





References:

- 1. Amadori, M., Zamparelli, V., De Carolis, G., Fornaro, G., Toffolon, M., Bresciani, M., ... & De Santi, F. (2021). Monitoring Lakes Surface Water Velocity with SAR: A Feasibility Study on Lake Garda, Italy. Remote Sensing, 13(12), 2293.
- 2. www.alplakes.eawag.ch

Combining SAR (Synthetic Aperture Radar) and numerical modeling to

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IN-SITU MEASUREMENTS

- Wave meter data,
 - Surface elevation density spectra.
 - height
- ADCP

- from 6th to 8th April.

NUMERICAL MODELLING

- wind waves.
- current interactions.
- the European Alps [2].







variance

Estimation of significant wave

 Flow velocity and direction Utilized for model calibration • Intense field campaign conducted



 Coupled Delft3D FLOW + SWAN model simulates 3D hydrodynamics &

 Forced by WRF output for realistic meteorological conditions.

Two-way coupling captures wave

 Up-to-date hydrodynamic forecasts and remote-sensing insights for lakes across

Consiglio Nazio

delle Ricerche



dall'Unione europea NextGenerationEU

🖉 dell'Università 🐲 e della Ricerca

Website of the project: https://sarlakes.irea.cnr.it/