

2023

Hochstetter Lecture

Lorna Strachan (University of Auckland)

Kaikōura Earthquake – Tales from the seafloor

6.30 pm Tuesday 26th September: Auditorium, Auckland War Memorial Museum

RSVP at <https://myaccount.aucklandmuseum.com/160942?premove=Y&promo=GEOSCIENCE23>

In November 2016, a magnitude 7.8 Earthquake dramatically struck the coastal region of Kaikōura, indelibly impacting the residents of the region, changing the very shape of the coast and land, and generating a devastating tsunami. But what happened offshore? Did the seafloor respond in a similarly dramatic fashion? What are the effects 6 years later and how can we use the earthquake triggered deposits to understand past and future hazards?

In this talk, I will use exceptional novel seafloor data and state of the art techniques to show the devastation wrought on the seafloor by the Kaikōura Earthquake. I will use the sedimentary deposits that resulted from the Earthquake to build a narrative of the physical and biogenic processes in the minutes, hours, and years following the Earthquake. I will reflect on how we can use these exceptionally “geologically young” deposits to unravel past cataclysmic natural hazards to help us better understand the interconnections between the land, people, and ocean floor in the future.

Lorna is a Senior Lecturer of Sedimentology at the University of Auckland whose research focuses on understanding the ways in which sediment moves and is deposited in the deep ocean. Along with her international and national collaborators, Lorna has studied geological processes occurring in a range of tectonically active and passive seafloor zones around the world. Her research is multi-disciplinary, integrating modern submarine topography, data from core samples, and flume modelling to disentangle physical processes in the deepest depths of the ocean.

