Te Kura Kairūri School of Surveying

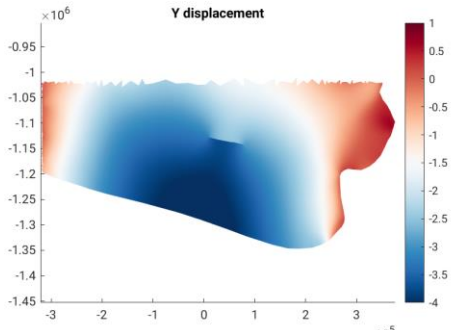
Lunchtime Seminar Series

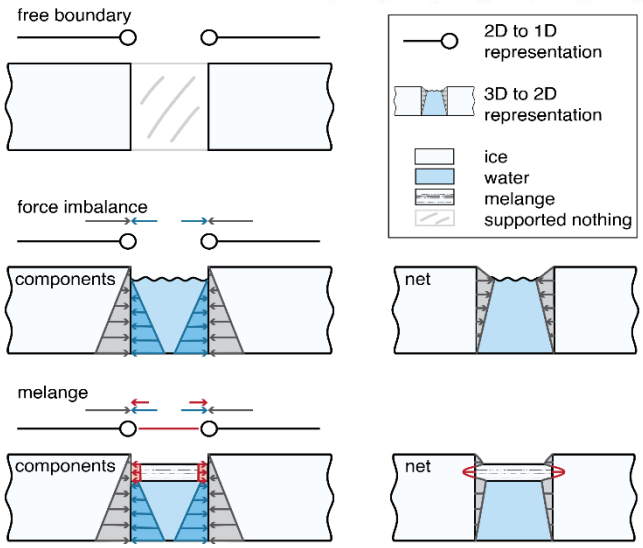
Postgraduate Research at Te Kura Kairūri | The School of Surveying

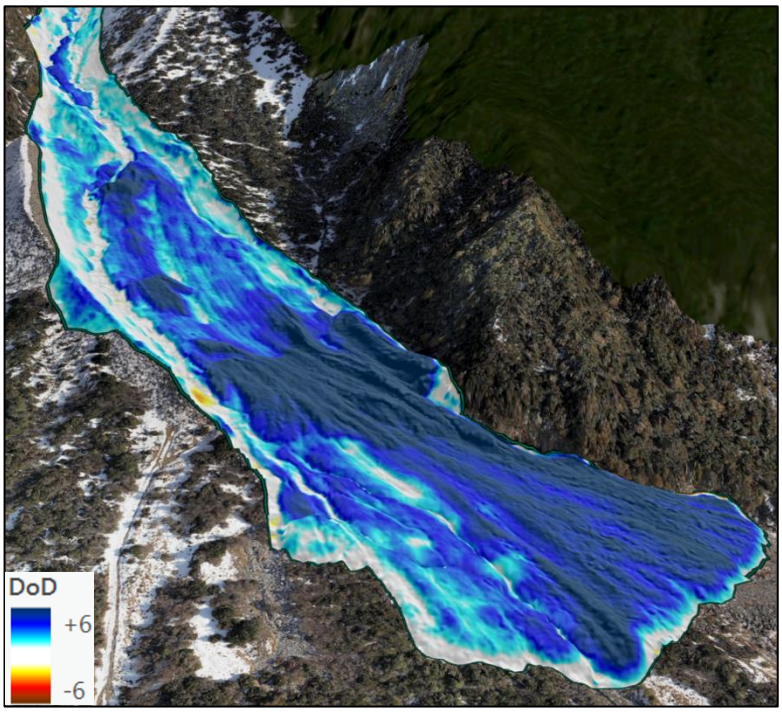
The Limits of Control

Martin Forbes

Over most of their advective histories, very little appears to happen to Antarctic ice shelf rifts. Lateral propagation events are rare and rift tips "arrest" at structural boundaries within the floating ice. Typical linear elastic fracture mechanics (LEFM) analyses lead to two, possibly contradictory, conclusions about this: (1) lateral propagation would continue were it not for unspecified, inhomogenous ice properties and (2) rift opening is insufficiently supported by the infilling ocean and there should be no lateral propagation. Nevertheless, rifts persist and do sometimes grow. Here, we show how melange (a material jumble of shelf-ice, sea-ice and firn) can facilitate lateral propagation and consider why, apart from its inability to provide realistic lateral limits, the traditional LEFM works so well.







When it rains, it avalanches: Initial observations and analysis of mass-movement sequence in Aoraki Mount Cook National Park, 17-19 July 2022

Aubrey Miller

An exceptional winter storm brought over 500mm of precipitation to Aoraki Mount Cook National Park over July 17-19, 2022. The rain fell on a winter snowpack which triggered a widespread avalanche cycle. The avalanche cycle was followed by small debris flows and rain runoff that incised and eroded debris. This presentation will detail observations from a field visit and UAV survey of the Kitchener avalanche path following the event, before presenting some initial modelling results used to replicate the event. The largest avalanche cycle in decades, the result of intense rain-on-snow, has implications for future hazard planning for alpine mass movements.

Mountain Research Centre
Aotearoa – New Zealand

Thursday 6th October 2022 (12pm – 1pm)

L1 Lecture Theatre | School of Surveying, 310 Castle Street

OR Join remotely: https://zoom.us/join (ID: 329 427 2033, P/W: 310310)