



# Technical Activities

- Earth Science Informatics
- Frequency Allocation in Remote Sensing
- Geoscience Standards in Earth Observation
- Geoscience Spaceborne Imaging Spectroscopy
- **Image Analysis and Data Fusion**
- Instrumentation and Future Technologies
- Modeling in Remote Sensing
- Quantum Earth Science and Technology
- **Remote Sensing Environment Analysis, and Climate Technologies**

9 GRSS Technical  
Committees

## Chairs

Irena Hajnsek, ETH/DLR, Germany (Past CHair)

Adnan Siddique, ITU, Lahore (Chair)

Subit Chakrabarti, Floodbase, USA (Chair Elect)

Ryo Natsuaki, University of Tokyo, Japan

Andrea Donnellan, Purdue University, USA

## Local Focus Area Lead

Delwyn Moller, RESTORE LAB

Esra Erten, Istanbul Technical University, Turkey

Dipankar Mandal, Indian Institute of Technology Guwahati

Adnan Siddique, Information Technology University, Lahore

Jacob Steiner, Himalayan University Consortium

Subit Chakrabarti, Floodbase, USA

Pooja Shah, University of Tasmania

Yifang Ban, KTH Royal Institute of Technology

## Young professional support

Rabia Munsaf Khan, SUNY ESF, USA (stepped down)

Anuva Chowdhury (new liaison)

## Liaison Standards Committee:

Tianlin Wang, JPL, USA



**REACT Team**  
**> 550 Members**

**since Nov 2022**



# Local Focus Area

- Gathering a community, that is working together on a common region
- A variety of methods and techniques are used to explore different applications domains
- Meeting SDGs and climate issues using remote sensing
- Local issues transferable to global issues
- Define current and future use cases in the local areas
- Interdisciplinary and multi-cultural

## NEW:

- Extension of LFA with Forest/Mangrove
- Further extension on cryosphere topic is planned



# EO4SDG Mini Projects & Foto Contest 2021-24



Mini projects open to student teams worldwide

**THE REACT (EO4SDG) COMPETITION** <sup>3rd Edition</sup>

*How Remote Sensing can tackle regional problems*

Send us your proposals by November 15 2024

**EARTH AT RISK IMAGE CONTEST** <sup>3rd Edition</sup>

*Send us your most impactful EO images!*

Deadline: September 10, 2024

# IEEE GRSS MicrowAve Monitoring of WATer with Applications (MAMI WATA) Workshop



- Second edition (after MAMI WATA 2023)
- **2-day course** on remote sensing of inland water, wetland, inundation
  - User needs, use cases
  - SAR, altimeter, GNSS Reflectometry, SWOT
  - Models
- **2-day Workshop** on the same topics
- Hybrid (in person and remotely)
- Hosted by Sapienza University of Rome (IT) on 18-21 November 2025
- Travel grants for students and Young Researchers
- Best student presentation prize
- In collaboration with REACT, GRSS Chapters in Italy
- IEEE GRSS West Africa Workshop 2025 will join MAMI WATA on November 20, 2025

**2025 MICROWAVE MONITORING OF WATER WITH APPLICATIONS (MAMI WATA)**  
**Course and Workshop**

**18-21 November 2025**  
**School for Advanced Studies**  
**Sapienza University of Rome**  
Viale Regina Elena 295 / Bd. D, Rome (Italy)

Existing remote-sensing methods for mapping global inland water bodies, wetlands, and inundations include microwave techniques such as SAR, radar altimetry, radiometry, and GNSS reflectometry, as well as optical and hyperspectral approaches. These methods have been successfully utilized by various remote sensing communities.

**Course (18-19/11)**

- Data products needed for food security
- Mapping floods using SAR: European services
- NISAR mission to monitor inundation
- Radar altimeter for inland water
- GNSS Reflectometry observing wetlands and floods
- SWOT mission for hydrology

**Workshop (20-21/11)**

- How does an individual remote sensing technique perform?
- How they compare in meeting user requirements?
- Emerging synergies and strategies for future data types

Sign up before 1 October 2025: <https://128.pl/n6eMm>

Register before 15 August 2025 to secure lodging at a discounted rate (limited availability)

A limited number of travel grants are available for students and young professionals (YP) members upon request. Awards will be allocated through a review process. For more details, please visit IEEE GRSS MIRS TC: <https://loom.ly/nS19LMo>

Contact us at:  
[mami-wata@ieee.org](mailto:mami-wata@ieee.org)

Hosted by: SAPIENZA UNIVERSITÀ DI ROMA

In collaboration with IEEE Chapters: GRSS-SI, GRSS CNI, OES Italy



# Planned Activities 2025



## Summerschools 2025

- REACT SAR course connected to APSAR October 04th, 2025 (Ryo Natsusaki)
- REACT Urban resilience course connected to the local community in Australia November 2025 (Pooja Shah)

## IGARSS 2025

- REACT technical committee session (Monday 17:00-18:30)
- CCS: RS to Quantify & Monitor Earth Dynamics in Support of SDG and Climate Related Impacts: Methods and Applications (Thursday TH1.B2 08:00-09:15)

## Webinar 2025

- Jan25: Prof. Dr. Subimal Ghosh
- Feb25: Prof. Dr. Yifang Ban
- March25: Dr. Jakob Grahn
- April25: Dr. Aleah N. Summers
- June25: Prof. Dr. Ioannis Papoutsis
- July25: Prof. Dr. Aleah Summer

REACT-TC WEBINAR SERIES

### Weather Ready and Climate Smart Agricultural System

TUESDAY, 21 JANUARY 2025  
8 AM ET (UTC-5)

REGISTER TODAY



**Prof. Subimal Ghosh**  
Indian Institute of Technology  
Mumbai, India

GRSS REACT

REACT-TC WEBINAR SERIES

### Near-Real-Time Wildfire Monitoring with Multi-Sensor Earth Observation and Deep Learning

WEDNESDAY, 26 FEBRUARY 2025  
2:00 PM CET (UTC+1)

REGISTER NOW



<https://shorturl.at/Nc8Pp>



**Prof. Yifang Ban**  
KTH Royal Institute of Technology

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REACT-TC WEBINAR SERIES

### Glacier Hydrology and Ice Dynamics – Coupled Modeling to Understand Seasonal Velocities, Surges, and Floods

TUESDAY, 08 JULY 2025  
9:00 AM ET (UTC-5)

REGISTER NOW



<https://loom.ly/2F9IIQw>



**Dr. Aleah Summers**  
Dartmouth College, USA

GRSS REACT

# We are a member of EO4SDG!



## GEO Working group on SDG

- REACT member of GEO EO4SDG (since 11 June 2024)
- Contribution to the BLOG of EO4SDG (Dec 2024)

REACT – Remote sensing Environment, Analysis and Climate Technologies



*Irena Hajnsek from ETH Zurich Switzerland and the German Aerospace Center, Germany is leading the IEEE Geoscience and Remote Sensing Societies Technical Committee named REACT. REACT has several local focus areas. **Adnan Siddique** and **Jakob Steiner**, from ITU Lahore, Pakistan and University of Graz, Austria, respectively, are co-leading the focus area on "Risks in High Mountain Asia."*

REACT – Remote sensing Environment, Analysis and Climate Technologies

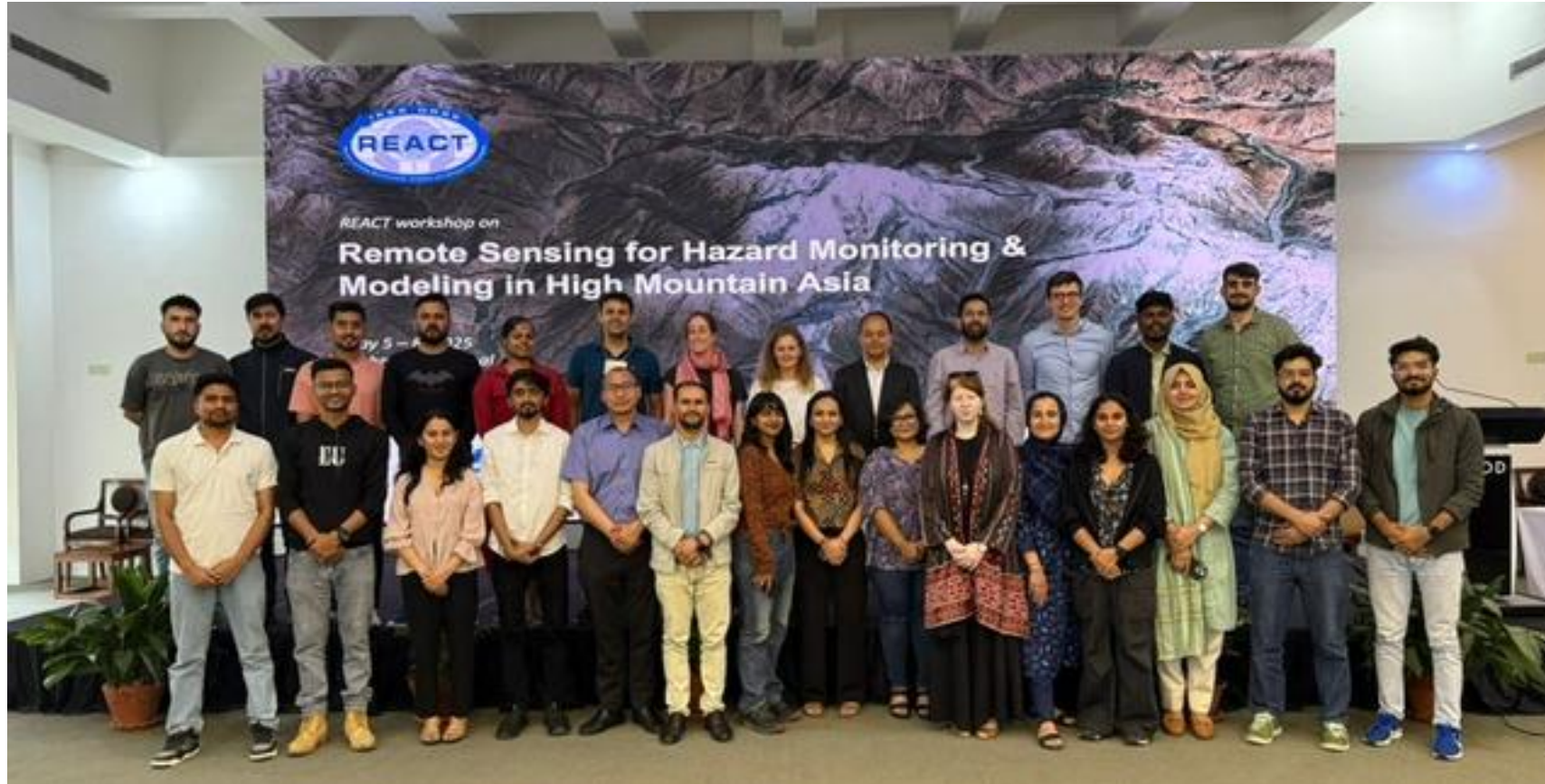


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# Risks in High Mountain Asia

(Adnan Siddique and Jakob Steiner)



*20 students from the Karakorum region (India, Pakistan, Nepal, Buthan, Bangladesh)  
Resource persons: Franz Meyer, Jakob Steiner, Adnan Siddique, Aleah Sommers,  
Rashmi Shah, Saurabh Vijay, Irena Hajnsek*



# How we can support the Pacific Islands?



Climate related issues: Sea level rise, extreme weather events, ocean acidification, floodings, deforestation, drought, etc.

- Education on RS (Summer schools)
- Workshop raising awareness what RS can do!
- Science Citizen – involve local communities actively to participate to climate related issues in their neighborhood
- Help to develop RS tools to monitor climate effects
- Capacity Building – interchange and exchange with experts
- ...