The Lithosphere

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Session Description

As the outermost solid layer of the Earth, the lithosphere is a structurally and compositionally complex region that experiences a range of tectonic behaviours from large-scale plate motions to intraplate deformation to local plate boundary tectonics. In these dynamics, the lithosphere is subject to surface processes and ice sheet loading at its upper boundary, rheological variations and domains in its interior, fluid transport and magmatism, and interactions with the asthenosphere at its base. These processes and the nature of the lithosphere are studied with a variety of observational, experimental, and numerical tools, in a host of tectonic settings and on a variety of length- and time-scales. Feedbacks between these processes are complex and sometimes not well understood. In this cross-disciplinary session, we welcome contributions from the fields of research that explore the nature and dynamics of the lithosphere.

Primary Affiliation: CGU, Solid Earth

Joint Session Partner: CGU, Earth Surface Processes