

## Keynote and Scientific Sessions

updated on July 31, 2025

### ● Keynote Sessions I & II

**Chairs:** Charles Lin (NCKU) and Yuki Tobimatsu (RISH, Kyoto U.)

**Confirmed Keynote Speakers:**

- Prof. Emer. Toshitaka Tsuda (RISH, Kyoto U.)
- Prof., Mamoru Yamamoto (RISH, Kyoto U.)
- Prof. Mt. Jade Scholar Masaru Ohme-Takagi (NCKU)
- Prof. Mt. Jade Scholar Takashi Gojobori (NCKU)

### ● Session I. Satellite Payload and Engineering

**Chairs:** Alfred Bing-Chih Chen (NCKU), Hirotsugu Kojima (RISH, Kyoto U.)

**Description:** TBD

**Speakers:** TBD

### ● Session II. Equatorial Aeronomy and Remote Sensing

**Chairs:** Charles Lin (NCKU), Tatsuhiko Yokoyama (RISH, Kyoto U.)

**Description:** This session focuses on the equatorial ionosphere and thermosphere, highlighting space and ground-based remote sensing, ionospheric variability, and space weather impacts. Contributions on observations, modeling, and interdisciplinary studies including machine learning techniques will be presented.

**Speakers:** P. K. Rajesh (NCKU), Yen-Hsyang Chu (National Central U.), Chi-Yen Lin (National Central U.), Peng Liu (RISH, Kyoto U.), Chun-Yen Huang (RISH, Kyoto U.)

### ● Session III. Urban Pest and Management

**Chairs:** Hou-Feng Li (National Chung Hsing U.), Wakako Ohmura (RISH, Kyoto U.)

**Description:** This session will focus on the problematic at hand of invasive alien species that cause economic damage with destruction of native ecosystems, as well as pest problems closely related to human life. Through the relationships among the individual problems and phenomena introduced by the speakers, an efficient approach to addressing invasive alien species will be explored.

**Speakers:** Etsuko Kagaya (FFPRI, Japan), Shu-Ping Tseng (National Taiwan University), Kok-Boon Neoh (National Chung Hsing U.), Hou-Feng Li (National Chung Hsing U.), Wakako Ohmura (RISH, Kyoto U.)

### ● Session IV. Wireless Systems – Semiconductor Devices and Wireless Power Transfer –

**Chairs:** Yu-Te Liao (National Yang Ming Chiao Tung U.), Tsung-Heng Tsai (National Yang Ming Chiao Tung U.), Tomohiko Mitani (RISH, Kyoto U.)

**Description:** Wireless systems including mobile communications, satellite systems, and IoT networks play a vital role in modern society. With the rapid development of wireless systems, there is an increasing demand for high-performance semiconductor devices. At the same time, wireless power transfer technologies are gaining attention as a solution for powering electronic devices wirelessly. In this

session, we introduce the recent development of wireless systems that support a sustainable future.

**Speakers:** Yu-Te Liao (National Yang Ming Chiao Tung U.), Tsung-Heng Tsai (National Yang Ming Chiao Tung U.), Bo Yang (RISH, Kyoto U), Tomohiko Mitani (RISH, Kyoto U).

- **Session V. Architecture with Wood – Large-scale Structures with Timber Materials –**

**Chairs:** Yu-Lin Chung (NCKU), Hiroshi Isoda (RISH, Kyoto U.)

**Description:** TBD

**Speakers:** TBD

- **Session VI. Biology and Biotechnology for a Sustainable Future**

**Chairs:** Chao-Li Huang (NCKU), Yuki Tobimatsu (RISH, Kyoto U.)

**Description:** Unlocking the full potential of plant biomass is key to mitigating our dependence on fossil resources and realizing a sustainable society. It is also increasingly important to assess the impacts of global climate change and human activities on our ecosystems. In this session, a panel of expert biologists will share their recent work in plant genetics, metabolic engineering, and ecosystem biology, envisioning how we can achieve a sustainable future through biological and biotechnological approaches.

**Speakers:** Ying-Chung Jimmy Lin (National Taiwan U.); I-Ching Chen (NCKU); Ying-Lan Chen (NCKU); Chao-Li Huang (NCKU); Yuki Tobimatsu (RISH, Kyoto U.)

- **Session VII. Space Science and Space Weather**

**Chairs:** Charles Lin (NCKU), Yusuke Ebihara (RISH, Kyoto U.)

**Description:** The utilization of space has already begun, and space infrastructure has become indispensable to our daily lives. Severe space disturbances can exert significant effects on modern society, so that understanding the dynamics of space environment and their consequences is crucial for ensuring societal safety and security. This session broadly covers the fundamentals of space science, space weather applications, and extreme space conditions.

**Speakers:** TBD

- **Session VIII. Advanced Biomass-based Materials**

**Chairs:** Yi-Chun Chen (National Chung Hsing U.), Yukiko Enomoto (U. Tokyo)

**Description:** This session focuses on advanced materials derived from biomass, including lignin or cellulose, the processing and production of biomass into high-value-added chemicals, environmental remediation materials, and any other novel methods or approaches in the related field. This session aims to discuss and explore sustainable development and the circular economy by sharing recent technologies based on carbon neutral and resource recycling, as well as low-environmental-impact approaches.

**Speakers:** Yi-Chun Chen (National Chung Hsing U.), Biqing Liang (NCKU), Yu-Ting (Lusia) Liu (National Chung Hsing U.), Bing Xie (Kyoto U.), Yukiko Enomoto (U. Tokyo)