The 30th CEReS International Symposium &
The 28th CEReS Environmental Remote Sensing Symposium

Hybrid: Keyaki Kaikan, Chiba University & Zoom

ver. 20251130

Date: November 30 and December 1, 2025
Method: Hybrid (Keyaki Kaikan, Chiba University & Zoom)
※Zoom connection information is emailed to participants before the symposium.

Oral Presentation (in English)

- Each presentation slot is 15 minutes long (10 minutes for the talk, 4 minutes for Q&A, and 1 minute buffer).
- Presenters are expected to connect their own PC to the projector. An HDMI port is required. Please bring any necessary adapters or converters.
- As a precaution, please prepare a copy of your presentation file so that it can be shown using the on-site PC if needed.
- If you are unable to use your own PC, please contact the CEReS Joint Research Promotion Committee (kyoudo@ceres.cr.chiba-u.ac.jp) in advance.
- We recommend checking the connection between your PC and the projector during the break before your presentation.
- We encourage the use of PowerPoint's laser pointer feature during your presentation. A physical laser pointer will also be available on-site; however, please note that it will not be visible to online participants.

Poster Presentation (in English)

- The poster board dimensions are 900 mm (W) × 1800 mm (H).
- We recommend that posters be displayed from the morning.
- All posters will be replaced between Day 1 and Day 2.
- Please check the program to confirm which day your poster is scheduled.
- Pins and other materials needed to mount the posters will be provided by CEReS.

Others

- Should any technical difficulties arise with online participation, priority will be given to on-site proceedings.
- Due to university's security policies, Wi-Fi access will likely not be available at the venue.
- After the presentations, we plan to collect presentation materials via email to compile into a proceedings document. You may remove any content that is not suitable for public release. Please submit your presentation as a PDF file with one slide per page. Posters should also be provided in PDF format. We appreciate your cooperation.
- The participation fee for the social gathering will be collected at the symposium reception. Please have exact change (3,500 JPY) ready.
- Cancellations for the social gathering will be accepted by November 27. After that date, the full fee will be charged. We appreciate your understanding.

環境リモートセンシング研究センター
Center for Environmental Remote Sensing

Co-sponsors

千葉大学国際交流公募事業
「海外との組織的教育研究支援プログラム」

公益財団法人
ちば国際コンベンションビューロー
Chiba Convention Bureau and International Center(CCB-IC)

■Day 1: November 30, 2025 (Sun)

please use your laptop PC for your talk.
presentation: 10 min. Q&A: 4 min.

UTC JST

00:30 09:30 **Welcome**
Katsumi Hattori (CEReS/Chiba-U)

00:35 09:35 **Logistics**
Hitoshi Irie (CEReS/Chiba-U)

CEReS 30th Anniversary Session [Chairs: Shunya Mizobuchi & Hitoshi Irie]

00:40 09:40 **A LTCC-based Antenna Array with Densified Self-Sequential Rotation Feeding Configuration for Circularly Polarized Terahertz Communications**
*Qiubo Ye

00:55 09:55 **Long-term trend analysis of land surface phenology in Northern Japan using Himawari-8/-9 AHI decade-long data**
*Tomoaki Miura

01:10 10:10 **Traveling Ionospheric Disturbances Triggered by the 29 July 2025 M8.8 Kamchatka Earthquake Observed in Taiwan and Japan**
Tiger Jann-Yenq Liu, Katsumi Hattori, and Yao-Chun Chen

01:25 10:25 [online] **CARE: A Next-Generation High Resolution Cloud and Radiation Remote Sensing Product and Its Earth System Applications**
*Husi Letu, Chong Shi, and Takashi Y. Nakajima

Joint-Research Results Session 1 [Chairs: Josaphat Tetuko Sri Sumantyo]

01:40 10:40 [online] **Three tectonic plates of Indonesia, biodiversity, carbon dating of marine fossils**
*Agus Hartoko, Josaphat T S Sumantyo, and Hariyadi

01:55 10:55 [online] **Improvement of application technology of satellite products by synthetic use of a climate model and satellite remote sensing data**
*K. Mabuchi and K. Kajiwara

02:10 11:10 **A Multi-task Transformer for Integrated In-season Rapeseed Mapping and Flowering Retrieval Using Sentinel-1 and Sentinel-2 Data**
*Xuehong Chen

02:25 11:25 **The 3rd Young Earth Observation Satellite Research Liaison Meeting**
*Kaya Kanemaru, Yuhei Yamamoto, Akira Yamauchi, Yuki Imura, and Takuro Michibata

02:50 11:50  **Group Photo (@1st floor)** onsite participants only

03:00 12:00 **(Lunch)**

04:00 13:00 to 04:30 14:30 **Poster Core Time (Day 1)** onsite participants only

Joint-Research Promotion Session 1 [Chairs: Wei Yang & Licong Liu]

06:00 15:00 **Challenges and Opportunities of Hyper-Temporal Vegetation Monitoring by an International Network of Gestationally Satellites**
*Kazuhito Ichii, Yuhei Yamamoto, Wei Yang, Taiga Sasagawa, Beichen Zhang, Wei Li, Rui Fu, Misaki Hase, Tatsuya Hirama, Reo Shibayama, Hiroki Yoshioka, Kenta Obata, Masayuki Matsuoka, and Tomoaki Miura

06:15 15:15 **High temporal resolution surface datasets from 3rd Japanese geostationary satellite Himawari -8/9 AHI**
*Wei Li, Beichen Zhang, Yuhei Yamamoto, Taiga Sasagawa, Wei Yang, and Kazuhito Ichii

06:30 15:30 **Using JapanFlux and Remote Sensing Data to Create a Data Driven Carbon Flux Model of Japan**
*Daniel Henri and Kazuhito Ichii

06:45 15:45 **(Break)**

Joint-Research Promotion Session 2 [Chairs: Kazuhito Ichii & Yuhei Yamamoto]

07:15 16:15 **Large-Scale Forest Inventory from drone laser data for MOLI satellite laser**
*Akira Kato, Tatsuro Nakaji, Kyaw Kyaw Htoo, Yuichi Hayakawa, Kentaro Takagi, Narumasa Tsutsuminda, and Yoshito Sawada

07:30 16:30 **Development of a Novel DBH Estimation Technique for TLS with ALS Data Affected by Understory Vegetation**
*Yamada Seitaro and Kato Akira

07:45 16:45 **On Solar-Terrestrial Interactions: Correlation Between Intense Geomagnetic Storms and Global Strong Earthquakes**
*Peng Han, Hongyan Chen, Katsumi Hattori, Jiancang Zhuang, and Qinghua Huang

08:30 17:30 to 10:30 19:30 **Social Gathering @ Aere cafe (in Chiba Univ.)**

see the map on the page below

■Day 2: December 1, 2025 (Mon)

please use your laptop PC for your talk.
presentation: 10 min. Q&A: 4 min.

UTC JST

00:25 09:25 **Logistics**
Hitoshi Irie (CEReS/Chiba-U)

Joint-Research Promotion Session 3 [Chairs: Naoko Saitoh & Dmitry Belikov]

00:30 09:30 **Carbon dioxide seasonal/intra-seasonal variations in the upper troposphere and lower stratosphere from GOSAT TANSO--FTS TIR profile data**
*Nawo Eguchi and Naoko Saitoh

00:45 09:45 **Application of TROPOMI Satellite Observations for Monitoring Air Pollution and Methane Variability**
*Dmitry Belikov

01:00 10:00 [online] **A study on the spaceborne remote sensing for the observations of Earth and planetary atmospheric environments**
*Katsuyuki Noguchi and Hitoshi Irie

01:15 10:15 [online] **A study on the aerosol transport in the Martian atmosphere using remote sensing data**
*Moe Oka, Katsuyuki Noguchi, and Hitoshi Irie

01:30 10:30 [online] **Application and Improvement of Gravity Wave Analysis Techniques, Established for the Earth's Atmosphere, to the Martian Atmosphere**
*Chikako Hashimoto, Katsuyuki Noguchi, and Hitoshi Irie

01:45 10:45 **(Break)**

Joint-Research Promotion Session 4 [Chairs: Pascal Oettli & Akira Takeshima]

02:00 11:00 **The Pre-Earthquake Ionospheric Anomalies and the Possible Coupling Mechanism Related to the M8.8 Kamchatka Earthquake on July 29, 2025**
*Rui Song, Katsumi Hattori, Xuemin Zhang, Jann-Yenq Liu, Chinatsu Sasanuma, and Chie Yoshino

02:15 11:15 **Observations of the horizontal inhomogeneity in lower-atmospheric water vapor concentration using A-SKY/MAX-DOAS and evaluation of model reproducibility**
*Shunya Mizobuchi, Hitoshi Irie, and Shingo Shimizu

02:30 11:30 **Evaluating Deep Learning+IDW Combinations: A Comparative Study of Solar Irradiance Forecasting in Tropical Regions**
*Bintang Lamra Soetopo, Pranda M.P. Garniwa, Muhammad Dimyati, and Josaphat Tetuko Sri Sumantyo

02:45 11:45 **Spatiotemporal Marine Intelligence in Coastal Ecosystem Conservation**
*Takashi Kobayashi, Kirara Kotani, Kota Sato, and Masaki Hisada

03:00 12:00 **(Lunch)**

04:00 13:00
to **Poster Core Time (Day 2)** onsite participants only
05:30 14:30

end of poster session
please remove posters

Joint-Research Results Session 2 [Chairs: Atsushi Higuchi]

05:45 14:45 **Spectral Transformation Based on the Equivalence of Inversion Algorithms in Red and NIR Reflectance Space**
*Hiroki Yoshioka, Kenta Obata, Masayuki Matsuoka, and Kazuhito Ichii

06:00 15:00 **LED Mini-lidar for Mars Rover-mounting**
*Tatsuo Shiina, Hiroki Senshu, Naohito Otobe, and George Hashimoto

06:15 15:15 **An unsupervised deep anomaly detection model combined with extreme value theory in loss function: Detecting sudden stratospheric warming events**
*Khulan Myagmar, Bayanjargal Darkhijav, Tsolmon Renchin, C. H. Charles Lin and Rajesh P.K

06:30 15:30 [online] **Spectral latent heating (SLH) algorithm for the midlatitudes using GPM/DPR**
*Atsushi Hamada, Chie Yokoyama, Hiroki Tsuji, Yasuataka Ikuta, Shoichi Shige, Moeka Yamaji, Takuji Kubota, and Yukari N. Takayabu

06:45 15:45 **Mass-Extinction Conversion Factor (MECF) estimated by lidar and field sampling of aerosols in East Asia**
*Kenji Kai, Kei Kawai, Yoshitaka Jin, and Tatsuo Shiina

07:00 16:00 **Research on quality assurance and quality control (QA/QC) of SKYNET observed aerosol and cloud products**
*Pradeep Khatri and Hitoshi Irie

07:15 16:15 [online] **Validation of Satellite Ozone Precursor Data (NO_2, HCHO, CHOCHO) Using MAX-DOAS Observations**
*Gaia Pinardi, Hitoshi Irie, Steven Compernolle, Tijl Verhoelst, Isabelle De Smedt, Thomas Danckaert, Bavo Langerock, Jean-Christopher Lambert, and Michel Van Roozendael

07:30 16:30 **Closing**
Kazuhito Ichii (CEReS/Chiba-U)

■Posters - Day 1: November 30, 2025 (Sun)

P-101 **Progress on retrieving the isoprene column amount from GOSAT-2 TIR spectral data**
*Tomoo Nagahama and Naoko Saito

P-102 **Analysis of Sporadic E Layers Using FMCW Ranging and HF Doppler Observation**
*Hiroyuki Nakata, Shota Sako, Noriko Namiki, Kenro Nozaki, Keisuke Hosokawa, and Hiroyo Ohya

P-103 **Estimation on age of houses using aerial photographs from the Geospatial Information Authority of Japan**
*Toru Takahashi and Keigo Oshima

P-104 **Lamb Waves of the 15 January 2022 Tonga Volcanic Eruption Uplift the Ionosphere in Taiwan and Japan**
Tien-Chi Liu, Jann-Yenq Liu, Katsumi Hattori, and *Yuh-Ing Chen

P-105 **Solar irradiance sensitivity of WRF-Solar with observed aerosol optical parameter in Asian dust event**
*Hiroyuki Iwanaga and Hitoshi Irie

P-106 **Short-Term Earthquake Forecast Using Ionospheric Electron Density Fluctuations ~ Discrimination of Geomagnetic Storm Effects ~**
*Chinatsu Sasanuma, Rui Song, Chie Yoshino, Katsumi Hattori, and Jann-Yeng Tiger Liu

P-107 **Accurate assessment of black carbon wet scavenging in the urban atmosphere**
*Yoshikazu Kamiya, Hitoshi Irie, and Pradeep Khatri

P-108 **Aerosol and pollutant variations over Fukuoka urban area in Japan: validation of satellite data**
*Hisahiro Takashima

P-109 **Development and Evaluation of a Methane Emission Estimation Model for Shallow Eutrophic Lakes Using Satellite Observations and Machine Learning**
*Masato Oda, Wei Yang, and Hiroki Iwata

P-110 **Re-architecting a Real-Time Image Processing Platform on Zynq-7020 with PetaLinux**
*Yuki Otsuka, Kazuteru Namba, and Josaphat Tetuko Sri Sumantyo

P-111 **Time-Series Comparison of Red Band Reflectance and NDVI in Diseased and Healthy Rice-Growing Areas Using Satellite Imagery in Indonesia**
*Yuki Nakada, Masayasu Maki, and Chiharu Hongo

P-112 **Observations by the Martian Meteorological Instruments on LUNATERRACE**
*Naohito Otobe, Tatsuo Shiina, Hiroki Senshu, George Hashimoto, and Takahiro Iwayama

P-113 **Development of a novel muti-criteria method using deep learning and optimization for image classification**
*Bayanmunkh.N, Tsolmonbayar.Sh, Bayanjargal.D, Batchuluun.Ts, and Tsolmon.R, Davaajargal.J, Selenge.M

P-114 **Physics-Based Estimation of Leaf Area Index in Asia and Oceania Using Himawari-8 Data**
*Tatsuya Hirama, Yuhei Yamamoto, Wei Yang, and Kazuhito Ichii

P-115 Assessment of Factors Contributing to Urban Heat Islands in Major Japanese Cities Using Data from the Himawari-8
*Misaki Ogawa, Masahito Ueyama, Yuhei Yamamoto, and Kazuhito Ichii

P-116 Building a Quantitative Model for the Cultural Value of Trees —A Case Study of the Garcinia and Deigo Tree-Lined Streets—
*Takumi Saito, Akira Kato, Hirabayashi Satoshi, and Goto Mizuho

P-117 Monitoring Terrestrial Ecosystems by PlanetScope CubeSat Constellation Images with High Spatiotemporal Resolutions
*Wei Yang, Mengyu Li, Wanqi Lin, and Heng Li

P-118 MOLI Mission: Advancing Global Forest Observation from the ISS
*Yoshito Sawada, Rei Mitsuhashi, Tadashi Imai, and Taishi Sumita

P-119 Analysis of Long-Term Variations and Drivers of Global Vegetation Activity Based on MODIS Data
*Madoka Koshino, Kazuhito Ichii, Misaki Hase, Daniel Henri

P-120 Analysis of Land Surface Temperature Characteristics in Japan in July 2025 Based on Satellite Observations
*Reina Watanabe, Kazuhito Ichii, and Beichen Zhang

P-121 The Phenological Eyes Network (PEN): Current Status and Future Directions for the World's Longest-Running In Situ Phenology Network
*Taiga Sasagawa, Kazuhito Ichii, and Kenlo Nasahara

P-122 Diurnal Modeling of Gross Primary Production in East Asia with Himawari-8/9 and JapanFlux and KoFlux Data
*Yuhei Yamamoto, Kazuhito Ichii, Wei Yang, and Masahito Ueyama

P-123 Diurnal Variability of Land Surface Temperature and Response to Climate Events in Southeast Asian Megacities
*Soma Yamasaki, Yuhei Yamamoto, and Kazuhito Ichii

P-124 Exploring Diurnal Land Surface Temperature Variations to Detect Vegetation Environmental Stress in Australia
*Reo Shibayama, Yuhei Yamamoto, Beichen Zhang, Xuanlong Ma, Hojin Lee, and Kazuhito Ichii

P-125 Visualization of Extreme Weather Events Scenarios Using Regional Ensemble Prediction Data
*Pascal Oettli and Shunji Kotsuki

P-126 A Comprehensive Benchmarking of Paleoclimate Reanalysis Products Against Major Observational Datasets
*Muhammad Abid Khan and Atsushi Okazaki

P-127 ENRICHING THE HERITAGE BUILDING'S DATA THROUGH PHOTOGRAMMETRY: THE DAENDELS PALACE OF JAKARTA (A.A. MARAMIS BUILDING)
*Yuke Ardhiati

P-128 Incorporating GeoMagnetic Precursor Anomalies into ETAS Model for Earthquake Forecasting
*Wenchao Li, Chie Yoshino , Katsumi Hattori, Jiancang Zhuang, and Peng Han

P-129 Development and validation of SCALE-CO_2 and SCALE-radionuclide
*Yousuke Sato, Yutaka Arai, Wang Qiao, and Naoko Saitoh

■Posters - Day 2: December 1, 2025 (Mon)

P-201 **Development of a gas visualization system using infrared absorption techniques**
*T. Somekawa, K. Inoguchi, S. Kurahashi, T. Shiina, and H. Kuze

P-202 **Estimation of ground level NO_2 concentration in Japan using atmospheric column NO_2**
*Masamitsu Hayasaki, Yukika Toda, Hitoshi Irie, Atsushi Higuchi

P-203 **Field Landscapes and Himawari-8/9 Observations in Contrast for Understanding Agricultural Features in Southeast Asia**
*Shindai Kanai, Misaki Hase, Taiga Sasagawa, and Kazuhito Ichii

P-204 **Detecting Multi-Cropping Patterns across Southeast Asia using Himawari-8**
*Misaki Hase, Kazuhito Ichii, Yuhei Yamamoto, Wei Li, and Beichen Zhang

P-205 **Forest fire simulation using drone laser data**
*Arisa Iwasaki, Akira Katou, Yosuke Yamada, and Akihiro Yamasaki

P-206 **Estimation of 3D Crustal Deformation in the 2024 Noto Peninsula Earthquake based on Airborne LiDAR Data**
*Wen Liu and Fumio Yamazaki

P-207 **The Effects of Topographical Modification on Crop Growth**
Katsuhisa Niwa, *Takayuki Mori, Jun Yokobori, and Chiharu Hongo

P-208 **Investigating the Link between Soundscapes and Green Space Configuration**
*Makoto Kasahara

P-209 **Machine Learning Identification of Lightning Discharge Processes Observed by a VLF/LF Interferometer and Evaluation of Discharge Location Estimation**
*Takumi Ono, Yuichiro Ota, Katsumi Hattori, Kenshin Miura, Chie Yoshino, and Noriyuki Imazumi

P-210 **Monitoring active volcanoes using Himawari-8 SWIR observations**
*N. Genzano, A. Falconieri, K. Hattori, A. Higuchi, N. Pergola, and F. Marchese

P-211 **Detection of Surface Thermal Anomalies Before Lava Eruption Using Himawari AHI Data**
*Keigo Saeki, Akitsugu Kitade, Shu Kaneko, Chie Yoshino, and Katsumi Hattori

P-212 **Large-Scale 4D Stress Field Evolution Model of the Longmen Shan Fault Zone**
*Jingtong Wang, and Peng Han

P-213 **Relationship between flooding period in paddies and bacterial leaf blight disease using sentinel-2 satellite data**
*Takayuki Mori, Gunardi Sigit, and Chiharu Hongo

P-214 **Proposal of a New Strain Analysis Method Using GNSS Data**
*Jumpei Najima, Yoichi Noda, Katsumi Hattori, Yukio Fujinawa, and Chie Yoshino

P-215 **Identifying Suitable Light Conditions for the Growth of Endangered Species in the Ogasawara Islands Using Drone-based LiDAR**
*Shinichi Katsuta and Akira Kato

P-216 **Prediction of Understory Vegetation Using Drone Laser-derived Canopy Structure**
*Kouhei Ogawa and Akira Kato

P-217 Comparison of Machine Learning, Remote Sensing, and Process-Based Models in GPP Estimation: Insights from Multi-Model Evaluation
*Ruci Wang and Kazuhito Ichii

P-218 Monitoring Agricultural Drought in Arid and Humid Regions Using the Diurnal Land Surface Temperature Index Based on Himawari 8/9
*Rui Fu, Kazuhito Ichii, and Yuhei Yamamoto

P-219 Advancing Terrestrial Evapotranspiration Monitoring through Diurnal Observations from Himawari-8 Satellite
*Beichen Zhang, Kazuhito Ichii, Yuhei Yamamoto, Wei Li, Atsushi Higuchi, and Wei Yang

P-220 Changes in Terrestrial Carbon Cycle in Siberia Based on Multi Model-Data Approach
*Munseon Beak, Kazuhito Ichii, Beichen Zhang, Daniel Henri, and Misaki Hase

P-221 Quantifying Carbon Sequestration in Subtropical Japan: Integrating 3D Scanning and Biomass Sampling of Fukugi Trees
*Satoshi Hirabayashi, Bixia Chen, Takumi Saito, Hayato Hirabayashi, and Akira Kato

P-222 A Comparative Study of BRDF Correction for MODIS and Himawari-9 Data
*Yueru Wen and Kazuhito Ichii

P-223 Spatial Characteristics of Daily Max/Min Urban Surface Temperatures during Heat Waves: A Case Study of the Tokyo Metropolitan Area
*Moena Fukatsu, Yuhei Yamamoto, and Kazuhito Ichii

P-224 Development of Machine Learning-based Weather Prediction System
*Akira Takeshima, Kenta Shiraishi, Atsushi Okazaki, Tadashi Tsuyuki, and Shunji Kotsuki

P-225 Toward Smarter Crop Insurance: Economic Feasibility and Operational Strategies for Integrating UAV-Based BLB Assessment in Tropical Rice Farming
*Arif Kurnia Wijayanto, Lilik Budi Prasetyo, and Chiharu Hongo

P-226 Advancing Rice Disease Surveillance: A Multidimensional UAV-Based Framework for Bacterial Leaf Blight Assessment
*Arif Kurnia Wijayanto, Lilik Budi Prasetyo, and Chiharu Hongo

P-227 Applying non-Gaussian data assimilation to estimating global precipitation fields from rain-gauge observations
*Yuka Muto, Craig Bishop, and Shunji Kotsuki

P-228 Assessing Light Pollution in Mongolia: Current Status and Future Trends
*Tsolmon Renchin and Selenge Munkhbayar

P-229 The relationship between landslides and trees using drone laser data
*Hina Wakabayashi, Akira Kato, Yuichi Hayakawa, and Mio Kasai

P-230 Development of an inventory of Deigo Trees on Kakaroma Island using a 3D laser scanner and Picus measurements and assessment of ecosystem services using i-Tree Eco
*Mizuho Goto, Satoshi Hirabayashi, and Akira Kato

P-231 Applying the Urban Tree Assessment Tool i-Tree Eco to the Fukugi (Garcinia subelliptica) Windbreak Landscape in Okinawa
*Bixia Chen, Satoshi Hirabayashi, Takumi Saito, Hayato Hirabayashi, Akira Kato, and Mizuho Goto

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