



# national science week 2016

## Gabriela Pilo

### *Oceanic Eddies*

**Physical Oceanographer, Institute for Marine and Antarctic Studies and CSIRO Oceans and Atmosphere**



I started scuba diving when I was 16 years old. I remember my first immersion as it was yesterday. My curiosity about the ocean increased exponentially after only a few minutes I had been underwater. After that weekend diving, I made up my mind: I was going to be an oceanographer.

During my undergraduate studies, I learned that Oceanography can be divided into four major branches: physics, biology, geology and chemistry. The more I learned, the more I wanted to learn. And the Physical Oceanography hooked me. Understanding more about energy transfer in the oceans and the transport of different water masses across thousands of kilometres was just breathtaking. By the time I graduated, I was sure I wanted to pursue a research career.

I then started my Masters in Physical, Chemical and Geological Oceanography. There, I found a new passion: Oceanic Eddies. Eddies are rotating structures of hundreds of kilometres – similar to hurricanes – and they can be almost the size of Tasmania! I then decided to pursue a PhD degree and keep working with oceanic eddies. This is why I moved from Brazil to Tasmania to become a student at UTAS and CSIRO.

Now I look at the 3D structure of eddies, using data from a global model and data collected directly from the ocean! This is very exciting because I get to explore how eddies interact with the ocean bottom, with the mean circulation, and even with each other. As eddies propagate, they retain water in their interior, and carry heat, salt, microalgae, and all sorts of larvae. This is important when we think that tropical eddies can bring invasive species to temperate waters.



While I am not looking at eddies and how they behave, I participate on scientific cruises. I had the opportunity to visit Antarctica and the East Australian Current to deploy moorings, and also measure internal tides in the Tasman Sea. I feel very lucky to visit unique places and work with brilliant people that keep me inspired! Every day is an opportunity to discover something new, to learn some amazing, and to be the best that you can be.

Find out more: [www.imas.utas.edu.au](http://www.imas.utas.edu.au)