

Emerging technologies and careers

National School of Surveying University of Otago

Professor Christina Hulbe
Mr Richard Hemi



FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2–6 MAY 2016

Recovery

from disaster

Organised by



Platinum Partners



Diamond Partner



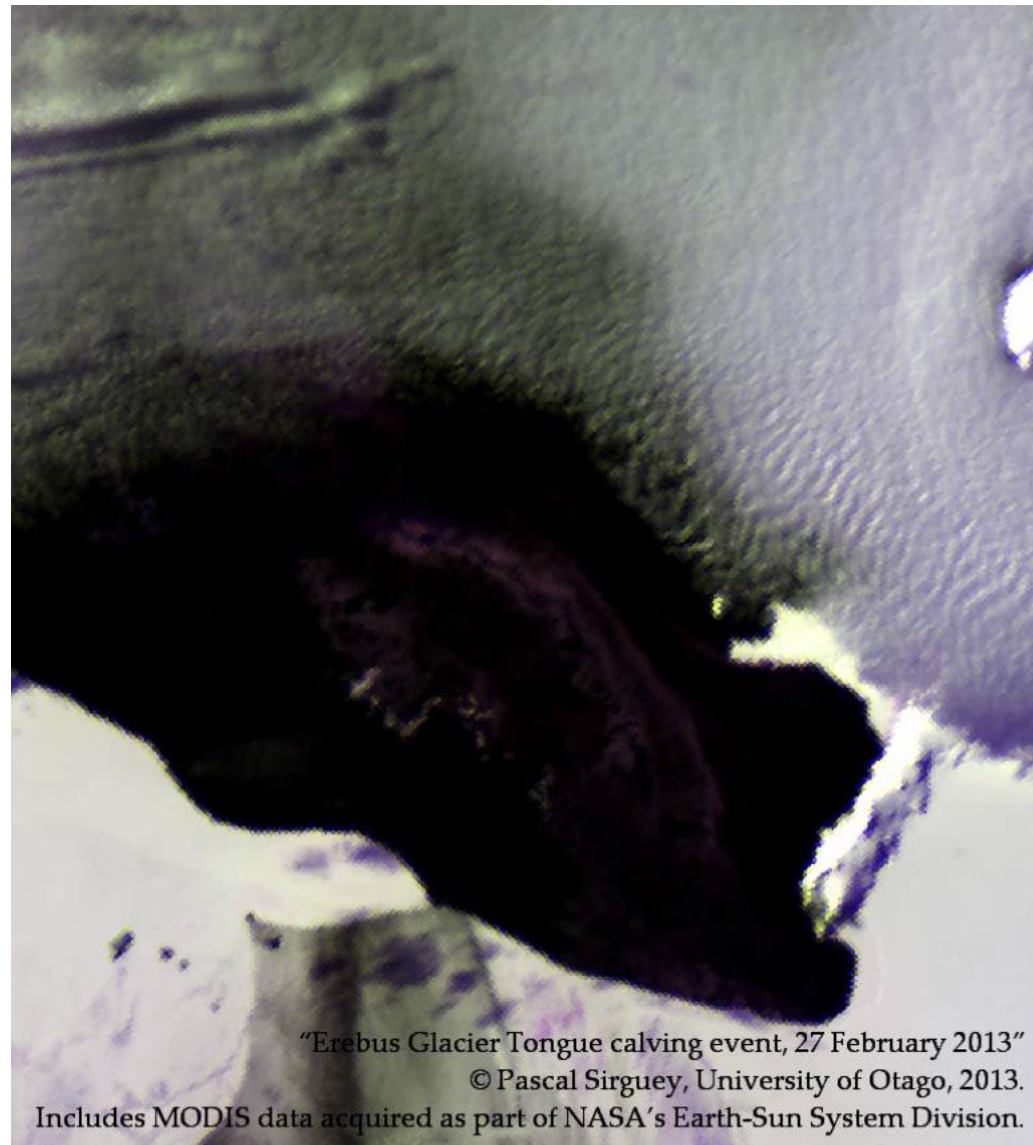
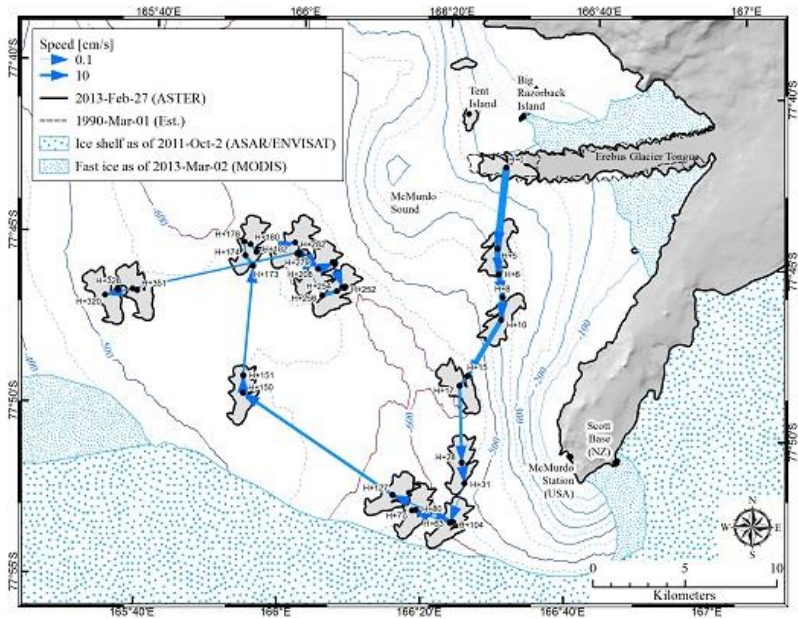
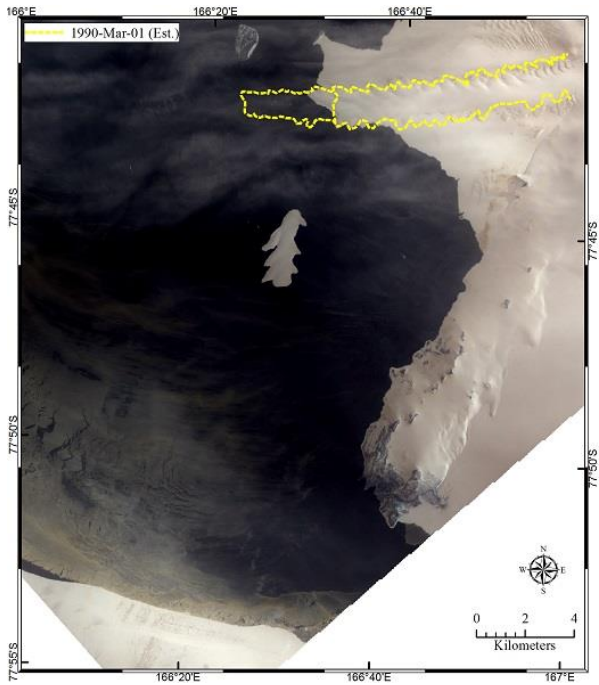
School of Surveying

University of Otago





Prof. Christina Hulbe
School of Surveying



Mapping pests to help protect our native fauna

MARIANO RODRIGUEZ RECIO
PhD, Surveying/Zoology

The high plateau of Spain is a long way from the South Island's braided river valleys, but it's in these fragile environments that doctoral student Mariano Rodriguez Recio is working to protect New Zealand's unique wildlife.

Mariano has successfully combined his degree in biology, longstanding passion for wildlife and background in information technology in an innovative research project in the School of Surveying.

Using GPS technology Mariano tracks feral cats and hedgehogs, both species which pose a real threat to native birds. He uses the data along with satellite imagery to create habitat maps and to study the animals' movements and distribution. By understanding their spatial ecology better, we'll be better placed to control their populations and reduce the risk they pose to endangered species.

Surveying and ecology aren't disciplines you might put together. Mariano's project proves that postgraduate researchers at Otago are pushing traditional disciplines into new fields, at the same time as pushing back the boundaries of what we know by seeking new knowledge.

www.otago.ac.nz/postgraduate



UNIVERSITY
of
OTAGO
Te Whare Wānanga o Ōtago
NEW ZEALAND

The spatial and temporal distribution of Hector's dolphin on the south coast of the South Island

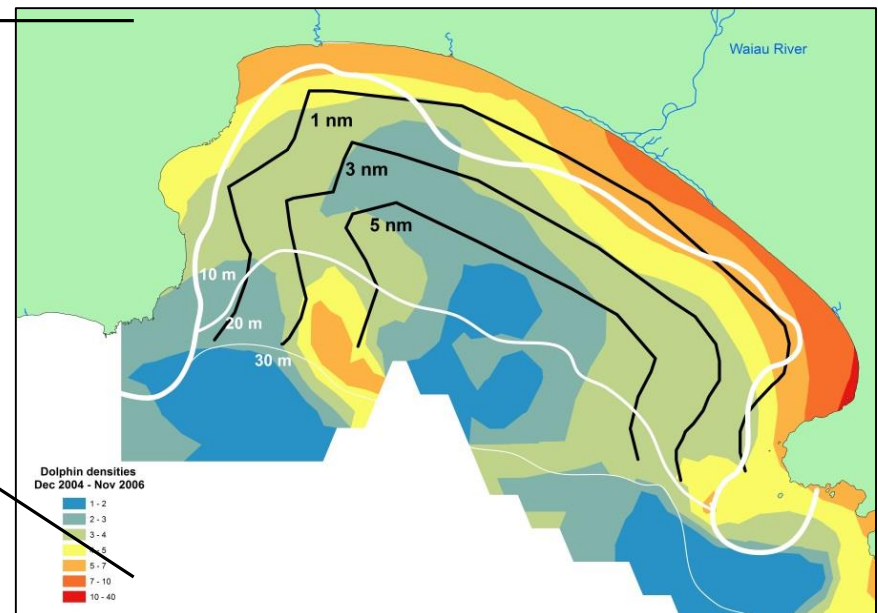


Aotearoa
New Zealand



Dr Judy Rodda,
School of Surveying

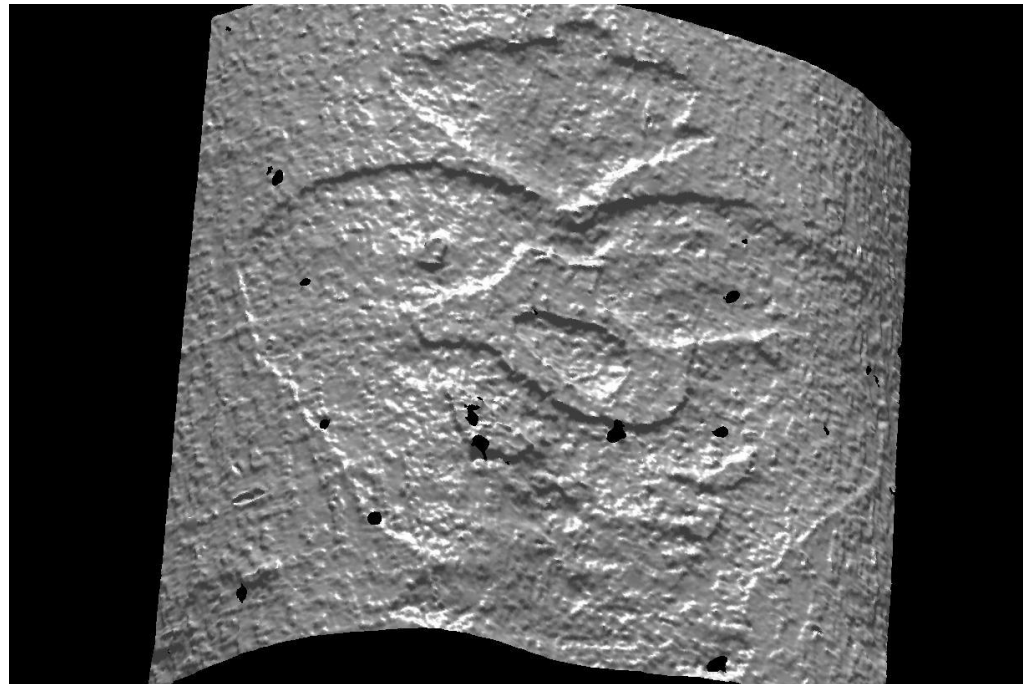
Dr Amelie Auge',
School of Surveying



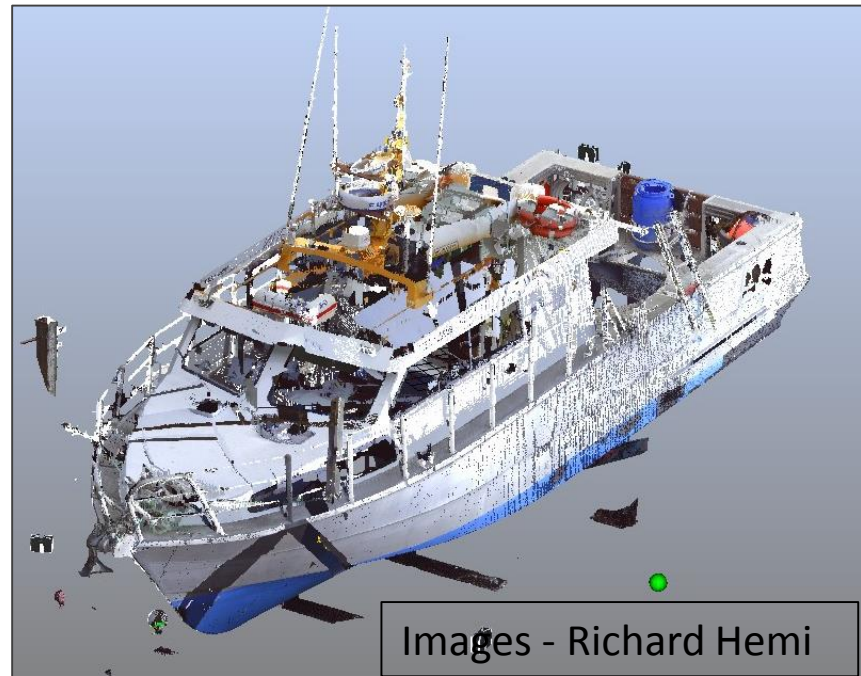
Moriori rock and tree carvings, Chatham Islands



Image - Richard Hemi



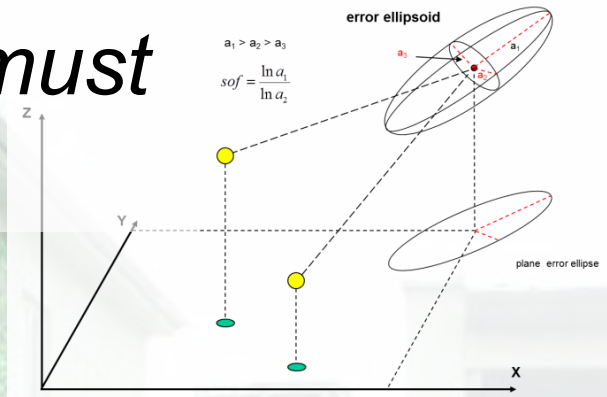
Images - Richard Hemi



Images - Richard Hemi



“To have good coordination you must first have good coordinates”



Rosa Paterson - BSurv



MIXED USE A mixed use environment will boost the region by creating a sustainable and attractive area, while bringing people and tourists back into the Steamer Basin area. Adding residential apartments and turning deserted grand heritage buildings such as the NZ Lands & Mercantile Building into accommodation will also remove the need for the unsightly hotel proposed for the east side of Steamer Basin.

PROPOSED EXISTING

Legend for Existing: Residential (Green), Commercial/Hospitality (Orange), Tourism (Yellow), Industrial (Cyan), Unused (Pink), Heritage (Grey).

Legend for Proposed: Residential (Green), Commercial/Hospitality (Orange), Tourism (Yellow), Accommodation (Red), Business (Purple).

3D VISUALISATION

Wharf Hotel—Fryatt Street

Floating Jetties

Fryatt Street

Caval Ridge Coal Mine Field

January 2013 – January 2014 (1 year 1 month)

Field duties included;

- QA of gravels, structures, dams, and drainage.
- Set-out of culverts, underground services, anchor bolts, concrete pours, and general earthworks.
- Machine guidance - Including setup of Topcon lasers, and Trimble ATS systems, benching cutting edges, calibrating sensors, and general troubleshooting of GPS issues.
- Aligning rail and working with a rail tamper.

Office work included

- Processing and reporting field data.
- Exporting machine and SCS900 designs through 3D Office and Trimble Business Centre.
- Creating vertical alignments and road jobs (Terramodel).
- Calculating and verifying end of month quantity claims using field data against design (volumes and trim areas).



Photo: Mark Myall



Rob Sharp – BSc LPD



“After a summer of survey set-out I was offered a challenging role as a Contract Manager with their construction division. One year on I find myself project managing large contracts, quoting and tendering, building a client base, dealing with contractual issues, working on energy sites and large industrial plants, designing and setting out”

School of Surveying, University of Otago

An environment in which students blend core fundamentals and emerging technologies to solve real world challenges

We educate students to be resilient and adaptable problem solvers

Careers in spatial science will evolve and young professionals will evolve with them





FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery



Platinum Partners:



Diamond Partner



