

## Preface

This special volume includes all of the papers to be presented at the 9<sup>th</sup> International Symposium on Impact Engineering (ISIE 2016) at National Cheng Kung University, Tainan, Taiwan from the 5<sup>th</sup> to 9<sup>th</sup> of September 2016. The symposium features technical and keynote programs, an insight into the most current and relevant trends in academia and industry, and a cultural excursion program.

The topics scheduled for discussion cover a wide range of disciplines in the Impact Engineering field, including dynamic deformation and constitutive relations; high-speed forming, machining and processing; dynamic failure and fracture; experimental and measurement techniques; microstructural effects of dynamic loading; biomechanics; structural crashworthiness and diagnostics; micro- and nanostructure characterization of materials, hypervelocity impact mechanics; modeling and numerical simulation, and industrial applications.

ISIE has been held in eight major cities since its inception in 1992, including Sendai, Beijing, Singapore, Kumamoto, Cambridge, Daejeon, Warsaw and Osaka. ISIE 2016 is the 9<sup>th</sup> event in the series and will provide an exciting opportunity for researchers and scientists from around the world to share their views and knowledge and build relationships for future collaboration. Three keynote speakers from the UK, Japan and Poland will discuss the latest developments and innovations in Impact Engineering, while a total of 91 technical papers are scheduled for presentation. In addition, a special session on recent advances in Split-Hopkinson Pressure Bar techniques and their applications will be held to honor Professor Takashi Yokoyama of Okayama University of Science for his outstanding contribution to the field.

The papers contained in this special volume make a significant contribution to the Impact Engineering field. On behalf of the organizing committee, we thank the keynote speakers, session chairmen, authors and participants for what promises to be a highly productive, informative and enjoyable symposium, which lives up to the high standards set by the previous symposia in the series. In addition, we wish to thank the Ministry of Science and Technology (MOST) in Taiwan for their financial support and advice. Without this support, the symposium would not have been possible.

Editors Woei-Shyan Lee, Shou-Hung Chang, and I-Ling Chang

Tainan, Taiwan, September 2016

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### **In Celebration of Professor Takashi Yokoyama's Retirement**

Professor Takashi Yokoyama retired from the Department of Mechanical Engineering, Okayama University of Science in March of this year, following an academic career spanning more than forty years. In celebration of his retirement, his faculty member held a heartwarming farewell party this April in Okayama, Japan.

Professor Yokoyama received his B. S. degree from the Department of Precision Engineering at Osaka University in 1971. He went on to receive his M. S. degree in Engineering from Osaka University in 1973. He was awarded his Doctor of Engineering from Osaka University in 1988. He started his research and teaching position in the Department of Mechanical Engineering at Ehime University in 1974. Five years later, he returned to Osaka University. In 1990, he then moved to Okayama University of Science (OUS) as a full Professor until his retirement earlier this year. His research interests include dynamic behavior of materials and welded joints, wave propagation in bars beams, impact testing techniques, constitutive modeling and dynamic fracture mechanics. He made a research stay at the University of Manitoba, Canada, in 1989. He was invited as a DAAD research fellow to the Hamburg University of Technology, Germany, in 1992.

During his time at OUS, Professor Yokoyama lectured on Dynamics of Machinery, BASIC Stress Analysis, Mechanics of Solids and Structures.

In terms of academic research, he has not only published numerous academic papers in many of the leading international journals in his field, and has also coauthored a text book on "Fundamentals of Mechanical Vibrations" in 1992 and edited a textbook on "Impact Engineering: Fundamentals and Applications" in 2014. Furthermore, he was conferred the Outstanding Achievement Award from a Committee on Impact in the Japanese Society of Materials Science (JSMS) in 2003, and the same award from the Japanese Society for Experimental Mechanics (JSEM) in 2009.

In addition to his many teaching and research duties, Professor Yokoyama was also positively engaged in international academic activities.

He has been a Member of Editorial Board of *Strain* (UK) since 1998. He served as an Associate Technical Editor for *Experimental Mechanics* (USA) from 2005 to 2008. He has greatly contributed to the organization of many International Symposia and Conferences on Impact Engineering and Experimental Mechanics. He chaired the 5th International Symposium on Advanced Science and Technology in Experimental Mechanics held in Kyoto, 2010. Domestically, Professor Yokoyama served as a Chairperson of the JSMS Committee on Impact from 2006 to 2008 and as a Head of Materials Division Committee of the Japan Society for Aeronautical and Space Sciences from 2007 to 2009. He was appointed as a President of the JSEM from 2007 to 2008.

Over the years, Professor Yokoyama has gained an outstanding reputation for his many contributions and achievements throughout academia and industry. Moreover, many of his former students have also gone on to have a significant impact in their respective fields. We would like to take this opportunity to express our sincere appreciation and respect to Professor Yokoyama for his selfless lifetime dedication. Although Professor Yokoyama may have retired, his intelligence and experience will continue to inspire us forever. As General Douglas MacArthur once famously said at a US Congress: “Old soldiers never die, they just fade away”, we all wish Professor Yokoyama a healthy and happy retirement!

Associate Professor Masahiro Nishida  
Nagoya Institute of Technology  
Nagoya, Japan