

First EGU Summer School

[Scuola](#)

Data: Domenica, 22 Agosto, 2010 - 08:00 - Venerdì, 27 Agosto, 2010 - 20:00

Signups closed for this *Eventi*

Abstract:

STRUCTURAL ANALYSIS OF CRYSTALLINE ROCKS

The [school](#) is aimed at teaching advanced techniques of quantitative structural analysis in deformed basement rocks. It is addressed at PhD and post-Doc students and early-career researchers.

The school is divided into two parts:

1) Two days of field work on glacier-polished outcrops in the Nevessee (Lago di Neves) area. The glacially-polished exposures in this area are spectacular and provide an ideal natural lab for field training. The area hosts an impressive variety of mesoscale structures, with classic examples of multiphase magmatic intrusion, magma mingling structures, localisation of ductile shear zones and their interaction, polyphase veining and brittle faulting.

2) The field workshop will be followed by three days of in-classroom teaching in Varna (Brixen) on the theory of deformation and of quantitative methods of micro- and meso-structural analysis of deformed rocks.

The different aspects and approaches to structural analysis of crystalline rocks that will be covered are:

- a) texture analysis of mylonites with a dedicated session on analysis of deformation microstructures and crystallographic preferred orientations in granitoid mylonites;
- b) simulation of deformation processes by rock-analogue and natural and synthetic rock experiments;
- c) numerical modelling of deformation structures;
- d) physical and chemical fluid-rock interaction in ductile shear zone and fault networks;
- e) shear heating in ductile shear zones;
- f) constraining strain rates in shear zones.

Proponente: G.Pennacchioni -
