Speaker Profile

Contact Details

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Name

Eung-Sug Lee

Title

Director of Intelligence & Precision Machine Dept.

Institute

Korea Institute of Machinery & Materials (KIMM)

1. Academic Experience

Ph.D : Korea Advanced Institute of Science and Technology (KAIST,1997)
M. S Seoul National University, Graduate Course (1982)
B. S Seoul National University, College of Engineering (1980)

2. Job Experiences

1982-present :
- Director of Intelligence & Precision Machine Dept.,
- Senior Researcher, Korea Institute of Machinery & Materials
- Professional Engineer of mechanical manufacturing
- Director of National Research Laboratory (Labotory for Polishing Technology)

Post doctoral period research :
July 1998 – June 1999 University of California, Berkeley
College of Engineering, Department of Mechanical Engineering
Laboratory for Manufacturing Automation (Pf. David A. Dornfeld)

3. Activities in Academic Society

- Invited Professor of Chung Nam Univ.
- Reviewer of the National Project on Clean CMP Technology
- Committee of Korea Nanotechnology Plan
- Committee of Korea MEMS Society
- Editor of the Korean Society of Precision Engineering
- Editor of the Korean Society of Mechanical Engineering
- Commitee of the National Technical Road Map
- Member of Japan Society of Precision Engineering
- Member of Japan Society of Abrasive Machining

4. Representative Researches

-Project leader of Multifuntional Nanoprinting Process Technology
-Project leader of National Project on the Planarization Technology using Electro-rheological and Magneto-rheological Fluid
-Project leader of National Project on the Machining System for nanotechnology
-Project leader of Design and Manufacturing of CMP System
-Development of Milli-Structure Manufacturing Technology
-Precision Truing/Dressing Technology
-Precision Micro Molding Technology
-Grinding of Optical Connector
-Technology for Optical Application and Precision Machining
-Grinding and Lapping of Ball Screw
-Development of High Speed Machining Technology
-Development of Micro Drilling Machine
-Development of Ultra-Precision Machining Technology

Center Information

Center Name

CONTACT

Center for Nanoscale Mechatronics & Manufacturing

For further information please contact:

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Sang-Rok Lee

Position
Director

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The Center for Nanoscale Mechatronics & Manufacturing (CNMM) was established in July, 2002 as a part of 21st Century Frontier R&D Program by the Ministry of Science and Technology in Korea.

The ultimate goal of CNMM is to develop manufacturing technology with the capability of producing nanocomponents smarter, cheaper, and faster with minimum feature size in the range of 100nm ~ 10nm, and to secure the elementary technologies for the enabling tooling. Since CNMM is in pursuit of commercially valuable technologies more than academic or scientific interests in the nanoscale engineering, it is expected that R&D progresses in CNMM would have incident impact on related industries. The detailed goals are as follows.

- Fabrication of 2D/3D shapes composed of 100-10nm level nanowires, dots, and structures
- Fully 3D shape fabrication through the upgrade of existing processes.
- Development of application technologies (Nano MOSFET, Organic Electronics, RF devices, Nano Bio Sensors, etc)
- Development of 3D nanoprocess hybrid equipment with 5nm level accuracy
- Development of nanoprocess control/analysus/ measurement/metrology

Annual Budget: ~ $10 M

Director: S R. Lee, Ph.D.

PLATFORM TECHNOLOGIES

- **Nanoimprinting**
- **Nanoinjection Molding**
- **Nanoequipment**
- **Nanoscale Metrology & Measurements**