft, watercraft, robotics, medical devices and more.

Aiming to the advances of Mechanical engineering and Materials, 2012 International Conference on Mechanical Engineering and Materials (ICMEM 2012) is an annual conference to call together researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Mechanical Engineering and Materials.

ICMEM 2012 has received more than 800 submissions from 31 countries and regions. The papers come from both academia and industry reflecting the international flavor of this event in the topics of Materials Science and Engineering, Materials Properties, Measuring Methods and Applications, Methodology of Research and Analysis and Modelling, Materials Manufacturing and Processing, Nanoscience and Nanotechnology, Mechanical Engineering, Design and Manufacturing, etc. And about 344 papers were accepted to be presented in ICMEM 2012, according to the reports from anonymous reviewers.

We express our thanks to all the members of the General Committee Chairs, Program Committee Chairs, Technical Program Committee and Volunteers who worked so hard to prepare the conference and chair the four sessions in ICMEM 2012 viz., Material Science and Engineering, Applied Mechanics and Mechanical Engineering, Manufacturing Engineering, and System Dynamics and Simulation. And thanks for Professor Patrick S.P. Wang who give an excellent keynote speech on Mechanical Engineering.

We hope that ICMEM 2012 will be successful and enjoyable to all participants. We look forward to seeing all of you next year at the ICMEM 2013.

Wen Jin

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