Te Kura Kairūri | School of Surveying

Lunchtime Seminar Series

GNSS-IR: Turning navigation satellite signals into an environmental sensor tool

Joe Eu Heng, University of Otago

GNSS Interferometric Reflectometry (GNSS-IR) utilises the signal-to-noise ratio (SNR) recorded in RINEX files to retrieve reflector heights, effectively turning a standard GNSS antenna into an environmental sensor. Rather than discarding multipath signals as noise, GNSS-IR treats them as a source of geophysical information. This allows a GNSS station to simultaneously perform precise positioning and monitor environmental parameters such as snow depth, soil moisture, sea level, and vegetation changes. By extracting additional value from already-collected data, GNSS-IR offers a cost-effective approach to environmental monitoring with positioning and sensing in a single antenna.

Thursday 19th 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)