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Active Faulting and Seismicity

Guest Editors:

Message from the Guest Editors

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Deadline for manuscript submissions: closed (11 December 2023)

Dear Colleagues,

The relation between active faulting and seismicity has been investigated mainly since the 1980s, when large earthquakes of magnitude >6 have re-activated neotectonic faults with measurable displacements on the fault planes. Soon after, empirical relationships have been elaborated between the earthquake magnitude and the fault length or the fault throw. Several dating techniques such as trenching, Cl³⁶ dating, etc., have resulted in the estimation of throw rate or slip rate on each fault. The correlation of slip rates with uplift/subsidence rates, erosion rates and GPS rates have increased our understanding of the overall active deformation of a region. A parallel process has been developed for active faulting and seismicity offshore with different techniques, combining detailed digital bathymetric data and lithoseismic profiles. Thus, the basic parameters of fault length, fault throw and their impact on the sea bed morphology have been determined. The dating of the off-shore faults either by drilling...

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