

A combined petrofabric and AMS approach to reveal the magmatism-tectonics link in a composite batholith: an example from the Serre Massif (Calabria, Italy)

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AMS (anisotropy of magnetic susceptibility) is a useful technique often adopted when studying plutonic bodies to infer magnetic foliation and/or lineation (Mamtani et al., 2019; Punturo et al., 2017) allowing to deduce, on apparently undeformed rocks, strain induced anisotropies, which otherwise could be very difficult to discern at outcrop scale. In this study we applied such technique to the Serre Batholith (Fiannacca et al., 2015) in order to reveal masked anisotropies and making also correlations with petrofabric and compositional information derived from parallel conducted investigations on the same specimens. Our findings have a good correlation with previously proposed distribution of granitoid rock types in the Serre Massif (Caggianelli et al., 2000). Combined AMS and petrofabric analyses have also allowed us to infer some concealed tectonic alignments as well as to suppose the occurrence of a tectonic phase previously recognized in the hosting metamorphic rocks (Festa et al., 2013).

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