

International Symposium Series on Mechanical Systems Innovation

Takeda Conference Hall, The University of Tokyo

International Symposium on Micro/Nano Thermal and Fluids Systems

December 6, 2004

8:30-9:20 Registrations

Openings

9:30-9:45 Grand Opening of COE symposia

Hiroshi Komiyama (Vice President, The University of Tokyo, Japan)

9:45-10:15 Mechanical Systems Innovation

Nobuhide Kasagi (Program Leader, The University of Tokyo, Japan)

10:15-10:35 Coffee break

1. Mico/Nano Bioengineering

10:35-11:20 Computer Aided Tissue Engineering: Recent Advances

Wei Sun (Drexel University, USA)

11:20-11:50 Effects of Cyclic Hydrostatic Pressure on Regulation of

Chondrocyte Differentiation and Chondrogenesis

Takashi Ushida (The University of Tokyo, Japan)

Lunch break and poster

2. Microscale Energy Conversion

14:00-14:45 Micro Reaction Technology for Energy Conversion

Klaus F. Jensen (Massachusetts Institute of Technology, USA)

14:45-15:15 Reaction Mechanism of

Low Temperature Combustion and Control of Autoignition

Atsumi Tezaki (The University of Tokyo, Japan)

15:15-15:45 Towards Realization of Small-sized Gas-turbine Engine

Chisachi Kato (The University of Tokyo, Japan)

15:45-16:15 Coffee break

16:15-17:00 Recent Advances in our Understanding of

Flow Boiling in Microchannels

Satish G. Kandlikar (Rochester Institute of Technology, USA)

17:00-17:30 Flow Visualization of Microscale Flow

Boiling and Development of Micro Reactor

Yuji Suzuki (The University of Tokyo, Japan)

18:00-20:00 Reception at Sanjo Conference Hall

December 7, 2004

3. Molecular Dynamics and Multi-Scale Analysis

9:30-10:15 Near-Field Heat Transfer Between Nanoparticles:

The Impact on Nanofluids

Sebastian Volz (Ecole Central Pari, France)

10:15-10:45 Transport Phenomena in Nanofluidic Channels

Hirohumi Dairuji (The University of Tokyo, Japan)

10:45-11:00 Coffee break

11:00-11:45 Challenges on Microscale Thermal Transport Modeling

Joon Sik Lee (Seoul National University, Korea)

11:45-12:15 Multiscale Modeling of Molecular Collision Dynamics

Yoichiro Matsumoto (The University of Tokyo, Japan)

Lunch break and poster

4. Heat Transfer Issues of Carbon Nanotubes

14:30-15:15 Unusual Thermal Properties of Carbon Nanotubes

Savas Berber (Michigan State University, USA)

15:15-15:45 CVD Generation and Heat Transfer of

Single-Walled Carbon Nanotubes

Shigeo Maruyama (The University of Tokyo, Japan)

15:45-16:00 Closing

Nobuhide Kasagi (The University of Tokyo, Japan)

Posters are displayed for two full days
for discussions during breaks.

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熱流体科学から価値の創造へ



主催：東京大学21世紀COEプログラム「機械システム・イノベーション」

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