



**CONSIGLIO NAZIONALE DELLE RICERCHE**  
**ISTITUTO DI SCIENZE MARINE**

## **CICLO DI SEMINARI**

05 Febbraio 2025

14:30 Sala riunioni terzo piano  
Sede Ismar Bologna e [on line \(link\)](#)

### **Eastern Sicily's dynamic continental margin: volcano flank collapse, active submarine landsliding, salt dynamics, and cold seeps**

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The continental margin off Eastern Sicily is shaped by magmatism, strike slip tectonics related to the Calabrian subduction zone, salt tectonics, gravitational sliding, an active sedimentary system, and ocean currents. Since 2012, GEOMAR has been active in the area to understand the dynamics and structure of the offshore flank of Mount Etna and the interplay of magmatism, tectonics and gravitational collapse. We have acquired ship- and AUV-based multibeam echosounder data (partly time-lapse), 2D and 3D high-resolution seismic data, sediment cores including pore water and tephra analyses, seafloor geodetic monitoring, and rock sampling with dredges. This heterogeneous data set allows differentiating tectonic, volcanic, and gravitationally-induced structures, gives insights into modern and past large-scale volcano flank deformation as well as small-scale submarine landsliding, and provides a more complete record of Etna's volcanic activity. In this talk I summarise the main results from our work on the submerged flank of Etna and its surroundings and conclude with the most important open questions.