



## **Structural interplay between plutons during the construction of Shir- Kuh batholith, Central Iran, (SW Yazd)**

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The Shir-Kuh batholith is a NW–SE elongate pluton which is located in central part of Iran, south-west of Yazd province. This batholith intrudes the Shemshak Formations (Triass -Late Jurassic) to the west and north. To the east, it overlain uncoformably by lower Cretaceous conglomerates. These rocks grade upward to massive grey limestone of the Taft Formation.

Detailed mapping of the Shir-Kuh batholith demonstrates two main rock types. Monzogranite grading into granodiorite covers the major part of the batholith area. The youngest intrusive unit has leucogranitic composition.

The susceptibility magnitudes (K) of measured from 181 stations range from 20 to 332  $\mu$ SI and can be correlated to the petrography (highest K values in the granodiorites; lowest in the granites; and monzogranites in- between). These weak values are indicative of dominantly paramagnetic rocks that belonging to the ilmenite-series.

Magnetic fabric patterns and microstructures of granitic rocks provide evidence of structural modifications as a result of the coalescence of these two plutons, during the construction of this granitoidic batholith.

At an early stage, two independent magmatic bodies started to spread laterally from different feeding channels. Since only a small strain overprint is required to reorient

the lineation in partly crystallized magmas, different crystallization percentages would explain that lineation in the external unit of the leucogranitic unite is parallel to the contact of the monzogranitic plutons.