

Understanding the current and past state of stress is key to comprehend the rheological behavior of the crust, with numerous implications spanning from geodynamics to microstructure developments, and applications spanning from seismogenesis to resource distribution. The current state of stress is mainly assessed on seismic focal mechanisms, fault monitoring and slip inversion, borehole failure and imaging, and methods such as hydraulic fracturing to determine the magnitude of the applied stress. Paleopiezometry techniques rely on experimental and/or analytical approaches that link a finite deformation to an applied stress magnitude. Such technique allows to reconstruct past stress magnitude, orientation and regime on long time-scales.

This session aims at picturing the state-of-the-art of the stress determination in the crust, whether it is the current stress or the past stress. We welcome any contribution that reconstructs regional state of stress in the crust by the mean of current measurement or paleopiezometry techniques, and that uses experimental or analytical/numerical approaches to predict stress distribution in rocks.