

# Agenda of the 4<sup>th</sup> Japan-Korea Joint Seminar on Space Environment Utilization Research

December 7 – 8, 2007

Advanced Automotive Research Center (Building #314)  
SEOUL NATIONAL UNIVERSITY

**December 7, 2007 Friday**

09:30 am

■ **Opening Remarks and Welcome**  
Welcoming Remarks

**Prof. Suk Ho CHUNG**  
**Dr. Hong Yul PAIK**

■ **Seminar Perspectives**

*Objective of the Seminar: Perspective of Korea*

**Prof. Suk Ho CHUNG, Seoul National University**

*Objective of the Seminar: Perspective of Japan*

**Prof. Makoto ASASHIMA, University of Tokyo**

10:00 am

■ **Space Program Introduction**

*Korea Space Program towards ISS Utilization*

**Dr. Gi-Hyuk CHOI, Head, Space Science Division, KARI and**

**Dr. Hong Yul BAIK, Chairman, KARI**

*JAXA Space Utilization Program Update: JAXA Guiding Principles towards Bilateral  
Coordination with Korea*

**Mr. Tetsuo TANAKA, JAXA Space Utilization Center Director**

*Planning Guide for Space Experiment Researches (continued)*

**Prof. Hiroo INOKUCHI, JAXA Consultant**

**Dr. Yoshinori FUJIMORI, SED Advisor**

11:30 am

■ **Astrophysics**

*Space missions for remote earth observation for climate change and extra terrestrial  
planet search studies*

**Prof. Sug-Whan KIM, Yonsei University**

12:00 pm

**Lunch**

1:30 pm

■ **Life Science & Biomedical engineering**

*Approach to the ISS experiment*

*-Dome formation and gene expression of A-6 cell line-*

**Professor Makoto ASASHIMA and Masayuki IKUZAWA,  
University of Tokyo**

*Approach to the ISS experiment II*

*-Molecular mechanism of microgravity-mediated muscle atrophy*

**Prof. Takeshi NIKAWA, Tokushima University**

*Approach to the ISS experiment III*

*-Countermeasure against muscle atrophy: utilizing a hibernation model*

**Prof. Inho CHOI, Yonsei University; Ju Woon Lee and Myoung Woo  
Byun, KAERI**

*Alterations in bone architectures during unloading and reloading: a morphological  
and mechanical study*

**Prof. Han Sung KIM, Yonsei University**

3:20 pm

**Break**

3:30 pm

■ **Fluid Physics**

*In-situ measurement of double diffusion field under microgravity*

**Prof. Associate, Atsuki KOMIYA, Tohoku University**

*Numerical study of the magnetohydrodynamic flows driven by surface tension,  
rotation and buoyancy*

**Prof. Associate, Toshio TAGAWA, Tokyo Metropolitan University**

4:30 pm

■ **Mini-Session: Japan-Korea Joint Activity for ISS/JEM Onboard Experiments**

*The AO for Korea-Japan cooperation on ISS/JEM utilization*

**Dr. Gi-Hyuk Choi, KARI**

*Conditions and Schedule of Joint KARI-JAXA Feasibility Study on JEM Utilization*

**Mr. Tetsuo Tanaka, Director of Space Environment Utilization Center,  
JAXA**

6:00 pm

**Reception**

**December 8, 2007**

9:30 am

■ **Space Program**

*JAXA Space utilization science program overview*

**Prof. Shinichi YODA, JAXA ISS Science Office Director**

10:20 am

■ **Molecular Biochemistry & Biomedical engineering**

*High-quality protein crystal growth in microgravity and structural analysis*

**Prof. Masaru TANOKURA, University of Tokyo**

*Systemic proteomics of aging, cancer, and microgravity*

**Dr. Tae-Sung YOON, Korea Research Institute of Bioscience and  
Biotechnology**

*Visualization of noise field inside the ISS*

**Prof. Duk-Ju LEE, Wonju JEON, Jeong Kwon IH, Jisung JANG, KAIST,  
and Young Ki KIM (SM Instrument)**

12:00 pm

**Lunch**

1:30 pm

■ **Material Science/Chemistry**

*Synthesis of zeolite microcrystals with uniform sizes and shapes in microgravity*

**Prof. Kyung Byung YOON, Sogang University**

2:00 pm

■ **Fluid Physics**

*Measurement of surface tension using a parabolic flight: flexible tool for microgravity experiments*

**Prof. Taketoshi HIBIYA, Keio University**

*Control of flow and heat transfer by G-gittering in the micro-gravity environment*

**Profs. Jae Min HYUN, KAIST, Jun Sang PARK, Halla University, and  
Young Sup SHIN, Halla University**

3:00 pm

■ **Combustion and Energy**

*Current topics in combustion researches under microgravity*

**Prof. Osamu FUJITA, Hokkaido University <date/time requested>**

*Electric fields effect on the oscillation and stabilization of nonpremixed flames*

**Prof. Suk Ho CHUNG, M.K. KIM and S.K. Ryu,  
Seoul National University**

4:00 pm

**Break**

4:20 pm

**■ Future Road Map of Collaborations / Individual discussion**

*Potential collaborative research topics and associated hardwares for ISS/JEM  
onboard experiments*

**Life and Biological Science**

**Prof. Makoto ASASHIMA and Prof. Inho CHOI**

**Materials Science**

**Prof. Suk Ho CHUNG and Prof. Shinichi YODA**