

## **Agenda for the 14<sup>th</sup> Japan-Korea Joint Seminar on Space Environment Utilization Research**

August 24 ~ 25, 2017

Korea Aerospace Research Institute, 169-84, Gwahak-ro, Daejeon, Korea

Chairs of the Seminar

**Prof. Inho CHOI & Prof. Makoto ASASHIMA**

### **August 24 (Day 1)**

#### **09:10 ~ 09:40**

- **Seminar Registration**

#### **09:40 ~ 09:50**

- **Opening and Welcome Remarks**

Opening and Welcoming Remarks

**Prof. Inho CHOI, Yonsei University**

#### **09:50 ~ 10:20**

- **Seminar Perspectives**

09:50-10:05

Research collaboration on microgravity sciences between Korea and Japan

**Prof. Inho CHOI, Yonsei University**

10:05-10:20

Outline of Space Experiments in Japan

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

#### **10:20 ~ 10:35**

- **Space Program Introduction**

**Session Chair: Dr. Joohee LEE**

10:20-10:35

Updates on Space Program Activities in KARI

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

The latest status of Asian Kibo utilization activities

**JAXA**

**10:35 ~ 11:20**

■ **Combustion**

**Session Chair: Prof. Seul-Hyun PARK**

10:35-10:50

Effects of applied electric fields on flame spread over electrical wire coated with Polyethylene insulator with different diameters

**Prof. Jeong PARK, Pukyong National University**

10:50-11:05

Research on solid material flammability limit followed by proposal of new ISO standard for fire safety in space

**Prof. Osamu FUJITA, Hokkaido University**

11:05-11:20

Cubesat as a Promising Platform for Microgravity Combustion Experiments

**Prof. Seul-Hyun PARK, Chosun University**

**11:20 ~ 13:00**

■ **Photo Time**

■ **Lunch Break: Cafeteria in KARI**

**13:00 ~ 14:00**

■ **Biology & Life Science (I)**

**Session Chair: Prof. Takeshi NIKAWA**

13:00-13:15

Unloading induces reactive oxygen species associated signal transduction toward atrophy in skeletal muscle cells

**Prof. Takeshi NIKAWA, Tokushima University Graduate School**

13:15-13:30

Mouse Experiment in ISS/Kibo

**Prof. Satoru TAKAHASHI, University of Tsukuba**

13:30-13:45

Spatial orientation and vestibular function are influenced by long-term exposure of gravitational stimulation in rats

**M.D. Kyu-Sung KIM, Inha University Hospital**

13:45-14:00

Muscle molecular physiology in spaceflown *C. elegans*

**Prof. Atsushi HIGASHITANI, Tohoku University**

**14:00 ~ 14:45**

■ **Biology & Life Science (II)**

**Session Chair: Prof. Jin LEE**

14:00-14:15

Regulatory mechanisms mutual or different between gravitropism and hydrotropism in seedling roots

**Prof. Hideyuki TAKAHASHI, Tohoku University**

14:15-14:30

The effects of altering gravity on motor neuron development and aging in the nematode *C. elegans*

**Prof. Jin LEE, Yonsei University**

14:30-14:45

Effects of simulated microgravity on UV resistance of plants

**Prof. Jun HIDEEMA, Tohoku University**

**14:45 ~ 15:05**

■ **Coffee Break**

**15:05 ~ 16:35**

■ **Chemical Engineering & Material Science**

**Session Chair: Dr. Geun Woo LEE**

15:05-15:20

Structural evolution and thermodynamics of highly supersaturated aqueous solutions

**Dr. Geun Woo LEE, Korea Research Institute of Standards and Science**

15:20-15:35

Soft hydrogel microstructures formed by reversible self-bending of pH-responsive bilayers

**Mr. Jongmin KIM & Prof. Chang-Soo LEE, Chungnam National University**

15:35-15:50

Numerical simulation of an oscillating liquid metal droplet under the influence of alternating magnetic field

**Dr. Toshio TAGAWA, Tokyo Metropolitan University**

15:50-16:05

Directional self-assembly of patch hexagram particles at the air/water interface via lateral capillary interaction

**Mr. Gyurak SHIM & Prof. Chang-Soo LEE, Chungnam National University**

16:05-16:20

Effects of Convection on Physical Vapor Crystal Growth of Hg<sub>2</sub>Cl<sub>2</sub> under  
Microgravity Environments

**Prof. Geug Tae KIM, Hannam University**

16:20-16:35

Interfacial phenomena levitated compound droplet under microgravity or ground

**Prof. Masahito WATANABE, Gakushuin University**

**16:35 ~ 16:50**

- **Coffee Break**

**16:50 ~ 17:20**

- **Comment / Seminar Discussion**

**Prof. Makoto ASHSHIMA & Prof. Inho CHOI**

**18:00 ~ 20:00**

- **Workshop Dinner**

## **August 25 (Day 2)**

**09:30 ~ 13:00**

- **Seminar Summary & Discussion**

Seminar Summary & Minutes

**Prof. Inho CHOI & Prof. Makoto ASHSHIMA**

- **Workshop Tour**

KARI Facility Tour & Lunch