

Preface

11th WCEAM—25 to 28 July 2016 Jiuzhaigou, China

Quality, reliability, risk, maintenance, safety, and engineering asset management are becoming increasingly important areas of endeavor for industries, governments, and academia. Today, more than ever these areas of endeavor must be addressed for all engineering systems such as space shuttles, civil aircrafts, nuclear systems, etc.

The 2016 International Conference on Quality, Reliability, Risk, Maintenance, and Safety Engineering (QR2MSE 2016) was held in conjunction with the 11th World Congress on Engineering Asset Management (WCEAM 2016) in Jiuzhaigou, Sichuan, China, July 25–28, 2016, hosted by the International Society of Engineering Asset Management (ISEAM). The QR2MSE is an annual international conference series which brings together leading academics, industry practitioners, and research scientists from around the world to advance the body of knowledge in quality, reliability, maintenance, and safety of engineering systems; to establish and strengthen the link between academia and industry; to promote applications of research results in practice; and to showcase the state of the art of industrial technologies. The QR2MSE international conference was founded in 2011 and has grown admirably through the support of many academic organizations and colleagues and has become a premier conference in this field in Asia. WCEAM has been held annually since 2006 commencing with the inaugural event on the Gold Coast in Queensland, Australia, and has objectives that are well aligned with the objectives of QR2MSE but addressing the overall multidisciplinary field of Engineering Asset Management. The joint event attracted 288 delegates from 21 countries.

The joint congress hosted an excellent technical program and several opportunities for networking through social events including the congress dinner. The conference program comprised nine keynote speeches, one workshop, and 20 regular technical paper oral sessions.

The keynotes were:

1. Professor Narayanaswamy Balakrishnan, McMaster University, Ontario, Canada, on “Parametric and semiparametric inference for one-shot device testing.”
2. Adjunct Professor Joseph Mathew, Asset Institute, Brisbane, Australia, on “Innovations in engineering asset management.”
3. Professor Jin Wang, Liverpool John Moors University, Liverpool, UK, on “Risk-based decision making in design and operation of large engineering systems under uncertainties.”
4. Professor Dong Ho Park, Hallym University, Chuncheon, Korea, on “Two-dimensional system maintenance strategy and its effects.”
5. Professor Gao Jinji, “Process machinery diagnosis and maintenance based on industry internet and big data analysis.”
6. Professor Guoliang Huang, University of Missouri, Columbia, USA, on “Modeling, experimental investigation and reliability of elastic metamaterials.”
7. Professor Suk Joo Bae, Hanyang University, Seoul, Korea, on “Reliability issues in fuel cell technology.”
8. Professor Lin Ma, Queensland University of Technology, Brisbane, Australia, on “Reliability modelling of electricity transmission networks using maintenance records.”
9. Professor Xiayue Wu, National University of Defense Technology, Changsha, China, on “Mission reliability evaluation of spaceflight Telemetry, Tracking and Control (TT&C) systems.”

For QR2MSE/WCEAM 2016, each submitted paper was reviewed by two invited reviewers. In total, 190 papers were selected from all submissions and included in the conference proceedings. Thirty-three papers were subjected to additional reviews by two Fellows of the International Society of Engineering Asset Management (ISEAM) per paper, with at least one acceptance before the paper was included in the Springer eBook proceedings.



ISEAM Fellows at the Congress

We would like to acknowledge the efforts of all of the Technical Program Committee members who reviewed the submitted papers. The members of the Technical Program Committee are as follows: Suk Joo Bae, Hanyang University, Korea; In Hong Chang, Chosun University, Korea; David W. Coit, Rutgers University, USA; Yi Ding, Zhejiang University, China; Serkan Eryilmaz, Atılım University, Turkey; ILia B. Frenkel, Sami Shamoon College of Engineering, Israel; Olivier Gaudoin, Ensimag Laboratoire Jean Kuntzmann, France; Antoine Grall, Troyes University of Technology, France; Bo Guo, National University of Defense Technology, China; Abdelmagid S. Hammuda, Qatar University, Qatar; Yu Hayakawa, Waseda University, Japan; Cheng-Fu Huang, Feng Chia University, Taiwan; Shinji Inoue, Tottori University, Japan; Chao Jiang, Hunan University, China; Renyan Jiang, Changsha University of Science and Technology, China; M. Rezaul Karim, University of Rajshahi, Bangladesh; Dae Kyung Kim, Chonbuk National University, Korea; Jongwoon Kim, Korea Railroad Research Institute Testing and Certification Center, Korea; Grzegorz Koszalka, Lublin University of Technology, Poland; Hongkun Li, Dalian University of Technology, China; Yan-Feng Li, University of Electronic Science and Technology of China, China; Zhaojun Li, Western New England University, USA; and Ming Liang, University of Ottawa, Canada.

This year's ISEAM Lifetime Achievement award for exceptional dedication and contribution to advancing the field of Engineering Asset Management was presented to Professor Gao Jinji of Beijing University of Chemical Technology. ISEAM's Lifetime Achievement Award recognizes and promotes individuals who have made a significant contribution to research, application, and practice of a discipline in engineering asset management over a continued period of time. The award was presented at the Gala Dinner of the event.



Prof Gao receiving the ISEAM Lifetime Achievement Award from the ISEAM Chair, Joe Mathew

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We are grateful for the voluntary assistance provided by members of the International Advisory Committee, the Program Committee, the Organization Committee, and the Conference Secretariat.

Last but not the least, we would like to appreciate the Congress General Chair and Co-Chairs: Professor Hong-Zhong Huang, UESTC, Adjunct Prof. Joseph Mathew, Asset Institute, Australia, Prof. Carlos Guedes Soares, University of Lisbon, Portugal, and Prof. Dong Ho Park, Hallym University, Korea; the Program

Committee Chair and Co-Chairs: Prof. Liudong Xing, University of Massachusetts, USA, Prof. John Andrews, University of Nottingham, UK, Prof. Lirong Cui, Beijing Institute of Technology, China, and Prof. Wei Sun, Dalian University of Technology, China; and the Organizing Committee Chair and Co-Chairs: Prof. Lin Ma, Queensland University of Technology, Australia, Prof. Yi-Kuei Lin, National Taiwan University of Science & Technology, Taiwan, Prof. Byeng Dong Youn, Seoul National University, Korea, and Prof. Chengming He, Armed Force Engineering Institute, China.

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