



## Session 33

### Time matters: From early warning to rapid response for effective earthquake impact mitigation

Conveners:

**Elisa Zuccolo<sup>1</sup>, Valerio Poggi<sup>1</sup>**

<sup>1</sup>National Institute of Oceanography and Applied Geophysics (OGS), Italy

Ensuring rapid access to important information on the effects of major earthquakes is crucial for the successful implementation of effective mitigation strategies, emergency management and improving seismic safety in densely populated regions. Unfortunately, the delay in collecting and organising this data significantly impairs the efficiency of the initial intervention phases.

Earthquake Early Warning (EEW) systems provide real-time insight into ongoing seismic events and enable end users such as citizens, businesses and governments to proactively mitigate potential damage or loss before the seismic impact reaches them. Rapid Response to Earthquakes (RRE) endeavours to provide immediate ground motion and damage scenarios as well as prompt damage assessments after an earthquake in near real-time. This makes it easier for affected stakeholders, including first responders and infrastructure operators, to make timely and informed decisions.

This session will compile and discuss state-of-the-art strategies to mitigate the effects of earthquakes, with a focus on minimising latency throughout the computational workflow. This includes fast data acquisition, agile modelling techniques and seamless interaction with decision makers. Topics of discussion will include the creation of near real-time ground motion scenario generation, rapid on-site damage assessment and the optimisation of earthquake early warning (EEW) systems.

