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ΙΟΝΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ



Session 13

Seismological and geophysical imaging of shallow geological structures at different scales: challenges and perspectives

Conveners:

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There is an increasing need for high-resolution imaging of shallow geological structures as well as characterization of their physical properties. This stems not only from purely scientific perspectives, but also from correct land planning in areas subject to a wide range of environmental risks. In this regard, seismological and geophysical techniques represent the main tools for achieving a deep understanding of inaccessible subsurface structures. The improvement of such imaging techniques is related to the growing computational capability in the solution of inverse problems, and to the theoretical development of modelling algorithms. Among their countless applications, we seek contributions on the study of active fault zones (crucial in tectonic geomorphology, and in the analysis of seismic sources, surface faulting hazard and fluids flow), fracture networks (in reservoirs, volcanic areas and geothermal fields), landslides (from shallow fractured rock masses to deep sliding surfaces) and seismological engineering problems (site effects and ground shaking amplification).

The aim of this session is to collect the most recent results of seismological and geophysical imaging of shallow crustal structures in a wide range of environmental applications, including also discussions on methodological challenges and new perspectives. We encourage submitting works dealing with multi-disciplinary high-resolution methods together with new developments in data processing, imaging strategies and field acquisition layouts. Case studies from active tectonic settings are welcome.