

ES10: Ice–rock interactions in the cryosphere

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Session Description

Understanding the cryosphere requires knowledge of how ice interacts with other materials including water, air and rock or soil, and thus depends on our ability to adequately characterise these materials. The complexity of ice–rock interactions is often parceled into boundary conditions on a macroscopic scale through variables such as temperature, stress, pressure and velocity. This is largely because processes operating in the subsurface can be challenging to observe, and are influenced by the heterogeneity of material properties across a range of scales. In this session we aim to bring together cryospheric scientists working on processes at the ice–rock or ice–soil interface, from microscopic to macroscopic scales. We welcome contributions related to glacial, periglacial and permafrost environments, studied from the perspectives of field observation, remote sensing, theory, modelling and laboratory experiments. Topics may include, but are limited to, subglacial processes, chemical and biological processes in cold regions, ice avalanches, frost heave, patterned ground and debris covered/rock glaciers.

Primary Affiliation: Earth Surface Processes