

# Agenda of the 7<sup>th</sup> Korea-Japan Joint Seminar on Space Environment Utilization Research

September 26-27, 2010

Forest Hongo, <http://www.forest-hongo.com/> in front of Main Gate  
of University of Tokyo Hongo Campus

Seminar Coordination

**Prof. Makoto ASASHIMA, Prof. Chi-Hwan LEE**

**Dr. Yoshinori Fujimori, Prof. Sug-Whan KIM**

## September 26 Sunday

09:30

■ **Opening Remarks and Welcome**

**Prof. Makoto Asashima,**

**Fellow and Director, Research Center for**

**Stem Cell engineering(SCRC) National Institute of Advanced Industrial Science  
and Technology(AIST), Emeritus Professor, University of Tokyo**

09:40

■ **Seminar Perspectives**

09:40-09:50

**Objective of the Seminar: Perspective of Korea**

**Prof. Chi-Hwan LEE, Inha University**

**[1]**

09:50-10:00

**Objective of the Seminar: Perspective of Japan**

**Prof. Makoto ASASHIMA**

**Fellow and Director, Research Center for Stem Cell engineering(SCRC)**

**National Institute of Advanced Industrial Science and Technology(AIST),**

**Emeritus Professor, University of Tokyo**

**[2]**

Moderator, Prof.Watanabe(10:00-12:00)

10:00

■ **Space Program Introduction**

10:00-10:25

**2010 JAXA Space Environment Utilization Program Update**

**Mr. Nobuyoshi FUJIMOTO, Space Environment Utilization Center, JAXA**

- [3]
- 10:25-10:50  
**Microravity Science at Present and Future in Japan**  
**Prof. Shinichi YODA, ISS Project Office, JAXA** [4]
- 10:50– 11:15  
**KARI Space Program Update toward ISS Utilization, Dr. Joohee Lee, KARI** [5]
- **Fluid Physics**
- 11:15-11:35  
**International Research Project of Thermophysical Properties Measurement of High Temperature Melt using containerless technique on ISS**  
**Prof. Masahito WATANABE, Gakushuin University** [6]
- 11:35-11:55  
**Thermal convection and two-phase flows driven by a gradient magnetic field**  
**Prof.Toshio TAGAWA, Tokyo Metropolitan University** [7]
- 11:55-13:00  
**Lunch**
- Moderator, Prof.Nikawa(13:00-16:00)
- **Life Science, Molecular Biology & Biomedical Engineering**
- 13:00-13:20  
**New concept anti-atrophy biomaterials for unloaded muscle: Development of collaborative research for ISS/JEM onboard experiment**  
**Prof. Inho Choi and Mr. Taesik Gwag, Division of Biological Science and Technology, Yonsei University** [8]
- 13:20-13:40  
**The Effects of Minimally Invasive Low Level Laser as Countermeasure against Bone Loss in Unloading**  
**Prof. Han Sung KIM, Yonsei University** [9]
- 13:40-14:00  
**Interim Report of MyoLab Experiment onboard ISS and Its Projection to the Future**  
**Prof. Takeshi NIKAWA, Tokushima University** [10]
- 14:00-14:20  
**Live cell imaging and gravity** **Dr.Akihiko NAKANO, RIKEN** [11]
- 14:20-14:40  
**Mammalian reproduction in space** **Dr.Teruhiko WAKAYAMA, RIKEN** [12]

14:40-15:00

**DNA Repair and Mutagenesis under Microgravity Environment**

**Dr.Fumio YATAGAI and Dr.Toshikazu EBISUZAKI, RIKEN [13]**

15:00-15:20

**Break**

15:20-15:40

**Dome gene experiment of space flight done in ISS**

**Prof. Makoto ASASHIMA,**

**Fellow and Director, Research Center for Stem Cell engineering(SCRC) National Institute of Advanced Industrial Science and Technology(AIST), Emeritus**

**Professor, University of Tokyo [14]**

15:40-16:00

**Protein crystal growth in microgravity and structural analysis**

**Prof. Masaru TANOKURA, University of Tokyo [15]**

16:00-16:20

**Structural proteomics with new opportunity of neutron crystallography**

**Prof. Tae-Sung YOON, University of Science & Technology (UST) at KRIBB [15\_1]**

Moderator, Dr.Ebisuzaki(16:20-17:40)

**■ Observation Sciences**

16:20-16:40

**Current status of Korean participation for JEM-EUSO mission**

**Prof. Il H. Park and the UFFO collaboration, Ewha University [16]**

16:40-17:00

**New computational technique for space instrument performance evaluation and its application for JEM-EUSO instruments**

**Prof. S. W. Kim, Mr. D. O. Rhu, Yonsei University [17]**

17:00-17:20

**JEM-EUSO to explore the extreme universe Dr. Toshikazu Ebisuzaki, RIKEN**

**[18]**

17:20-17:40

**Remote sensing with Lidar from space Dr.Satoshi WADA, RIKEN [19]**

17:40-19:30

**Welcoming Reception**

**September 27 Monday**

Moderator, Prof. Fujita(9:30-11:10)

■ **Technology**

9:30-9:50

**Small Mass Measuring System (SMMS) development and test results in micro-gravity environment, Dr. Youn Kyu Kim, KARI [20]**

■ **Combustion**

9:50-10:10

**Effects of wire length on flame spread over electric wire with AC electric field, Prof. Jeong Park, Pukyung University, Korea [21]**

10:10-10:30

**Minimum Ignition Energy of Overloaded Electric Wire in Microgravity  
Prof. Osamu FUJITA, Hokkaido University [22]**

■ **Material Science/Chemistry**

10:30-10:50

**Feasibility study of BaTiO<sub>3</sub> based ceramics using aerodynamic levitator  
Prof. Won-Seung Cho, Ki-Ju Lee, Chi-Hwan Lee, Hyung-Sun Kim, and  
Soong-Keun Hyun, Inha University [23]**

11:00-11:40

■ **Discussion and Summary on Collaborative Research by All participants  
Prof. Lee and Prof. Asashima**

11:40-12:00

■ **Farewell commemorative photograph**

12:00-13:00

■ **Lunch**

13:15

■ **Adjourn**