

# Recent postgraduate fieldwork in the School of Surveying

***Martin Forbes (PhD Candidate), Holly Still (MSc Candidate), Craig MacDonell (MSc Candidate), Todd Redpath (PhD Candidate), Sam West (MSc Candidate)***

Postgraduate research within the School of Surveying often involves fieldwork in remote and exciting locations, where the application of surveying techniques can provide insight into important environmental processes. This seminar will showcase the fieldwork components of several postgraduate research projects.

Martin and Holly (PhD and MSc candidates) travelled to Antarctica as part of an NZARI funded project to study the Ross Ice Shelf (RIS). This programme investigates the stability of the world's largest ice shelf in a warming world by studying the physical processes at its boundaries. During this largely successful field season, two boreholes were drilled through the RIS revealing hidden secrets within and below.

Craig (MSc candidate) is investigating vegetation and geomorphology relationships and change at the Okia Reserve (Victory Beach), Otago Peninsula. This involves the repeated deployment of the Trimble UX5 remotely piloted aircraft system (RPAS) to collect aerial imagery. 4 flight days have been completed so far, with the 5th and final in the next few weeks. Other fieldwork at the site involves vegetation surveys and general observations of conditions throughout the reserve and along Papanui Inlet.

Todd (PhD candidate) has been using the Trimble UX5 RPAS to map snow depth across a study basin within the Pisa Range in Central Otago. While logistically challenging, the use of the UX5 has produced snow depth maps at unprecedented spatial resolution, over the course of two winters. In combination with terrain and climatological data, these maps provide new insights into the fine scale spatial distribution of seasonal snow, and contribute to efforts to improve modelling of snow processes.

Sam (MSc candidate) is also working in the Pisa Range, where he uses vegetation plots to ground truth data from satellite and UX5 imagery. Collection of ecological data in the field, and its integration into remote sensing methodologies, is essential to gaining improved insights into environmental processes and change.



School of  
**Surveying**  
Te Kura Kairūri

**12:00 noon, Thursday, 29 March 2018**

**L1 Lecture Theatre  
School of Surveying  
310 Castle Street**

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