

# K

Knowledge

# I

Innovation

# M

Motivation

# M

Marketability

## Invited Speakers



Dr. Young-Sup Joo  
SME Minister  
Small and Medium Business Administration, Korea



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



Dr. Pamir Alpay  
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



Dr. Jack Wang  
Director, Metal Processing R&D Department  
Metal Industries R&D Centre, Taiwan



Dr. Peter Hoffmann  
Professor & Managing Partner  
Erlangen Lasertechnik GmbH, Germany



Dr. Helmut Schiff  
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

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# 2016 INTERNATIONAL FORUM KOREA

on Advances in  
Mechanical Engineering

**August 18, 2016**

Hotel ICC, Daejeon, Korea

Organized by **Korea Institute of Machinery & Materials**

Sponsored by

미래창조과학부  
Ministry of Science, ICT  
and Future Planning

산업통상자원부  
Ministry of Trade,  
Industry and Energy

대전광역시  
DAEJEON METROPOLITAN CITY

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The National Academy of Engineering Education

KAST  
The Korean Academy of Science and Technology

UST  
과학기술연합대학원대학교

DIME  
Daejeon International  
Marketing Enterprise



## Invitation from the Organizer

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 Hotel ICC, 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 Schiff, 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, Erlangen Lasertechnik GmbH; Dr. Pamir Alpay, Professor of Materials 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

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

Program, August 18, 2016, Hotel ICC, Daejeon, Korea

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

## Registration & Venue

### 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:

Hotel ICC, Daejeon, Korea (<http://www.hotelicc.com>)  
123beon-gil 55, Expo-ro, Yuseong-gu, Daejeon, Korea

### 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 Hotel ICC (10 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 Dursan Bridge.

\* Enquiries: Send e-mail to the Forum Secretariat at [secretariat@kimm.re.kr](mailto: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.