

## MINERALS AND ROCKS UNDER STRESS: A WAY TO UNRAVEL GEOLOGICAL PROCESSES

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### Session description

The correct interpretation of geological and planetary processes requires the reconstruction of the stress conditions under which they take place. This information is often recorded in the mineralogy and microstructures of rocks that have been involved in such processes in the past and have subsequently become available to direct investigation. In the last decades, various experimental, analytical and computational techniques have become more and more accurate and accessible. They allow us to investigate with unprecedented detail the effect of stress on the properties and the microstructures of minerals, fluids and rocks (e.g. elastic response, defects, phase equilibria and transformations etc.) shedding light on the mechanisms that govern the processes that have originated them. A better constrain on stress distribution in natural systems is required to determine rock deformation mechanisms at the large scale and to interrogate the effect that differential stress might have on the stability of mineral assemblages.

In this session, we welcome contributions adopting a broad variety of experimental, analytical and numerical techniques to investigate the effect of stress on minerals, rocks and their physical properties from the microscopic to the macroscopic scale. The session targets, among other, current advances in elastic geobarometry, microstructure and electron microscopy.