2025 MicrowAve MonItoring of WATer Applications (MAMI WATA) with Workshop program

Day 3 November 20th 2025

Time (UTC+1)	Session Title	Session Chair	Presenter	Institution	Presentation Title
8:30-9:00	Opening session & welcome remarks	C. Zuffada / N. Pierdicca	C. Zuffada / N. Pierdicca / M. Crespi		*Introduction to the workshop objectives, overview of the program, and welcome from organizers.*
9:00-10:30	Session 1: Advances in GNSS-R Based Flood Mapping	E. Cardellach	Andrew Kruczkiewicz	University of Twente - ITC	Collaborative Development of a CYGNSS Flood Product for Enhanced Disaster Risk Management and Response
			Katie Stephens	University of California, Berkeley	Boreal Wetland Inundation Maps: GNSS-R and Computer Vision for Improved Water Cycle Monitoring of High Latitude Ecosystems
			Román Alarcia Pérez	University of Luxembourg	Detecting Floods with GNSS Reflectometry: A CYGNSS-Based Deep Learning Approach for Surface Water Monitoring
			Maurizio Di Bisceglie (Invited)	Università degli Studi del Sannio	Inland water detection from raw GNSS-R data using Kolmogorov-Smirnov phase analysis.
10:30-11:00	Coffee Break				
11:00-12:30	Session 2: Advances in SAR-Based Flood Mapping	M. Di Bisceglie	Pratyush Tripathy	University of California, Santa Barbara	Microwave is Not Optical: Challenges in Using SAR for Large-Scale Flood Mapping
			Alberto Refice (invited)	CNR IREA	SAR flood detection through Bayesian time series analysis: state of the art and future developments
			Luca Pulvirenti (invited)	CIMA Research Foundation	An algorithm for continuous satellite-based flood mapping using on-demand SAR data
			Marco Chini (invited)	Luxembourg Institute of Science and Technology (LIST)	Flood Water Depth Estimation Using SAR-Derived Flood Inundation Maps and Topographic Information by a Gradient-Based Optimization Method
12:30-13:30	Lunch break				
13:30-15:00	Session 3: Advances in Multi-Sensor Approaches for Water and Wetland Dynamics	A. Refice	Davide Festa (invited)	Technische Universität Wien	SAR-Optical Data Fusion for Dynamic Water Monitoring: Handling Sensor-Specific Uncertainty
			Paolo Gennaro Madonia	Sapienza - Università di Roma	Synergies and challenges in the combination of SAR and GNSS-R observations in vegetated environments
			Luca Cenci (invited)	CIMA Research Foundation	Assessing Benefits and Challenges of Sentinel-2 and COSMO-SkyMed Integration for Water Bodies Monitoring
			Nigeria Joint Talk - Aguruo Emmanuel Chukwud	NEWMAP, RAMP, World Bank Assisted Project Consultant	Tackling Flood Generated Food Insecurity in the West African Sub-region using Remote Sensory Approach
15:00-15:30	Coffee Break				
15:30-17:20	Session 4: Missions Updates	L. Pulvirenti	Tianjiao Pu	Princeton University	Daily CYGNSS WaterMask Reveals Hydrologic Hot Moments and Dynamic Wetland Variability
			Clara Chew (Invited)	Muon Space	Muon Space On-Orbit and Future GNSS-R Satellite Missions and Their Utility for Inundation Mapping
			E. Cardellach	HydroGNSS Science Team	HydroGNSS Mission Overview
			Clara Chew (Invited)	CyGNSS Science Team	CyGNSS Inundation Team - Water Product Update
			Joey Zhao	University of Colorado Boulder	High-Resolution Inland Surface Water Mapping Using GNSS Reflectometry and Deep Learning
17:20-17:40	Q&A / Discussion	MAMI WATA organizers	All participants		
19:30	Social Dinner				

Notes Each oral presentation considered as 15 minutes oral presentation & 5 minutes Q&A. One session is set to be 4 presenters * 20 mins each + 10 mins buffer time = 90 mins (1.5 hr)

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Day 4 November 21st 2025

Time (UTC+1)	Session Title	Session Chair	Presenter	Institution	Presentation Title
9:00-10:30	Session 5: Hydrologic and Ecological Applications of Microwave Remote Sensing	M. Chini	Abdul Ahad Ansari	Interdisciplinary Department of Remote Sensing and GIS Applications, Aligarh Muslim University, Aligarh, India	A Complementary Multi-Sensor Framework for Holistic Wetland Assessment: Integrating Optical, Microwave, and Gravity Data to Decipher Eco-Hydrological Dynamics
			Jayasree T V	Central University of Kerala	DeepFusionFlood: A DNN based framework for flood detection using heterogenous datafusion
			Yanmei Zhong	Wuhan University	On the Effects of Time Scale, Spatial Scale, Fitting Methods, and Vegetation Index on STR-VI Feature Space Performance
			Luisa Fernanda White Murillo	Monash University	Spatial variability of root zone soil moisture using a passive-passive retrieval with P- and L-band microwave frequency
10:30-11:00	Coffee Break				
11:00-12:00	Session 5: Hydrologic and Ecological Applications of Microwave Remote Sensing Continued	P. G. Madonia	Bandaru Bhanu Sree	Indian Institute of Remote Sensing	Scattering Signature Libraries for Horticultural Crops: Insights from RISAT-1A PolSAR data
			Shubhayan Roy Chowdhury	Indian Institute of Technology Bombay	Agricultural Flood Mapping Using Sentinel-1 Dual-Polarimetric SAR Data
			Sakthivel Ramar	Kumaraguru College Of Technology, Coimbatore.	Integrating Remote Sensing and Field Observations to Assess Wetland Water Spread Dynamics and Avian Abundance in Bonal Bird Conservation Reserve, India
12:00-13:00	Q&A / Discussion	MAMI WATA organizers	All participants		Open discussion / seed questions
13:00-14:00	Lunch break				
14:00-15:20	Session 6 (Poster Session):		Muriithi David Mwenda	Sapienza University of Rome	Synthetic Aperture Radar (SAR) Based Flood Extent Mapping in Complex Land Cover Areas
			Bishal Khatri	Karnali Secondary School	Leveraging Google Earth Engine with Python-based Machine Learning for Flood Susceptibility Zonation: A Comparative Analysis of RF and SVM in Kanchanpur, Nepal
			Linda Theres Bathinathan	Geospatial, Centre of Data for Public Good, IISc Campus, Bangalore	Glacier Velocity Mapping Using SAR Offset-Tracking and Multi-Sensor Fusion: A Case Study of Surface Motion Dynamics in the Indian Himalayan Region (IHR)
			Alessandra Maria de Pace	Sapienza, University of Rome	Near real-time GNSS meteorology: a prelimirary feasibility demonstration based on the variometric approach
			Michele Scagliola	European Space Agency	Geophysical Retrievals from CRISTAL over Inland Waters: Design, Development and Validation
			Marco Restano	Starion Group c/o ESA-ESRIN	St3TART-FO - Establishing a framework for operational Fiducial Reference Measurements (FRM) for Sentinel-3 Hydro-Cryo Altimetry products and beyond
			Marco Restano	Starion Group c/o ESA-ESRIN	Sentinel-3 Cal/Val and application for Hydro-Cryo
			Richa Prajapati	Center for Spatial Studies of the Biosphere (CESBIO – UT)	Towards enhancing root zone soil moisture estimates in JULES model using data assimilation in P-and L-band
			Matteo Barone, Nikita Mostacciuolo, Orazio Esposito, Luca Mucci, Sara Abounnasr	Università degli Studi del Sannio	GNSS-R high-resolution analysis of inland waters using Kolmogorov–Smirnov phase statistics.
15:20 - 15:40	Closing Remarks	C. Zuffada / N. Pierdicca			

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