

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

nst
National Research Council
of Science and Technology

NAEC
The National Academy of Engineering of Korea

KAST
한국과학기술원
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 40th anniversary" and "2016 International Forum Korea on Advances in Mechanical Engineering (IFAME)" which will be held at the Hotel ICC, Daejeon, Korea, on August 18th, 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 of 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 40th Anniversary & the Forum

Program, August 18, 2016, Hotel ICC, 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 Schiff Head, Polymer Nanotechnology Group, Paul Scherrer Institute
10:30 – 12:00	Opening Ceremony with Congratulatory Remarks for the 40 th Anniversary Special Invited Talk on the 40th 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	Korean SME Policy Innovation for Creative Economy 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
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 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.