

Preface

Dear Distinguished Delegates and Guests,

The Organizing Committee warmly welcomes you to the 2014 International Conference on Materials Engineering and Automatic Control (ICMEAC 2014), held on May 26-28, 2014 in Singapore. ICMEAC 2014 is held on conjunction with 2014 2nd International Conference on Mechanical, Automotive and Materials Engineering (CMAME 2014), which is sponsored by Tianjin University of Technology and Singapore Institute of Electronics.

The conference is aimed at providing a platform for all of you to present leading-edge work in the fields of Materials Engineering and Automatic Control. More than 350 papers were and finally 182 papers are accepted for the conference after peer reviewed by reviewers drawn from the scientific committee, external reviewers and editorial board depending on the subject matter of the paper. Reviewing and initial selection were undertaken electronically. After the peer-review process, the submitted papers were selected on the basis of originality, significance, and clarity for the purpose of the conference. The selected papers and additional late-breaking contributions to be presented as lectures will make an exciting technical program. The conference program is extremely rich, featuring high-impact presentations.

The proceeding records the fully refereed papers presented at the conference. The main conference themes and tracks are Electrical Engineering, Materials Research, Control Engineering, Manufacturing Technology, Power System, Robotics and System Modeling. The main goal of the conference is also to provide international scientific forums for exchange of new ideas focus on Materials Engineering and Automatic Control.

We would like to thank the program chairs, organization staff, and the members of the program committees for their work. Thanks also go to all those who have contributed to the success of the conference.

Hopefully, all participants and other interested readers benefit scientifically from the proceedings and also find it stimulating in the process. We hope all of you have a unique, rewarding and enjoyable week in Singapore.

With our warmest regards,

Prof. Muhamamd Yahaya, UKM, Malaysia

Conference Chairman

Committees

Conference Co-Chairs

Prof. Muhamamd Yahaya, UKM, Malaysia
Prof. Wei Kexin, Vice-President Tianjin University of Technology, China
Prof. Gong Hao, National University of Singapore, Singapore
Prof. Shinn- Liang Chang, National Formosa University, Taiwan
Prof. Guoqun Zhao, Shandong University, China

Technical Program Committee Chairs

Prof. Wang Yunliang, Tianjin University of Technology, China
Prof. Shuxiang Guo, Kagawa University, Japan
Prof. Wang Shoujun, Tianjin University of Technology, China
Prof. Mostafa Ranjbar, Islamic Azad University-Pardis Branch, Iran
Prof. Chao-Lung Chiang, Nan Kai University of Technology, Taiwan
Prof. M. Chandrasekaran, Vels University, India
Prof. Wenliang Guo, Taiyuan University of Technology, China
Prof. Raj Das, University of Auckland, New Zealand

Publication Chairs

Prof. Yuming Yuan, Hubei University, China
Prof. Quan Zhou, Hubei Polytechnic University, China

International Technical Committees

Prof. Jung-Fa Tsai, National Taipei University of Technology, Taiwan
Prof. Masrukan Kasnan, National Nuclear Agency of Republic Indonesia, Indonesia
Prof. MANHAR KANTILAL BHATT, S.V. National Institute of Technology, India
Prof. Mehul Mahrishi, Central University of Rajasthan, India
Prof. CHI-JUI WU, National Taiwan University of Science and Technology, Taiwan
Prof. Cheng-Di Dong, National Kaohsiung Marine University, Taiwan
Prof. Zuoyu Sun, Guangzhou University, China
Prof. Nikoloz Jalabadze, Georgian Technical University, Georgia
Prof. I WAYAN SURATA, UDAYANA UNIVERSITY, INDONESIA
Prof. Mehmet Serkan Kirgiz, Hacettepe University Polatli Technical Sciences Vocational School, Turkey
Prof. Jaroslaw Milewski, Warsaw University of Technology, Insitute of Heat Engineering, Poland
Prof. Abdelghani ElToumi, University of Morocco, Morocco
Prof. Tomas Ucol-Ganiron, Jr., Qassim University-Buraidah, KSA
Prof. Yi-Cheng Huang, National Changhua University of Education, Taiwan
Prof. Jinan Basheer Al-Dabbagh, Universiti Malaysia Pahang, Malaysia
Prof. Atef A. Ata, Alexandria University, Egypt

Prof. Satoshi Takei, Electronic Material Laboratory, Japan
Prof. Musa Omar Abdalla, University of Jordan, Jordan
Prof. Morgan Remond Heikal, Universiti Teknologi Petronas, Malaysia
Prof. T. R.Vijayaram, VIT University, India
Prof. Kyoungjin Kim, Kumoh National Institute of Technology, Korea
Prof. Se Woong Kim, Kumoh National Institute of Technology, Korea
Prof. Sorin ILIE, University of Pitesti, Romania
Prof. Zdeněk Majer, Brno University of Technology, Czech
Prof. Raghuvir Pai B., Manipal University, India
Prof. Ahalapitiya Jayatissa, The University of Toledo, USA
Prof. Bruce Moulton, University of Technology Sydney, Australia
Prof. Achanai Buasri, Silpakorn University, Thailand
Prof. Yeong-Sant Kuo, Chienkuo Technology University, Taiwan
Prof. Mallappa Hebbal, Basaveshwar Engineering College Bagalkot, India
Dr. Teik-Cheng Lim, SIM University, Singapore
Prof. Zhizhong Yan, Beijing Institute of Technology, China
Prof. Sim Kok Swee, Multimedia University, Malaysia
Prof. Nidal Abu-Hamdeh, King Abdulaziz University, Saudi Arabia
Prof. Sim Kok Swee, Multimedia University, Malaysia
Prof. Ding Zai-ming, Shandong Transport Vocational College, China
Prof. Gururaj Rao, PDA College of Engineering, India
Prof. Yeong-Sant Kuo, Chienkuo Technology University, Taiwan
Prof. Mallappa Hebbal, Basaveshwar Engineering College Bagalkot, India
Prof. S. G. Sapate, VisvesYaraya National Institute of Technology, India
Dr. Pankaj K. Srivastava , Rewa Engineering College, India
Dr. Muhammad Hussain Ismail, Universiti Teknologi MARA, Malaysia
Dr. Abdul Hadi, University Teknologi Mara, Malaysia
Dr. L. A.Kumaraswamidhas, Indian School of Mines University
Dr. Md Amin Hashim, University Teknologi Mara, Malaysia
Dr. Cho-Pei Jiang, National Formosa University, Taiwan
Dr. Lim Meng Hee, Universiti Teknologi Malaysia, Malaysia
Dr. P. Sivaprakash, A.S.L.Pauls College of Engineering& Technology, India
Dr. S. Arungalai Vendan, VIT University, Vellore, India
Dr. Yap Tze Chuen, Multimedia University, Malaysia

Sponsors

Tianjin University of Technology, China
Singapore Institute of Electronics, Singapore