

# Knowledge

Innovation

### Motivation

Marketability

# **Invited Speakers**

Dr. Young-Sup Joo





SME Minister

Dr. Pamir Alpay

Dr. Hellmut Schmücker Head (retired), Technical Division Max Planck Institute for Physics, Germany

Professor, Materials Science & Engineering

University of Connecticut, USA



Dr. Chang-Jin "CJ" Kim Professor, Mechanical and Aerospace Engineering UCLA, USA



Dr. Jeong-Soo Lee Vice President Materials & Devices Advanced Research Institute LG Electronics, Korea

Erlangen Lasertechnik GmbH, Germany

#### Dr. Jack Wang Director, Metal Processing R&D Department



Metal Industries R&D Centre, Taiwan Dr. Peter Hoffmann Professor & Managing Partner



Dr. Helmut Schift Head, Polymer Nanotech Group Paul Scherrer Institute, Switzerland



Dr. Man-Been Moon Vice President, R&D Center Hyundai Steel, Korea



Dr. Choong-Sik Bae Head, Department of Mechanical Engineering KAIST, Korea

Dr. Yong-Taek Im President Korea Institute of Machinery and Materials, Korea



# 2016 INTERNATIONAL FORUM KOREA

on Advances in **Mechanical Engineering** 

August 18, 2016 LOTTE City Hotel, Daejeon, Korea

Organized by Korea Institute of Machinery & Materials



# Tentative Program of Ceremony for the 40<sup>th</sup> Anniversary & the Forum

#### Dear Colleagues,

On behalf of the Korea Institute of Machinery and Materials (KIMM), I would like to cordially invite you to the "Ceremony for the 40<sup>th</sup> anniversary" and "2016 International Forum Korea on Advances in Mechanical Engineering (IFAME)" which will be held at the LOTTE City Hotel, Daejeon, Korea, on August 18<sup>th</sup>, 2016.

KIMM launched IFAME in 2014 to spur creative economy of the current government in terms of promotion of research, development, and business (R&DB) in mechanical engineering. Previous IFAMEs provided excellent opportunities to exchange experiences and discuss new direction of R&DB in mechanical engineering, attracting more than 200 participants from around the world. Therefore, KIMM is very excited to continue the dialog by organizing the third IFAME this year.

This year's theme is "Mechanical Engineering and Global Sustainability." With advanced nations around the globe rediscovering manufacturing as a source of economic growth and national security, KIMM recognizes its duty as a national research institute and would like to open up discussions to stimulate technological innovation and create a fertile environment for convergence for manufacturing.

The one-day Forum will feature outstanding presentations and open discussions by renowned speakers from industry, academia, and research institutions around the world on the new initiatives, action plans, and best practices concerning spearheading technological advances, in particular, for commercialization of nanotechnology, industry and entrepreneurship, technology transfer of public research, etc.

Confirmed luminaries for the speakers and panelists are Dr. Hellmut Schmücker, Head (retired) of Technical Division, Max Planck Institute for Physics; Dr. Chang-Jin (CJ) Kim, Professor of Mechanical and Aerospace Engineering, UCLA; Dr. Helmut Schift, Head of Polymer Nanotech Group, Paul Scherrer Institute; Dr. Jeong-Soo Lee, Vice President, Materials & Devices Advanced Research Institute, LG Electronics; Dr. Peter Hoffmann, Professor & Managing Partner of Erlangen Lasertechnik GmbH; Dr. Pamir Alpay, Professor of Materi als Science & Engineering, UConn; Dr. Man-Been Moon, Vice President of R&D Center, Hyundai Steel; Dr. Jack Wang, Director of Metal Processing R&D Department, Metal Industries R&D Centre of Taiwan; Dr. Choong-Sik Bae, Head of Department of Mechanical Engineering, KAIST and Dr. Young-Sup Joo, SME Minister of Small and Medium Business Administration of Korea.

I sincerely hope that you can join us in making the third IFAME a true success. I am looking forward to seeing you in Daejeon, Korea.

With best regards,

Dr. Yong-Taek Im President Program, August 18, 2016, LOTTE City Hotel, Daejeon, Korea

09:00 - 09:30	Registration
Session 1: Micro-Opto-Nano-Bio Technology	
09:30 - 10:00	Superhydrophobic Surfaces for Reducing Frictional Drag: Dream or Reality? Dr. Chang-Jin "CJ" Kim Professor, Mechanical and Aerospace Engineering, UCLA
10:00 - 10:30	Back to Mechanics - How Nanoimprint Lithography changed the Way how We are thinking about Nanomanufacturing? Dr. Helmut Schift Head, Polymer Nanotechnology Group, Paul Scherrer Institute
10:30 - 12:00	Opening Ceremony with Congratulatory Remarks for the 40 <sup>th</sup> Anniversary Special Invited Talk on the 40 <sup>th</sup> Anniversary of KIMM: KIMM – Birth, Growth and Impact Dr. Hellmut Schmücker Head (retired), Technical Division, Max Planck Institute for Physics
12:00 - 13:00	Luncheon
Session 1: Micro-Opto-Nano-Bio Technology	
13:00 - 13:30	Innovative MEMS, Opto, and Nano Technologies in LG Electronics Dr. Jeong-Soo Lee Vice President, Materials & Devices Advanced Research Institute, LG Electronics
13:30 - 14:00	Laser Welding in High Volume Production Dr. Peter Hoffmann Professor & Managing Partner, Erlangen Lasertechnik GmbH
Session 2: Materials, 3D Printing, and Sustainability	
14:00 - 14:30	Accelerating Materials Deployment and Manufacturing via Multi-Scale Modeling and Genomics Dr. Pamir Alpay Professor, Materials Science & Engineering, University of Connecticut
14:30 - 15:00	Hyundai Steel's Challenge toward "Automotive Steel Specialized Steelworks" Dr. Man-Been Moon Vice President, R&D Center, Hyundai Steel
15:00 - 15:30	The R&D Prospects of Additive Manufacturing (AM) Technology at MIRDC Dr. Jack Wang Director, Metal Processing R&D Dept., Metal Industries R&D Centre of Taiwan
15:30 - 15:50	Vision of Energy Sustainability Dr. Choong-Sik Bae Head, Department of Mechanical Engineering, KAIST
15:50 - 16:10	Coffee Break
Session 3: National Initiatives for SMEs	
16:10 - 16:40	SME Policy of Korea – Strategic Directions for Innovation Dr. Young-Sup Joo SME Minister, Small and Medium Business Administration, Korea
16:40 - 17:10	KIMM for Creative Economy Dr. Yong-Taek Im President, Korea Institute of Machinery and Materials
17:10 - 18:20	Panel Discussion
10.20 20.00	D

18:30 - 20:00 Banquet

#### Registration:

On-line registration is now available at http://forum.kimm.re.kr

- \* Registration deadline for early-bird: August 8, 2016
- \* Special dietary needs can be specified as you register.

#### Venue:

LOTTE City Hotel, Daejeon (http://www.lottehotel.com/city/daejeon/en) 33, Expo-ro 123beon-gil, Yuseong-gu, Daejeon

#### Map & Directions



#### When traveling from Incheon Int'l Airport:

•Take KTX Train at Airport Transportation Center to Daejeon Station (2 hrs). •Take a taxi from Daejeon Station to LOTTE City Hotel (30 mins).

#### When driving southbound from Seoul:

•Exit at N.Daejeon IC. Turn left. Turn right at Daedeok Culture Center T-junction. Turn left at Expo Science Park.

#### When driving northbound on Honam Expressway:

•Exit at Yuseong IC. Make two rights. Pass by the entrance of Chungnam Nat'l Univ. without entering underpass. Turn right at Expo Science Park Junction.

#### When driving northbound on Gyeongbu Expressway:

•Exit at Daejeon IC. Turn right at Dongbu Junction. Turn left at Jungri Junction. Turn right after Hanbat Bridge. Cross Dunsan Bridge.

#### \* Enquiries: Send e-mail to the Forum Secretariat at secretariat@kimm.re.kr or call at 82-(0)42-868-7656

\* Notice: The program might be changed without prior notice depending on the speakers' availability.