



## **Morphotectonic Analysis of Deformation at the Simply Folded Zagros Tear Faults, Iran**

A.A. Sharafi (1), H. Sharafi (2), S. Kooshafar (3), and I. Monsef (4)

(1) Department of Earth Sciences, Shiraz University, Shiraz, 71454, Iran (Sharafi@susc.ac.ir), (2) Department of Civil Engineering, Shiraz University, Shiraz, Iran (Hasti\_sharafi@yahoo.com), (3) Department of Geology, Islamic Azad University, Shiraz Branch, Shiraz, Iran, (4) Shahid Beheshti University, Earth Sciences Faculty, Evin, Tehran, Iran (iman\_monsef@yahoo.com)

Sabzpushan fault zone is chosen as a case study for deformation analysis of the simply folded Zagros tear faults. Sabzpushan fault zone is one of the most fault zones that crosses simply folded Zagros belt at approximate trend of N150 – 170. These fault zones are stretched from NW to SE of Shiraz province. These zones have strike slip-dextral movement with normal dip slip component. Deformation analysis along the Sabzpushan fault zone are done by field work, processing of satellite images, detecting and enhancing of lineaments, Digital Elevation Model (DEM), Slope map, Aspect map, Hill Shade images, lineament map and lineament density map. These data indicate the area is active from the view point of tectonics and morphotectonics. It seems from the deformation evidences such as: change of trend in Babakouhi anticline (N of Shiraz), rotation of the axis in Derak anticline (NW of Shiraz), uplifting in northeast part of Derak anticline and uplanded synclines as Ghalat syncline (NW of Shiraz) and Soltanabad syncline (S of Shiraz). The existences of numerous fractures in the studied area are caused by the activity of the Sabzpushan fault zone. Conclusion of this research can be extended to other simply Zagros tear faults such as Izeh, Kazeroon, Karebas and Sarvestan fault zones.

**Key words:** Simply folded Zagros belt, Tear fault, Strike slip – dextral fault, Iran.