

4th TU-SNU-UT Joint Symposium
(Tsinghua University, Seoul National University and The University of Tokyo)
March 12-13, 2010, Tokyo, Japan

PROGRAM

Friday, March 12, 2010

Venue: Takeda Hall (Takeda Bldg., The University of Tokyo)

9:00-9:30 **Registration**

9:30-9:45 **Opening** (Chair: Yasuyuki Yokono)

Welcome Address 1 Kazuo Hotate, Dean of the School of Engineering, UT

Welcome Address 2 Nobuhide Kasagi, Symposium Co-Chair, Dept. of Mechanical Engineering, UT

9:45-10:45 **Session 1: Biomedical Applications I** (Chair: Sunao Ishihara)

"A bioMEMS Based Cells Array Chip for Drug Screening"

Dahai Ren, Dept. of Precision Instruments & Mechanology, TU

"Controlling Cellular Microenvironments with Microfluidics and Nanostructures"

Noo Li Jeon, School of Mechanical and Aerospace Engineering, SNU

"Serum Separation System from Whole Blood on Microchip"

Takehiko Kitamori, Dept. of Applied Chemistry, UT

10:45-11:05 **Coffee Break**

11:05-12:05 **Session 2: Design and Manufacturing I** (Chair: Tadamoto Suga)

"Design and Implementation of an Electromagnetic Ultrafast Tool Servo"

Dan Wu, Dept. of Precision Instruments & Mechanology, TU

"Computing Techniques for Analysis and Design of Micro/Nano Vibratory Resonators"

Jin Hwan Ko, School of Mechanical and Aerospace Engineering, SNU

"Micro 3-D Fabrication and Nano Scale Metrology by Controlling Localized Light Energy"

Satoru Takahashi, Dept. of Precision Engineering, UT

12:05-13:15 **Lunch**

13:15-14:15 **Session 3: Fluids and Thermal Engineering I** (Chair: Shigehiko Kaneko)

"Latest Development of CFB Boilers in China"

Hairui Yang, Dept. of Thermal Engineering, TU

"Micro/Nanoscale Thermal Transport Modeling Based on The Boltzmann Transport Equation"

Joon Sik Lee, School of Mechanical and Aerospace Engineering, SNU

*"Numerical Assessment of SOFC Anode Polarization Based on Three-Dimensional Model
Microstructure Reconstructed by FIB-SEM"*

Naoki Shikazono, Dept. of Mechanical Engineering, UT

14:15-16:30 **Poster Session** (Chair: Shin'ichi Nakasuka)

14:15-15:00 Short Oral Presentation

15:00-15:45 *Odd-Numbered* Poster Session

15:45-16:30 *Even-Numbered* Poster Session

16:30-16:40 **Coffee Break**

16:40-17:40 **Session 4: Human Resource Development** (Chair: Shinsuke Sakai)

“Graduate Education at Tsinghua University”

Yonggang Meng, Dept. of Precision Instruments & Mechanology, TU

“Graduate Education at Seoul National University”

Seung Jin Song, School of Mechanical and Aerospace Engineering, SNU

“Human Resource Development Program in Global Center of Excellence for Mechanical Systems Innovation”

Mamoru Mitsuishi, Dept. of Mechanical Engineering, UT

18:00-19:30 **Banquet** (Chair: Shinji Suzuki)

Venue: Abreuvoir, Mukogaoka Faculty House

Saturday, March 13, 2010

Venue: Faculty Conference Hall (Engineering Bldg. 8, The University of Tokyo)

9:00-9:40 **Session 5: Biomedical Applications II** (Chair: Satoshi Watanabe)

“Study of the Contact Biomechanics of Tibia-femoral Joint”

Zhixiu Hao, Dept. of Precision Instruments & Mechanology, TU

“A Cutting Method for Bone Based on Its Micro Crack Propagation Characteristics”

Naohiko Sugita, Dept. of Mechanical Engineering, UT

9:40-11:00 **Session 6: Design and Manufacturing II** (Chair: Kiyoshi Takamasu)

“1-Dimension Nano-Material-Based Device and its Characteristics”

Xing Yang, Dept. of Precision Instruments & Mechanology, TU

“Development of Redundant Parallel Mechanism Machines “

Jong Won Kim, School of Mechanical and Aerospace Engineering, SNU

“Reproduction Technologies for Multi-layer Nano/Micro Structures “

Masayuki Nakao, Dept. of Mechanical Engineering, UT

“A Novel MEMS Based Sun Sensor”

Zheng You, Dept. of Precision Instruments & Mechanology, TU

11:00-11:20 **Coffee Break**

11:20-12:20 **Session 7: Fluids and Thermal Engineering II** (Chair: Chisachi Kato)

“Shear-Thickening Rheological Fluids”

Yu Tian, Dept. of Precision Instruments & Mechanology, TU

“Performance Analysis of a Multi-Hundreds MW-Class SOFC/GT Hybrid System Based on a Commercially Available Gas Turbine”

Jeong Lak Sohn, School of Mechanical and Aerospace Engineering, SNU

“Microscale Combustion for Fuel-Based Mobile Power Source”

Yuji Suzuki, Dept. of Mechanical Engineering, UT

12:20-12:30 **Closing** (Chair: Yasuyuki Yokono)

Closing Address - Mamoru Mitsuishi, Symposium Co-Chair, Dept. of Mechanical Engineering, UT