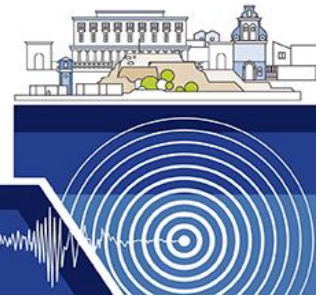


39th GENERAL ASSEMBLY OF THE EUROPEAN SEISMOLOGICAL COMMISSION

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CORFU, GREECE



Session 32

Data and process in seismic hazard: a TREAD-Fault2SHA joint session

Conveners:

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Decades of seismic events such as the 2010 Mw 7.1 Canterbury, 2012 Mw 8.6 Sumatra, 2016 Mw 7.8 Kaikōura, 2016 Mw 6.5 central Italy, have revealed structural complexities and stimulated scientific community to produce a new generation of earthquake forecast models. A change of paradigm in earthquake forecast is necessary to address the specificity of fault source interactions and earthquake modes in seismic areas. This includes the ability to calculate the probability of multiple earthquake ruptures, to evaluate the interaction between active faults across various time and spatial scales, to quantify the effect of stress transfer and fault-fluid interaction in earthquake triggering, and to produce models integrating both the transitory phase of slip and the far-field strain imposed by plate-tectonic forces at plate boundaries. Moreover, Europe and the Mediterranean are facing a major environmental transition with external processes such as the sea level rise, that needs to be integrated in the risk assessment analysis.

We propose a joint session between the Horizon EU MSCA-DN TREAD project and the ESC Fault2SHA working group, where the last activities of the scientific communities of the two groups will be presented. The session also welcomes contributions from earthquake geologists, geodesists, seismologists, and modellers external to these groups and will encourage contributions on fault geometry and behaviour; simulations of complex ruptures and earthquake recurrence through dynamic and multi-cycle simulations; incorporation of characteristic of 3D fault-based ruptures into SHA; and ground motion models (empirical and physics-based) investigating the influence of such complex micro- and macroscale 3D complexities.

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