



**ECOLOGICAL MODELS ARE COMBINING INFORMATION ABOUT PHYSICAL OCEANOGRAPHY WITH FOOD-WEB (BIOLOGICAL) MODELS TO HELP UNDERSTAND & PREDICT THE EFFECT OF CLIMATE CHANGE ON SOUTHERN OCEAN ECOSYSTEMS.**

*- Dr Jessica Melbourne Thomas*



# MATHS FOR ECOSYSTEMS

MATHS TAKES YOU PLACES...  **ANTARCTICA**

Our real ecosystem model is developed by recent graduates of the CSIRO UYAS PhD Program in Quantitative Marine Science (QM). Dr Jessica Melbourne Thomas, has been used in research and management in Mexico, the Philippines, the United States and Japan.

Our work will help the Australian Antarctic Division design ecological models to help understand and predict the effect of climate change on Southern Ocean ecosystems.

The CSIRO UYAS PhD Program in Quantitative Marine Science (QM) is offered through the University of Tasmania's specialist Institute for Marine and Antarctic Studies and CSIRO Marine and Atmospheric Research.