International Workshop on Advancing Disaster Resilience through Radio Observations 2026

12–13 November 2026

100th Anniversary Hall, UEC Alliance Center

Chofu, Tokyo, Japan

ORGANIZERS

QuakeInsight Tokyo (QIT)

and

Earth Environment Research Station,

The University of Electro-Communications (UEC)

SUPPORTED BY

Society of Atmospheric Electricity of Japan

PROGRAM

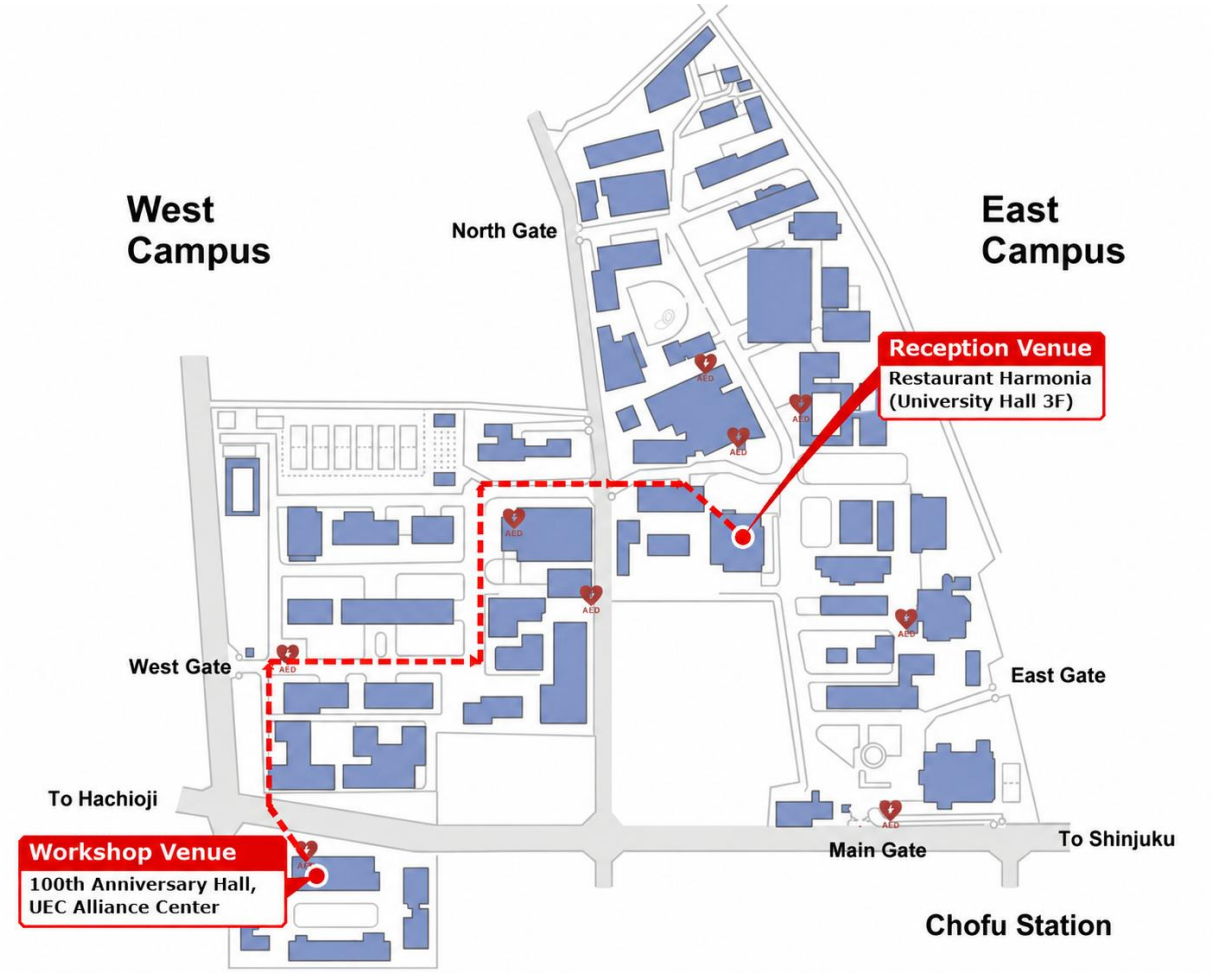
Invited talks: 30 minutes each (including 10-minute Q&A)

DAY 1 — THURSDAY · 12 NOVEMBER 2026

TIME	PROGRAM
OPENING	**Chair: Prof. Masashi Hayakawa**
09:30-09:45	**Opening remarks** **Dr. Kazuaki Oya** | Executive Assistant to the President, UEC
SESSION 1 • EXTREME WEATHER	**Chair: Prof. Tomoo Ushio**
09:45-10:15	**Short-term prediction of lightning and heavy rainfall using MP-PAWR and LF/MF lightning location system [L1]** **Prof. Hiroshi Kikuchi**, **Y. Hobara** (UEC), **E. Yoshikawa** (The University of Osaka), **Y. Nakamura** (Kobe City College of Technology), **T. Morimoto** (Kindai University), **T. Ushio** (The University of Osaka)
10:15-10:45	**Technology for avoiding aircraft lightning strikes [L2]** **Prof. Eiichi Yoshikawa** (The University of Osaka), **S. Horishita**, **Y. Hamada** (Japan Aerospace Exploration Agency), **T. Ushio** (The University of Osaka)
10:45-11:15	**Design and field verification of a needle-tip electric field meter [L3]** **Mr. Kazuki Oobayashi**, **S. Yanagawa** (SHODEN CORPORATION), **K. Michimoto** (Hayakawa Institute of Seismo Electromagnetics, Co., Ltd.)
11:15-11:45	**Real-time 3D imaging of lightning discharges and charge distributions in thunderclouds for early warning of lightning strikes [L4]** **Prof. Manabu Akita**, **T. Inaba** (UEC), **T. Morimoto**, **Y. Takayanagi** (Kindai University), **Z. Kawasaki** (The University of Osaka), **M. R. Ahmad** (Universiti Teknikal Malaysia Melaka, Malaysia), **Z. Baharuddin** (Universiti Tenaga Nasional, Malaysia)
11:45-13:15	*Lunch Break* 🥐
SESSION 2 • EXTREME WEATHER / SEISMO-ELECTROMAGNETICS	**Chair: Prof. Sudipta Sasmal**
13:15-13:45	**Challenges and application of the X-band phased-array weather radar [L5]** **Prof. Tomoo Ushio**, **E. Yoshikawa** (The University of Osaka)
13:45-14:15	**Radio observations of the strongest lightning discharges in winter thunderstorms [L6]** **Prof. Ting Wu**, **D. Wang** (Gifu University)
14:15-14:45	**Equivalent source strengths of earthquake-associated ULF magnetic anomalies from three-dimensional simulations [S1]** **Prof. Yoshiaki Ando** (UEC)
14:45-15:15 On-line	**Spatiotemporal distribution of geomagnetic discrepancies and their link to major earthquakes [S2]** **Prof. Chieh-Hung Chen** (Chengdu University of Technology, China), **X. Zhang** (Institute of Earthquake Forecasting, China)
15:15-15:30	*Break* ☕
SESSION 3 • SEISMO-ELECTROMAGNETICS	**Chair: Prof. Ken Umeno**
15:30-16:00	**Statistical relationship between anomalous VHF broadcast wave propagation and earthquake occurrence [S3]** **Prof. Kuniyuki Motojima** (Gunma University)

TIME	PROGRAM
16:00-16:30	**Lithosphere-Atmosphere-Ionosphere (LAI) Coupling during extreme geophysical events: Atmospheric gravity waves and implications for Disaster Risk Reduction (DRR) [S4]** **Prof. Yasuhide Hobara**, **A. D. Setiawan** (UEC), **S. Sasmal** (Institute of Astronomy Space and Earth Science, India), **A. Shvets** (O. Ya. Usikov Institute for Radio physics and Electronics, Ukraine)
16:30-17:00	**Pre-seismic gravity wave activity before the 2024 Noto Peninsula earthquake [S5]** **Dr. Shih-Sian Yang** (Solar Sharing, Co. Ltd., Taiwan), **Y. Hobara** (UEC), **S. Sasmal** (Institute of Astronomy Space and Earth Science, India), **S. M. Potirakis** (University of West Attica, Greece), **M. Hayakawa** (QuakeInsight Tokyo)
17:00-17:30	**Multiparameter Lithosphere-Atmosphere-Ionosphere coupling signatures associated with three 2026 earthquakes in Japan [S6]** **Dr. Sudipta Sasmal**, **K. Nanda** (Institute of Astronomy Space and Earth Science, India), **M. Hayakawa** (QuakeInsight Tokyo), **S. M. Potirakis** (University of West Attica, Greece), **H. Hinata** (QuakeInsight Tokyo), **Y. Hobara** (UEC)

18:00 - 20:00 — **NETWORKING RECEPTION**
Venue: Restaurant Harmonia, University Hall 3F



DAY 2 — FRIDAY · 13 NOVEMBER 2026

TIME	PROGRAM
SESSION 4 • SEISMO-ELECTROMAGNETICS	**Chair: Prof. Abhirup Datta**
09:30-10:00	**Meteorological anomalies associated with earthquakes with the use of AMeDAS data, and Lithosphere-Atmosphere-Ionosphere Coupling channels [S7]** **Prof. Masashi Hayakawa**, **H. Hinata** (QuakeInsight Tokyo), **S. Hirooka** (HiSR Inc.), **S. M. Potirakis** (University of West Attica, Greece), **Y. Hobara** (UEC)
10:00-10:30	**Ionospheric anomalies preceding the 1944 Tonankai and 1945 Mikawa earthquakes revealed by handwritten ionogram analysis [S8]** **Prof. Ken Umeno** (Kyoto University)
10:30-11:00	**An automated software framework for the QuakeInsight Tokyo (QIT) earthquake dashboard [S9]** **Dr. Sudipta Sasmal**, **A. Bhattacharyya**, **K. Nanda** (Institute of Astronomy Space and Earth Science, India), **M. Hayakawa**, **H. Hinata** (QuakeInsight Tokyo), **Y. Hobara** (UEC)
11:00-11:30	**Capacitive coupling model between the earth's crust and the ionosphere: Electrification in pre-seismic charged fractured layer with supercritical water [S10]** **Prof. Akira Mizuno**, **M. Kao**, **K. Umeno** (Kyoto University)
11:30-12:00	**Pre-earthquake ionospheric anomalies associated with the 2025 Kamchatka M8.8 earthquake: Toward data-driven short-term earthquake forecasting [S11]** **Prof. Katsumi Hattori** (Chiba University), **J.-Y. Liu** (National Central University, Taiwan), **P. Han** (Southern University of Science and Technology, China), **D. Ouzounov** (Hellenic Mediterranean University, Greece), **Q. Huang** (Peking University, China), **C. Sasanuma**, **C. Yoshino**, **W. Li**, **R. Song**, **T. Ono**, **J. Najima**, **Y. Noda**, **K. Saeki** (Chiba University), **S. Pillipenko** (Schmidt Institute of Physics of the Earth, Russia)
12:00-13:30	*Lunch Break*
SESSION 5 • SEISMO-ELECTROMAGNETICS	**Chair: Prof. Yasuhide Hobara**
13:30-14:00 On-line	**Towards the localization of earthquake preparation through combined seismo-electromagnetic and seismicity analysis [S12]** **Prof. Stelios M. Potirakis**, **E. Kyriakis-Bitzaros** (University of West Attica, Greece), **S. Sasmal** (Institute of Astronomy Space and Earth Science, India), **A. Charitopoulos** (University of West Attica, Greece), **D. Dimakos** (Hellenic Telecommunications and Post Commission (EETT), Greece), **Y. Kokkaliaris** (University of West Attica, Greece)
14:00-14:30	**Toward continuous earthquake activity forecasting using ionospheric observations and end-to-end deep learning [S13]** **Dr. Shinji Hirooka**, **M. Tatsuno** (HiSR Inc.), **M. Hayakawa** (QuakeInsight Tokyo)
14:30-15:00	**Advancing disaster risk reduction through ionospheric guidance: A multi-hazard, source-resolved framework for India [S14]** **Prof. Abhriup Datta** (Indian Institute of Technology Indore, India), **S. Sasmal** (Institute of Astronomy Space and Earth Science, India), **M. Hayakawa** (QuakeInsight Tokyo), **Y. Hobara** (UEC)
15:00-15:30	**Milk yield variations in dairy cows and earthquakes: Previous findings and exploratory lunar phase analysis [S15]** **Dr. Hiroyuki Yamauchi** (Earthquake Prediction Research Center)
15:30-15:45	*Break*

TIME	PROGRAM
SESSION 6 • EXTREME WEATHER	**Chair: Prof. Katsumi Hattori**
15:45-16:15	**Water vapor lidar observations of moisture transport into mesoscale convective systems in western Japan [L7]** **Prof. Satoru Yoshida** (Chiba University), **M. Nishihashi**, **T. Sakai** (Meteorological Research Institute)
16:15-16:45 On-line	**Observational insights into lightning-rainfall coupling and convective evolution in severe thunderstorms [L8]** **Dr. Debrupa Mondal** (Indian Institute of Tropical Meteorology, India), **Y. Hobara**, **H. Kikuchi** (UEC), **J. Lapierre** (Advanced Environmental Monitoring, USA)
16:45-17:15	**Atmospheric gravity waves excited by convective weather systems [L9]** **Dr. Shih-Sian Yang** (Solar Sharing, Co. Ltd., Taiwan), **Y. Hobara** (UEC), **S. Sasmal** (Institute of Astronomy Space and Earth Science, India), **S. M. Potirakis** (University of West Attica, Greece), **M. Hayakawa** (QuakeInsight Tokyo)
17:15-17:45	**Advanced disaster resilience via lightning observations: Multi-scale prediction of heavy rainfall and spatiotemporal mapping of high-charge flashes [L10]** **Prof. Yasuhide Hobara**, **H. Kikuchi** (UEC)
CLOSING	
17:45-17:50	**Plan of proceedings of two international workshops** **Prof. Abhirup Datta** (Indian Institute of Technology Indore, India)
17:50-18:00	**Closing Remarks** **Prof. Yasuhide Hobara** (UEC)