



Session title: Emerging geophysical methods for permafrost investigations

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Summary: Electrical resistivity tomography, ground penetrating radar and seismic refraction tomography are geophysical methods that have been widely applied to investigate the extension of permafrost rocks as well as to monitor their temporal variations. Within the last years, there has been a significant improvement in the measuring instruments as well as in the modeling and inversion algorithms; thus, permitting the application of new methods for permafrost investigations. This session aims at presenting emergent geophysical methods for permafrost investigations: from the instrumentation and data collection, to the presentation of inversion and modeling algorithms for an improved interpretation of geophysical signatures. We welcome case studies or technical contributions for emerging methods, such as time- or frequency-domain electromagnetic (EM), surface-waves seismic, seismic interferometry, induced polarization, or multi-method approaches as well as innovative algorithms for the processing, inversion and interpretation of geophysical signatures. This includes studies across different scales: from numerical and laboratory studies to land, water and airborne investigations.