

Preface

Mechatronics is a design process that includes a combination of mechanical engineering, electrical engineering, control engineering and computer engineering. Mechatronics is a multidisciplinary field of engineering, that is to say, it rejects splitting engineering into separate disciplines. Originally, mechatronics just included the combination of mechanics and electronics, hence the word is a combination of mechanics and electronics; however, as technical systems have become more and more complex the word has been "updated" during recent years to include more technical areas.

Applied mechanics is a branch of the physical sciences and the practical application of mechanics. Applied mechanics examines the response of bodies (solids and fluids) or systems of bodies to external forces. Some examples of mechanical systems include the flow of a liquid under pressure, the fracture of a solid from an applied force, or the vibration of an ear in response to sound.

Aiming to the advances of Mechatronics and Applied Mechanics, 2013 International Symposium on Mechatronics and Applied Mechanics (ISMAM 2013) 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 Mechatronics and Applied Mechanics. ISMAM 2013 is co-sponsored by International Materials Science Society, Hong Kong and Singapore Management and Sports Science Institute, Singapore.

ISMAM 2013 has received more than 380 submissions from 23 countries and regions. The papers come from both academia and industry reflecting the international flavor of this event in the topics of Mechatronics and Applied Mechanics. About 20 PC members and 50 International reviewers worked hard in reviewing the submissions. Based on the review reports, about 108 papers were accepted to be presented in ISMAM 2013 by the chairs. All the accepted papers have been presented on the conference, mainly by oral presentations in five sessions viz., 1. Materials science and Materials Processing Technology, 2. Applied Mechanics, 3. Design and Manufacturing, Control and Automation, and 4. Computer and Information Technologies. There were many novel research works have been introduced and highly evaluated. For example, the "Enhanced Diamond Nucleation by Surface Texturing of Si Substrate in SF₆/O₂ Plasmas" by Jong Cheon Park in the first session introduced the new achievements of Diamond Nucleation in Korea; "Analysis of Human Hand Kinematics: Reaching Upward Movement" from Malaysia by Hisyam Abdul Rahman introduced Applied Mechanics into Human Hand Kinematics. Wei Fan from China introduce an novel PID controller in "Design and Implementation of Fuzzy PID Controller for Brushless DC Motor Control System"; moreover, those works in computer and information Technologies also attracted interest from engineers. The participants came to an agreement that they will participate in the ISMAM 2014 next year.

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 2 sessions in ISMAM 2013 .

We hope that ISMAM 2013 will be successful and enjoyable to all participants. We look forward to seeing all of you next year at the ISMAM 2014.

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