

Stress states in the Earth's crust are of fundamental importance, they determine how rocks deform, how fracture and fold patterns develop and how faults behave. In general, the access to ancient states - paleo-stresses - is allowed by different methods that give mainly reduced stress tensors, focusing on the direction of paleo-stress axes, while only few provide differential stresses, and even fewer both quantities.

The session aims at making the point on the advances in methods of paleo-stress/strain analysis and at evaluating how paleo-stress/strain reconstructions contribute to tectonic studies, both in terms of orientations and magnitudes. We also would like to discuss keys and pitfalls in paleostress reconstructions, to move forward the long-lived debate on stress vs strain vs kinematic interpretation of fault slip data and other geological indicators, and to estimate to what extent paleo-stresses can be compared with modern stresses in terms of distribution in time and space and of geological and physical meanings. We would also like to tackle the need for new improved techniques and/or the way existing ones can be more thoughtfully combined and applied. Our ultimate wish would be to bring together researchers who work on these topics. We welcome a wide range of contributions : methodological contributions, contributions that use paleo-stress/strain analyses to decipher the regional polyphase tectonic history, to better constrain fold kinematics and to improve our understanding of reactivation mechanisms and strain partitioning in the brittle regime, as well as modeling studies of stress states at the local or regional scale.