CONFERENCE 13264

Active and Passive Remote Sensing of Oceans, Seas, and Lakes

02 - 03 December 2024 | Room 303A

Conference Chair(s): **Robert J. Frouin,** Scripps Institution of Oceanography (United States); **Hiroshi Murakami,** Japan Aerospace Exploration Agency (Japan); **Jong-Kuk Choi,** Korea Institute of Ocean Science & Technology (Korea, Republic of); **Kuo-Hsin Tseng,** National Central Univ. (Taiwan)

Program Committee: **Vittorio Ernesto Brando,** National Research Council (Italy); **Prakash Chauhan,** Indian Institute of Remote Sensing (India); **Heidi M. Dierssen,** Univ. of Connecticut Marine Sciences (United States); **Ana I. Dogliotti,** Institute for Astronomy and Space Physics (Argentina); **David P. Doxaran,** Lab. d'Océanographie de Villefranche (France); **Cécile Dupouy,** Institut de Recherche pour le Développement (New Caledonia); **Xianqiang He,** The Second Institute of Oceanography, SOA (China); **Chung-Ru Ho,** National Taiwan Ocean Univ. (Taiwan); **Po-Chun Hsu,** National Central Univ. (Taiwan); **Joji Ishizaka,** Nagoya Univ. (Japan); **Milton Kampel,** Instituto Nacional de Pesquisas Espaciais (Brazil); **Ewa J. Kwiatkowska,** EUMETSAT (Germany); **Zhongping Lee,** Univ. of Massachusetts Boston (United States); **Hubert Loisel,** Lab. d'Océanologie et de Géosciences (France); **Young-Je Park,** Korea Institute of Ocean Science & Technology (Korea, Republic of); **Satheesh C. Shenoi,** Indian National Ctr. for Ocean Information Services (India); **Jing Tan,** Univ. of California, San Diego (United States); **Menghua Wang,** NOAA Ctr. for Satellite Applications and Research (United States); **P. Jeremy Werdell,** NASA Goddard Space Flight Ctr. (United States)

Monday 2 December 2024

OPENING CEREMONY AND PLENARY SESSION

02 December 2024 • 08:45 AM - 12:00 PM | Room 304A

Chair welcome and introduction
2 December 2024 • 8:45 AM - 09:00 AM

Taiwan's space-based remote sensing development and application: from TASA's perspective (Plenary Presentation)
Presenter(s): Jong-Shinn Wu, Director General, Taiwan Space Agency (TASA) (Taiwan)
2 December 2024 • 09:00 AM - 09:30 AM

NASA Earth science vision: technology enables science (Plenary Presentation)
Presenter(s): Upendra N. Singh, NASA Engineering and Safety Ctr., NASA Langley Research Ctr. (United States)
2 December 2024 • 09:30 AM - 09:45 AM

Enabling technology for Space-based remote sensing for science and exploration (Plenary Presentation)
Presenter(s): Clayton P. Turner, Associate Administrator (acting), Space Technology Mission Directorate, NASA Headquarters (United States)
2 December 2024 • 09:45 AM - 10:00 AM

10:00 AM - 10:30 AM: Coffee Break

Integration of vantage points, programs, and approaches for Space-based Earth remote sensing (Plenary Presentation)
Presenter(s): Jack A. Kaye, Associate Director for Research, Science Mission Directorate/Earth Science Division, NASA Headquarters (United States)
2 December 2024 • 10:30 AM - 11:00 AM

JAXA's Earth Observation Program: current missions and international cooperation (Plenary Presentation)
Presenter(s): Futoshi Takiguchi, Vice President, Japan Aerospace Exploration Agency (JAXA) (Japan)
2 December 2024 • 11:00 AM - 11:30 AM

Past, current, and future of Geostationary Ocean Color Imager (GOCI) (Plenary Presentation)
Presenter(s): Jongkuk Choi, Principal Researcher (Director), Korea Ocean Satellite Center, Korea Institute of Ocean Science & Technology (KIOST) (Korea, Republic of)
2 December 2024 • 11:30 AM - 12:00 PM

Lunch Break 12:00 PM - 01:30 PM

WELCOME AND OPENING REMARKS

02 December 2024 • 01:30 PM - 01:40 PM | Room 303A
Robert J. Frouin, Scripps Institution of Oceanography (United States), **Hiroshi Murakami**, Japan Aerospace Exploration Agency (Japan), **Jong-Kuk Choi**, Korea Institute of Ocean Science & Technology (Korea, Republic of), **Kuo-Hsin Tseng**, National Central Univ. (Taiwan)

SESSION 1: ALGORITHM DEVELOPMENT AND CALIBRATION TECHNIQUES

02 December 2024 • 01:40 PM - 03:00 PM | Room 303A
Session Chair(s): **Hiroshi Murakami**, Japan Aerospace Exploration Agency (Japan)

13264-1 • 01:40 PM - 02:00 PM
PCA-based atmospheric correction of PACE OCI ocean color imagery
Author(s): **Robert Frouin, Jing Tan,** Scripps Institution of Oceanography (United States)

13264-2 • 02:00 PM - 02:20 PM
Local optimization of satellite ocean color algorithm using AERONET-OC in Ariake Bay
Author(s): **Hiroshi Murakami**, **Taiga Nakayama,** Japan Aerospace Exploration Agency (Japan); **Joji Ishizaka,** Nagoya Univ. (Japan)

13264-3 • 02:20 PM - 02:40 PM
Estimating diurnal variability of photosynthetically available radiation at the ocean surface from EPIC observations
Author(s): **Jing Tan**, **Robert Frouin,** Univ. of California, San Diego (United States); **Deuk-Jae Hwang**, **Jong-Kuk Choi,** Korea Institute of Ocean Science & Technology (Korea, Republic of); **Hiroshi Murakami,** Earth Observation Research Ctr., Japan Aerospace Exploration Agency (Japan)

13264-4 • 02:40 PM - 03:00 PM
A bias correction method for AMSR2 brightness temperatures over global ocean
Author(s): **Kyungsoo Lee, Sang-Moo Lee,** Seoul National Univ. (Korea, Republic of)

Coffee/Tea Break 03:00 PM - 03:30 PM

SESSION 2: EMERGING TECHNOLOGIES AND PRODUCT INNOVATIONS

02 December 2024 • 03:30 PM - 04:30 PM | Room 303A
Session Chair(s): **Jing Tan**, Univ. of California, San Diego (United States)

13264-6 • 03:30 PM - 03:50 PM **(CANCELLED)**
Development of an organic pin grid array (OPGA) image sensor in OCI CubeSat remote sensing instrumentation
Author(s): **Po Hung Lin,** Taiwan Space Agency (TASA) (Taiwan); **Yu Han Chen**, **Hsiao Hua Tsai**, **Huan Kun Pan**, **Shih Chi Tsai**, **Yen Ching Wu,** PixArt Imaging, Inc. (Taiwan)

13264-5 • 03:30 PM - 03:50 PM
Satellite on-board processing of synthetic aperture radar data for rapid delivery of latency sensitive maritime information products
Author(s): **Dominik Günzel, Srikanth Mandapati,** Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany)

13264-7 • 03:50 PM - 04:10 PM
Improving online data QC of VHF coastal radar for ocean current mapping
Author(s): **An Cheng**, **Huan-Meng Chang,** National Central Univ. (Taiwan); **Hsin-Yu Yu,** Central Weather Administration (Taiwan); **Hwa Chien,** National Central Univ. (Taiwan); **Chun-Ying Lee**, **Cheng-Da Lee, Shou-Shiun Lin,** TTRC, IOT, MOTC (Taiwan)

13264-8 • 04:10 PM - 04:30 PM
Coastline extraction and coastline types recognition based on deep learning using Chinese high-resolution satellite imagery
Author(s): **Hui Li**, **Linhai Jing, Haifeng Ding,** Aerospace Information Research Institute (China)

POSTER SESSION

02 December 2024 • 04:30 PM - 06:00 PM | Room 304/305 Foyer

Conference attendees are invited to attend the poster session on Monday evening. Come view the posters, ask questions, network and socialize with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to this event.

Poster Setup: Monday 12:00 PM - 04:00 PM
Poster authors: view poster presentation guidelines and set-up instructions online.

13264-20 • 04:30 PM - 06:00 PM
Spatiotemporal variability of sea surface temperature, sea surface height, and water quality along the northwestern coast of Taiwan
Author(s): **Qian-Zhu Hao, Po-Chun Hsu,** Ctr. for Space and Remote Sensing Research, National Central Univ. (Taiwan)

13264-21 • 04:30 PM - 06:00 PM
Performance of a portable fluorescence lidar system with regional Chl-a derivation algorithms: a case study of Chiba, Japan
Author(s): **Jumar Cadondon,** Univ. of the Philippines Visayas (Philippines), De La Salle Univ. (Philippines); **Jejomar Bulan**, **Edgar Vallar**, **Maria Cecilia Galvez,** De La Salle Univ. (Philippines); **Shiina Tatsuo,** Chiba Univ. (Japan)

13264-22 • 04:30 PM - 06:00 PM
Deriving optical water quality from GCOM-C/SGLI remote sensing reflectance
Author(s): **Eko Siswanto,** Japan Agency for Marine-Earth Science and Technology (Japan)

13264-24 • 04:30 PM - 06:00 PM
Sea surface temperature trends in marginal seas of the Asian Continent
Author(s): **Yu-Hao Tseng**, **Chung-Ru Ho,** National Taiwan Ocean Univ. (Taiwan); **Ching-Yuan Lu,** Pyras Technology Inc. (Taiwan)

13264-25 • 04:30 PM - 06:00 PM
Nearshore bathymetry derived from a synergy of ICESat-2 and optical satellites in Southern Penghu
Author(s): **Chun-Chuen Huang, Kuo-Hsin Tseng,** National Central Univ. (Taiwan)

13264-26 • 04:30 PM - 06:00 PM
Advanced algorithm for estimating sea surface salinity in the East China Sea during the summer season using GOCI-II data
Author(s): **Hyun-Jin Yang,** Pusan National Univ. (Korea, Republic of); **Jong-Kuk Choi,** Korea Institute of Ocean Science and Technology (Korea, Republic of); **Jong-Kuk Choi,** Korea Institute of Ocean Science and Technology (Korea, Republic of); **Young-Heon Jo,** Pusan National Univ. (Korea, Republic of)

13264-27 • 04:30 PM - 06:00 PM
Sea surface salinity monitoring in the East China Sea using geostationary satellite
Author(s): **Eunna Jang**, **Jong-Kuk Choi, Jae-Hyun Ahn,** Korea Institute of Ocean Science & Technology (Korea, Republic of)

13264-28 • 04:30 PM - 06:00 PM
Evaluating the spatial suitability for seaweed aquaculture through ocean color remote sensing in Lombok, Indonesia
Author(s): **Md Rakesur Rahman**, **Jong-Kuk Choi,** Korea Ocean Satellite Ctr., Korea Institute of Ocean Science & Technology (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); **Hansan Park,** Korea-Indonesia Marine Technology Cooperation Research Ctr., Korea Institute of Ocean Science & Technology (Indonesia)

13264-29 • 04:30 PM - 06:00 PM
Estimating PAR product at the ocean around Korean Peninsula with GOCI series
Author(s): **Deuk-Jae Hwang,** Korea Institute of Ocean Science & Technology (Korea, Republic of); **Jing Tan**, **Robert Frouin,** Scripps Institution of Oceanography (United States); **Jae-Hyun Ahn**, **Kyeong-Sang Lee, Jong-Kuk Choi,** Korea Institute of Ocean Science & Technology (Korea, Republic of)

13264-30 • 04:30 PM - 06:00 PM
Satellite-based mapping of mackerel habitat suitability in the exclusive economic zone of South Korea
Author(s): **Doni Nurdiansah,** Korea Institute of Ocean Science & Technology (Korea, Republic of), National Research and Innovation Agency (Indonesia), Univ. of Science and Technology (Korea, Republic of); **Seon Ju Lee,** Cooperative Institute for Satellite Earth System Studies (United States); **Deuk-Jae Hwang, Jong-Kuk Choi,** Korea Institute of Ocean Science & Technology (Korea, Republic of)

13264-31 • 04:30 PM - 06:00 PM
Water column correction for coral reef habitat mapping using high spatial resolution remote sensing image technology
Author(s): **Bara Samudra Syuhada,** Korea Ocean Satellite Ctr., Korea Institute of Ocean Science & Technology (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); **Deuk-Jae Hwang,** Korea Ocean Satellite Ctr., Korea Institute of Ocean Science & Technology (Korea, Republic of); **Taihun Kim,** Jeju Marine Research Ctr., Korea Institute of Ocean Science & Technology (Korea, Republic of); **Jong-Kuk Choi,** Korea Ocean Satellite Ctr., Korea Institute of Ocean Science & Technology (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of)

13264-32 • 04:30 PM - 06:00 PM
Inter-comparison with multi-year GOCI-II, MODIS, and VIIRS ocean color data
Author(s): **Myung-Sook Park**, **Minsang Kim**, **Sun-Ju Lee**, **Jae-Hyun Ahn, Jong-Kuk Choi,** Korea Institute of Ocean Science & Technology (Korea, Republic of)

13264-33 • 04:30 PM - 06:00 PM
Current calibration and validation status of the GOCI-II atmospheric correction
Author(s): **Jae-Hyun Ahn**, **Kyeong-Sang Lee**, **Jeong-Eon Moon**, **Tai-Hyun Han**, **Minsang Kim**, **Myung-Sook Park**, **Su-Jung Bae**, **Eun-Kyung Lee**, **Eunna Jang**, **Sun-Ju Lee, Jong-Kuk Choi,** Korea Institute of Ocean Science & Technology (Korea, Republic of)

13264-34 • 04:30 PM - 06:00 PM
Tracking of floating materials on the ocean surface using multisatellite images: a case study for the floating algae
Author(s): **Tae-Ho Kim**, **Jae-Yeop Kwon**, **Kuk-Jin Kim,** UST 21 Co., Ltd. (Korea, Republic of); **Hye-Kyeong Shin,** UST 21 Co. (Korea, Republic of)

Tuesday 3 December 2024
SESSION 3: COASTAL AND INLAND WATER APPLICATIONS
03 December 2024 • 08:30 AM - 09:50 AM | Room 303A
Session Chair(s): **Deuk-Jae Hwang,** Korea Institute of Ocean Science & Technology (Korea, Republic of)

13264-10 • 08:30 AM - 08:50 AM
Mapping the benthic habitats of Boracay and Sta. Cruz Islands, Philippines using Sentinel-2 imagery and random forest classification in Google Earth Engine
Author(s): **Kristine M. Bantay,** Philippine Space Agency (Philippines), Marine Science Institute, Univ. of the Philippines Diliman (Philippines); **Christian G. Candido,** Philippine Space Agency (Philippines); **Ariel C. Blanco,** Philippine Space Agency (Philippines), Univ. of the Philippines Diliman (Philippines)

13264-11 • 08:50 AM - 09:10 AM
Comparison of corrected surface reflectance, principal component analysis, and kernel principal component analysis for seagrass percent cover mapping using Sentinel-2 based on various regression models
Author(s): **Pramaditya Wicaksono**, **Setiawan Djody Harahap, Muhammad Kamal,** Univ. Gadjah Mada (Indonesia); **Muhammad Kamal, Candra S. D. Kartika,** Univ. Gadjah Mada (Indonesia)

13264-13 • 09:10 AM - 09:30 AM
Monitoring lake and reservoir dynamics in Taiwan by SWOT Mission
Author(s): **Kuo-Hsin Tseng,** National Central Univ. (Taiwan)

13264-12 • 09:30 AM - 09:50 AM
Mapping wetland dynamics via global seamless data cube and deep learning
Author(s): **Shuai Yuan**, **Peng Gong,** The Univ. of Hong Kong (Hong Kong, China); **Jie Wang,** Peng Cheng Lab. (China)

Coffee/Tea Break 09:50 AM - 10:20 AM

SESSION 4: ENVIRONMENTAL CHANGE AND CLIMATE IMPACT ASSESSMENTS

03 December 2024 • 10:20 AM - 12:00 PM | Room 303A
Session Chair(s): **Kuo-Hsin Tseng**, National Central Univ. (Taiwan)

13264-14 • 10:20 AM - 10:40 AM
High-Resolution Monitoring and Modelling of Thermal Plumes from Nuclear Power Plants in the Arabian Gulf
Author(s): **Fahim Abdul Gafoor**, **Yacine Addad**, **Maryam R. Al Shehhi,** Khalifa Univ. (United Arab Emirates); **Sultan A. Al Shehhi,** Emirates Nuclear Energy Corp. (United Arab Emirates); **shahira Abdul Lathif,** KHALIFA UNIVERSITY (United Arab Emirates)

13264-15 • 10:40 AM - 11:00 AM
Satellite-derived variability of particulate organic carbon and the influences of physical and biological processes in the Arabian Gulf during 2003-2022
Author(s): **Md Masudur Rahman, Roman Shults,** King Fahd Univ. of Petroleum & Minerals (Saudi Arabia)

13264-17 • 11:00 AM - 11:20 AM
A near real-time automated oil spill monitoring system using SAR imagery from the European Copernicus mission
Author(s): **Yi-Jie Yang,** Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany), Christian-Albrechts-Univ. zu Kiel (Germany); **Christoph Schnupfhagn,** Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany)

13264-18 • 11:20 AM - 11:40 AM
Dry period phytoplankton plumes are beneficial for coral reefs
Author(s): **Cécile Dupouy,** Institut de Recherche pour le Développement (France); **Jing Tan**, **Robert Frouin,** Scripps Institution of Oceanography (United States); **Andra Whiteside,** National Institute of Water and Atmospheric Research (New Zealand); **Rüdiger Röttgers,** Helmholtz-Zentrum Hereon GmbH (Germany); **Awnesh Singh,** Univ. of the South Pacific (Fiji); **Martine Rodier,** Institut de Recherche pour le Développement (France); **Hiroshi Murakami,** Japan Aerospace Exploration Agency (Japan)

13264-19 • 11:40 AM - 12:00 PM
High-frequency radar observations of meteotsunami currents in the northern region of Taiwan
Author(s): **Li-Ching Lin,** Advanced Research Ctr. for Earth Sciences, National Central Univ. (Taiwan); **An Cheng, Hwa Chien,** Institute of Hydrological and Oceanic Sciences, National Central Univ. (Taiwan)

ASIA-PACIFIC REMOTE SENSING BANQUET

03 December 2024 • 05:30 PM - 08:00 PM | Galaxy, Jubilee Hall

All registered conference attendees are invited to relax and socialize with your colleagues at the Asia-Pacific Remote Sensing Banquet. We ask that attendees gather at 05:30 PM. Dinner will be served at 06:00 PM. Entertainment provided by the Taiwu Ballads Troupe. Due to venue size restriction, we have limited space for guests of registered attendees to join the banquet. Guest tickets must be purchased.