



## **Constraints to the 2008 Patras (Greece) seismic fault: Evidence from historical triangulation and morphotectonic data.**

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The 2008 Patras (SW Greece) earthquake (MW 6.4) was associated with a NE-striking, strike-slip fault, correlating with a lineament defined by several recent destructive earthquakes. Despite its high rupture energy, this earthquake produced no surface faulting, it did not correlate with any known fault and it produced no significant ground deformation as GPS and INSAR data revealed; this provided evidence of thin-skin tectonics and of a nascent major fault heading towards the city of Patras.

Analysis of historical triangulation data covering this fault revealed statistically significant shear deformation between  $\sim 1890/1928$  and  $\sim 1928/1965$ , consistent with the pattern of the 2008 coseismic deformation. This slow deformation is however not reflected in the relief, as the absence of any anomaly in the hydrographic network reveals, and provides a further support to the hypothesis of an immature strike slip fault and of a low-depth detachment zone close to the Hellenic (Aegean) Arc.