UNIVERSITA' DEGLI STUDI DI PADOVA
DIPARTIMENTO DI GEOSCIENZE
Via Gradenigo 6
35131 Padova
www.geoscienze.unipd.it

DIPARTIMENTO DI GEOSCIENZE

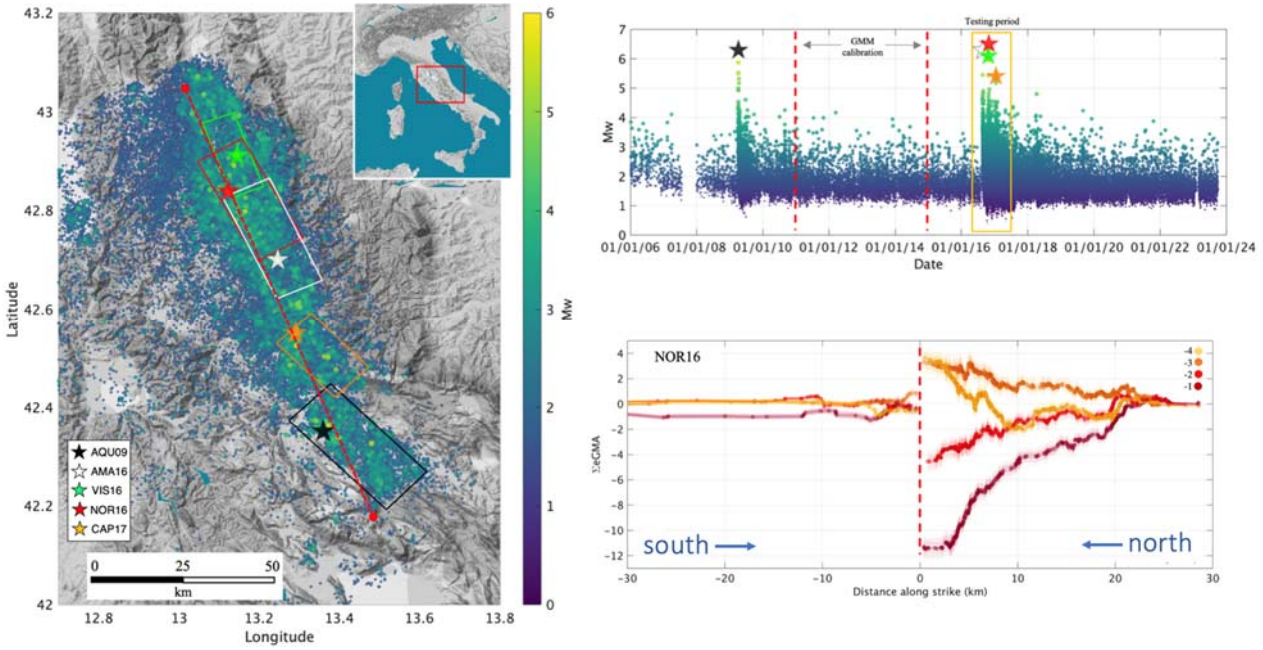
Seminario

Monitoring the temporal evolution of fault properties and the preparatory phase of large earthquakes

Giovedì 10 ottobre 2024 – ore 16:30, Aula Arduino

Relatore: **Prof. Matteo Picozzi**

Centro di Ricerche Sismologiche - Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (CRS-OGS)



How, when and where large earthquakes are generated remain fundamental unsolved scientific questions. Intercepting when a fault system starts deviating from its steady behavior by monitoring the spatio-temporal evolution and dynamic source properties and ground motion of micro-to-small earthquakes can have high potential as tool for identifying the preparatory phase of large earthquakes.

In this contribution, results of studies concerning the spatio-temporal evolution of source properties and ground motion of small magnitude earthquakes occurred during the preparatory phase of the Mw 6.3 earthquake that hit L'Aquila on 6 April 2009 and those of the three main earthquakes occurred in central Italy between 2016 and 2017 will be presented.

Results suggest that micro-to-small earthquakes can be exploited as beacons of stress change and help to monitor the mechanical state of the crust and the nucleation of large earthquakes.

Proponente: **Jacopo Boaga**