

# 2025 International Symposium on Earth and Space Environment Monitoring and its Application to Disaster Risk Reduction

Date and Time: 11 November 2025 9:00 ~ 18:00

Venue: 100th Anniversary Hall (UEC Alliance Center (1F))

Organized by  
Earth Environment Research Station (UEC)

Co- organized by  
Mega-Risk Disaster Research Station (UEC)  
Research Center for Realizing Sustainable Societies (UEC)  
Hayakawa Institute of Seismo Electromagnetics Co. Ltd.  
QuakeInsight Tokyo Association

Commemorative lecture: Prof. Masashi Hayakawa  
(Recipient of the Order of the Sacred Treasure, Gold Rays with Neck Ribbon in 2025)



## - 2025 International Symposium of Earth Env. Res. Station -

### Opening remarks

---

9:00-9:15 Prof. Kazuto Masamoto (International Education Center, UEC, Japan)  
Prof. Yasuhide Hobara (Department of Computer and Network Engineering, Earth Environment Research Station, SSRE, Research Center for Realizing Sustainable Societies, UEC, Japan)

---

Session 1 Chair: Prof. Yasuhide Hobara

---

9:15-9:30 (15-min) Observations of convective storms in Japan with X-band MP-PAWR and LF/MF band lightning location system  
Prof. Hiroshi Kikuchi (SSRE, UEC, Japan)

---

9:30-9:45 (15-min) Real-Time 3D Imaging of Charge Distributions in Thunderclouds for Early Warning of Lightning Strikes  
Prof. Manabu Akita (Department of Mechanical and Intelligent Systems Engineering, UEC, Japan)

---

9:45-10:00 (15-min) Assessing the Potential of Total Lightning for Nowcasting Ground Rainfall in Summer Thunderstorms Using Density-Dependent Automatic Tracking  
Dr. Debrupa Mondal (Department of aerospace engineering, Nihon University, Japan)

---

10:00-10:10 Break

Session 2 Chair: Prof. Koichiro Michimoto

---

10:10-10:25 (15-min) Overview of Real-Time Lightning 3D Imaging and Forecasting Project for Sustainable and Reliable Supply of Energy and Storm Disaster Early  
Prof. Takeshi Morimoto (Department of Electrical and Electronic and Communication Engineering, Kindai university, Japan)

---

10:25-10:40 (15-min) Differences in Lightning Source Locations Using Broadband Interferometry and Cross-correlation Mapping Techniques  
Dr. Yuji Takayanagi (Department of Electrical and Electronic and Communication Engineering, Kindai University, Japan)

---

10:40-10:55 (15-min) Real-time Distribution of Lightning Observation Data and Disaster Prevention Applications  
Dr. Muhammad Haziq bin Mohammad Sabri (Department of Electrical and Electronic and Communication Engineering, Kindai University, Japan)

---

10:55-11:10 (15-min) Low-Frequency Observatory at the Ukrainian Antarctic Station 'Akademik Vernadsky  
Dr. Oleksandr Koloskov (Department of Physics, University of New Brunswick, Canada)

---

11:10-11:20 Break

- 2025 International Symposium of Earth Env. Res. Station -

Session 3	Chair: Prof. Koichiro Oyama
11:20-11:35 (15-min)	Progress in the Construction of the MVP-LAI System for Monitoring Vibrations and Perturbations in the Lithosphere-Atmosphere-Ionosphere, and the Application of Resonance Signals in Natural Disaster Prediction and Early Warning Prof. Chieh-Hung Chen (State Key Laboratory of Geohazard Prevention and Geoenvironment Protection, Chengdu University of Technology, China)
11:35-11:50 (15-min)	Multiple-event analysis of ULF emissions using 3D WLP-FDTD electromagnetic simulations in the lithosphere Prof. Yohaiki Ando (Department of Computer and Network Engineering, SSRE, UEC, Japan)
11:50-12:05 (15-min)	Doppler Sounder Observations of Ionospheric Disturbances Associated with the March 28, 2025 Myanmar Earthquake Dr. Yanlin Liu (State Key Laboratory of Geohazard Prevention and Geoenvironment Protection, Chengdu University of Technology, China)
12:05-12:20 (15-min)	Investigation of Seismo-Ionospheric Precursors Using Artificial Intelligence Dr. Shinji Hirooka (HiSR Inc., QuakeInsight Tokyo, Chiba University, Japan)

12:20-13:15 Break

**Commemorative lecture: Recipient of the Order of the Sacred Treasure,  
Gold Rays with Neck Ribbon**

13:15-14:00 (45-min)	Study of electromagnetic noise for 50 years Prof. Masashi Hayakawa (AWCC (UEC), Hayakawa Institute of Seismo Electromagnetics Co. Ltd., QuakeInsight Tokyo, Japan)
-------------------------	---

14:00-14:10 Break

Session 4	Chair: Prof. Sudipta Sasmal
14:10-14:25 (15-min)	Modulation of basic Schumann resonance frequency by solar activity Prof. Alexander P. Nickolaenko (O.Ya. Usikov Institute for Radiophysics and Electronics of National Academy of Sciences of Ukraine, Ukraine)
14:25-14:40 (15-min)	Winter thunderstorms in Japan Prof. Koichiro Michimoto (Former National Defense Academy, Japan)

**- 2025 International Symposium of Earth Env. Res. Station -**

---

14:40-14:55    Radio observations for Disaster Risk Reduction  
(15-min)      Prof. Yasuhide Hobara (Department of Computer and Network Engineering, Earth Environment Research Station, SSRE, Research Center for Realizing Sustainable Societies, UEC, Japan)

---

14:55-15:05    Break

Session 5      Chair: Prof. Takeshi Morimoto

---

15:05-15:20    Radiation and Environmental Risk Assessment in Resource Extraction Regions  
(15-min)      Prof. Yo Ishigaki (Research Center for Realizing Sustainable Societies, UEC, Japan)

---

15:20-15:35    Current Missions and Researches on the Space Environment Monitoring at  
(15-min)      KAIST: LEO, GEO, and beyond  
Prof. Kwangsun Ryu (Korea Advanced Institute of Science and Technology (KAIST), Korea)

---

15:35-15:50    Enhancing Disaster Resilience with ICT Solutions  
(15-min)      Prof. Kayoko Yamamoto (Department of Informatics and Joint Doctoral Program for Sustainability Research, Mega-Risk Disaster Research Station, Research Center for Realizing Sustainable Society, UEC, Japan)

---

15:50-16:05    Low-Frequency Near-Field Communication for Wireless Blasting in Tunnel  
(15-min)      Construction: A Preliminary Study  
Prof. Kun Li (Advanced Wireless and Communication Research Center (AWCC), UEC, Japan)

---

16:05-16:20    Applications of Degree of Polarization Information in Synthetic Aperture Radar  
(15-min)      Field  
Prof. Fang Shang (Department of Computer and Network Engineering, UEC, Japan)

---

16:20-16:30    Break

Session 6      Chair: Prof. Chieh-Hung Chen

---

16:30-16:45    Multiparameter observation of EQ precursors  
(15-min)      Dr. Sudipta Sasmal (Institute of Astronomy Space and Earth Science, India)

---

16:45-17:00    Common behaviors of ionosphere and ground motion for M larger than 7  
(15-min)      earthquakes  
Prof. Koichiro Oyama (Asia Space Environment Research Consortium, International Center of Planetary and Space Environment Study, Kyushu University, Japan)

---

- 2025 International Symposium of Earth Env. Res. Station -

---

17:00-17:15    Challenge to Short-term Earthquake Forecast  
(15-min)      Prof. Katsumi Hattori (Department of Earth Sciences, Chiba University, Japan)

---

17:15-17:30    Criticality in different Lithosphere-Atmosphere-Ionosphere Coupling (LAIC)  
(15-min)      agents before significant earthquakes  
Prof. Stelios M. Potirakis (Department of Electrical and Electronics Engineering,  
University of West Attica, Greece)

---

17:30-17:45    Overview of QuakeInsight Tokyo  
(15-min)      Prof. Masashi Hayakawa (AWCC (UEC), Hayakawa Institute of Seismo  
Electromagnetics Co. Ltd., QuakeInsight Tokyo, Japan)

---

Closing remarks

---

17:45-18:00    Prof. Kayoko Yamamoto (Department of Informatics and Joint Doctoral Program  
for Sustainability Research, Mega-Risk Disaster Research Station, Research  
Center for Realizing Sustainable Society, UEC, Japan)  
Prof. Yasuhide Hobara (Department of Computer and Network Engineering, Earth  
Environment Research Station, SSRE, Research Center for Realizing Sustainable  
Societies, UEC, Japan)

---

18:15-20:15    Banquet