

## عنوان مقاله:

(Seismic Hazard Assessment of the Zagros Collision vs. Makran Subduction Transfer Deformation Zone (SE Iran

## محل انتشار:

چهارمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1382)

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## خلاصه مقاله:

Iran coincides with the interaction zone between the Arabian and Eurasian plates that currently converge at about 30 mm/yr. To the West, a continental collision accommodating about 10 mm/yr shortening results in the formation of the Zagros fold and thrust belt. To the East, the Makran is the emerged accretionary prism resulting from the subduction of the Oman oceanic lithosphere beneath the Iranian platelet. A NNW-striking deformation zone, the Zendan-Minab fault system, connects the Western Makran and the Eastern Zagros deformation domains. Structural and geomorphic field observations, complemented with SPOT satellite images and aerial photographs analyses have been performed to evaluate the active deformation pattern and to localize the high seismic potential zones. This analysis shows a Zagros-Makran transfer zone characterized by a distributed deformation covering a wide domain: at least three NNW-trending major faults have been identified, the Minab, Zendan and Palami faults; and two N-trending major faults: Sabzevaran and Jiroft faults. Fault slipvector analyses indicate that the current stress of state is transpressional associated with NE-trending compression. Thanks to offsets, escarpments and uplifted terraces, these faults show geomorphic evidence for Late Quaternary oblique reverse right-lateral slip, that seems relevant for the Present-day activity of the Minab deformation domain. Offset measurements associated with  $^{10}\text{Be}$  ages indicate that the right lateral displacement rate throughout the entire zone is about 15 mm/yr. Maximal fault segment length of about 40 km indicates that the expected maximum earthquake magnitude should be of about  $M_w=7$ , in a context of low historical seismicity. In addition, active deformation is localized to the North while it is distributed to the South. This implies a northward increase of seismic hazard

## کلمات کلیدی:

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