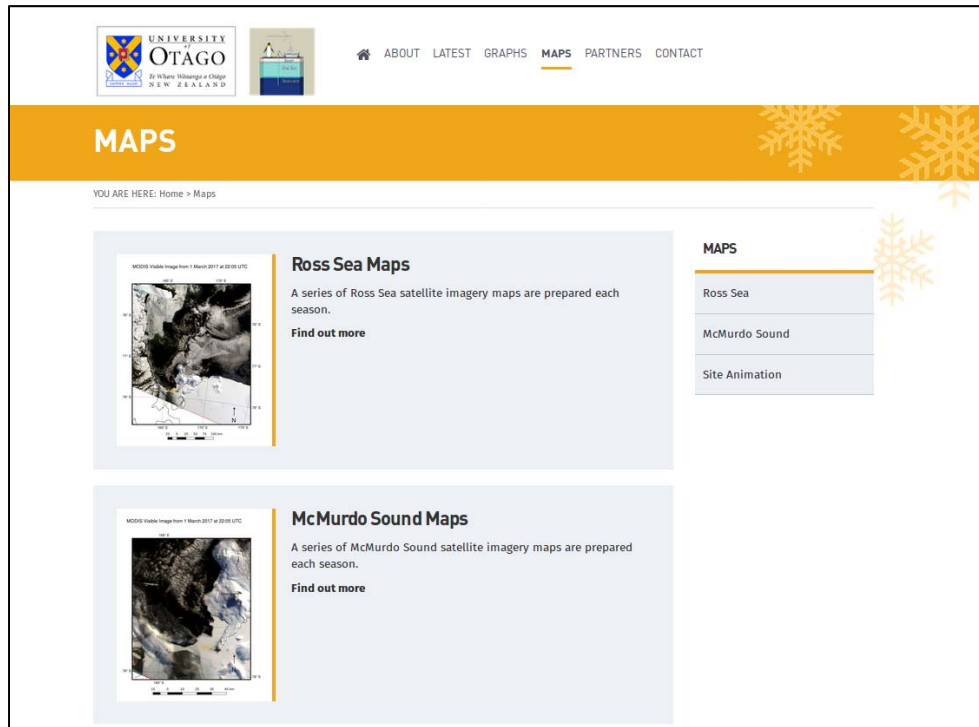


# Using Open Source Geospatial Software in Antarctic Sea Ice Research

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**Abstract:** Sea ice is a critical component of the Earth's climate system. In recent years, Arctic sea ice has decreased in extent, thickness, and age, while Antarctic sea ice extent has not decreased overall. A possible explanation for this different response in a warming world is the presence of ice shelves (large floating glaciers) in Antarctica. Sea ice that forms in the presence of basal meltwater from ice shelves often grows more quickly (and hence is thicker) than "normal" sea ice, and it is also structurally different. In this presentation I will provide an overview of Antarctic sea ice's role in Earth's climate system and summarise the research that our group has undertaken in this area. I will then introduce a set of open source geospatial tools that I have developed to facilitate the analysis of sea ice data from multiple sources. Finally I will describe how these tools form a key component in a recently funded New Zealand Antarctic Research Institute (NZARI) project that will measure Antarctic sea ice growth over the winter period and automatically convey this information to the public via a dedicated geospatial web server.

**12:00 noon, Thursday, 9 March 2017**

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

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Te Kura Kairūri