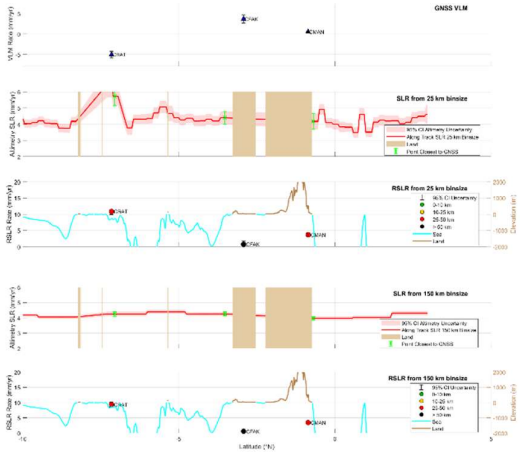
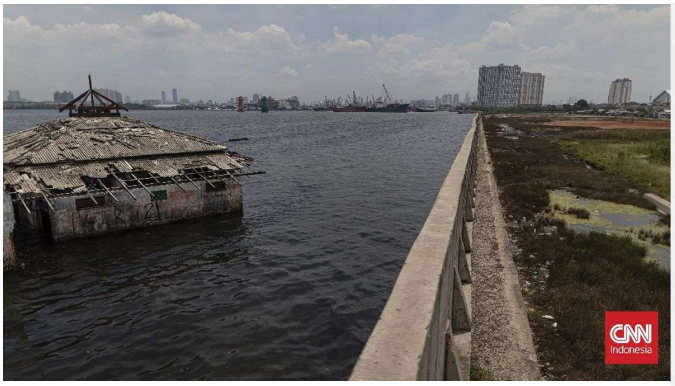
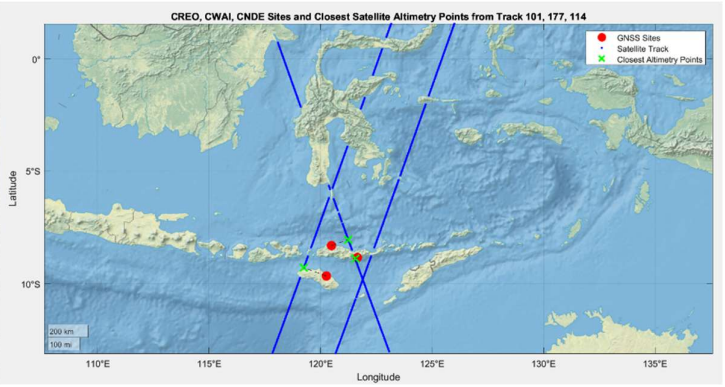
Te Kura Kairūri | School of Surveying

Lunchtime Seminar Series







The Effect of Vertical Land Movement on Sea Level Variability

Maritsa Nisa, PhD Candidate @ School of Surveying, University of Otago

The combination of vertical land movement (VLM) and changes in sea level poses a serious threat to coastal regions. In areas experiencing land uplift, typically due to tectonic activity, the impacts of rising sea levels can be mitigated. In contrast, coastal areas experiencing land subsidence face significant risks, which can exacerbate the effects of rising sea levels. In regions where tidal data is unreliable for extracting relative sea-level rise (RSLR) values, integrating VLM data from GNSS with SLR from satellite altimetry is beneficial. This research employs both technologies to determine the actual rates of sea-level rise along the coast, assess how sea levels fluctuate along the altimetry track, and evaluate the influence of VLM on these fluctuations. The integration of these sensors also accounts for the region's distinct shape, particularly in an archipelagic country.

Thursday 12th March 2026 (12pm – 1pm)

OW1.01 Lecture Theatre | School of Surveying, 133 Union Street East

OR Join remotely: https://otago.zoom.us/ (ID: 990 5863 2248, P/W: 133133)