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Send inn 1 abstract per prosjekt selv om dere er flere i gruppen. Ønsker du å holde muntlig presentasjon, kan du gjøre det individuelt – eller som gruppe. Både studenter, universiteter og næringsliv kan delta.

Presentasjon/Poster kan leveres på norsk eller engelsk.

Du blir kontaktet etter at avgjørelse om muntlige presentasjoner og antall postere et tatt.
Vi er svært takknemlige for bidrag!

Mitt innlegg, jeg foretrekker: (rediger etter hvilken presentasjonsform du foretrekker)

- Muntlig presentasjon

Kontaktperson:

Fornavn og etternavn: Knut Tveit
E-post: knuttv@unis.no
Studieretning/Fagfelt: Permafrost
Universitet/Bedrift: UNIS

Hvis flere medforfattere:

Fornavn Etternavn: Aleksey Shestov
Fornavn Etternavn: Hanne H. Christiansen
Fornavn Etternavn: Ivan Depina

Nøkkelord: (minst 5 nøkkelord, eks: geofarer, skred, erosjon, flom, ras)

1. Permafrost
2. Skred
3. Overvåkning
4. Svalbard
5. Klimaendringer

Skriv sammendrag (Abstract) med minimum 200 ord, og maks 1 A4 side (2500 tegn, inkludert mellomrom) her:

Abstract

Introduction:

Permafrost is warming globally due to climate change, causing in increase in permafrost geohazards such as ground subsidence and active layer detachment slides. Svalbard is the fastest warming place on the globe, leading to increased risk of permafrost geohazards here. The PermaMeteoCommunity project is aiming to increase knowledge and reduce this risk.

Method:

We are creating a permafrost climate change response system that combines permafrost monitoring (ground temperatures and groundwater conditions in the active layer), meteorological monitoring (air temperature, wind, and precipitation), and geotechnical modelling. The response system will give local municipalities access to real-time permafrost data, assisting their decision making in extreme weather events.

7 deep (16 to 45m) and 5 shallow (3 to 5m) boreholes have been drilled to obtain cores for laboratory analyses to obtain information on the sediment properties and ground ice content. The retrieved cores are tested in the laboratory for geotechnical properties such as grain size distribution, seismic velocities, thermal conductivity, and gravimetric and volumetric ice content. The results are important for the geotechnical modelling. Geophysical investigations, such as Electrical Resistivity Tomography (ERT) and Ground Penetrating Radar (GPR) will be utilised to interpolate between the boreholes. The shallow boreholes have been equipped with high-resolution thermistor strings to monitor ground temperatures, and we are aiming to monitor groundwater conditions in the active layer.

Results:

Preliminary results show that the active layer and top of permafrost is ice poor down to around 1.5m depth in the shallow boreholes in the hills surrounding Longyearbyen. Below this the retrieved cores are ice rich with excess ice. This implies an increased landslide risk if the active layer reaches this depth. The current thaw depth and ground temperatures will be available at the time of the conference.