



## **Kinematics and geometry of transpressional deformations within the Sanandaj-Sirjan Metamorphic Belt, Iran**

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This study provides some details on the geometry and kinematics of the transpressional deformations affecting the Sanandaj-Sirjan metamorphic rocks of the Zagros Mountains of Iran and tries to test current theoretical models of transpressional deformation. The studied deformed structures cropping out in the Neyriz area of the S Zagros Mountains are characterized by a dextral oblique collision which have occurred between the African-Arabian continent and the Central-Iranian microcontinents. Careful measurements of the fabrics and structures show that the data are consistent with existing theoretical models of triclinic transpression zones considering coeval shear and pure shear components and provide satisfactory explanation of the spatial variation in the foliation and lineation data. The presence of horizontal to sub-horizontal stretching component parallel to the deformation zone boundary and triclinic finite strain pattern allow suggesting a kinematic model of inclined lateral tectonic extrusion along the Zagros transpression zone. These results can offer new insights into the tectonic evolution of the Zagros Mountains and show how complex transpressional strains can arise during oblique crustal deformation associated with the motion of tectonic plates.