

## **Postdoctoral Research Fellow in Ocean Tracer Dynamics @ University of St Andrews, UK**

We are seeking a postdoctoral research fellow to work on the broad topic of ocean tracer dynamics and their impact on climate, with a particular focus on the high-latitude oceans. Questions of interest include, but are not limited to:

- What processes set the mean-state and temporal variability (annual to centennial) of mixed layer tracer budgets (e.g. heat, carbon) in the high-latitude oceans, and what is their impact on global climate?
- What is the role of circulation features such as transient eddies, meanders, and gyres in the vertical and horizontal transport of tracers in the ocean subsurface (for example, moving heat toward the Antarctic ice sheet)?
- What is the residence time of tracers in the ocean mixed layer, what processes impact this, and is it likely to change in a warming climate?
- What is the relationship between watermass transformation, overturning circulation, passive tracer subduction/ventilation, and heat and carbon uptake at high latitudes?

The postdoc will have the opportunity to address these questions using a range of different approaches, including novel analysis of observational data and Earth System Models, running idealized numerical simulations or climate model experiments, or developing new theory. They will join an enthusiastic team dedicated to addressing similar questions and, as part of the COAST (Climate, Ocean, and Atmosphere @ St Andrews) group, will share thoughts, ideas, and expertise with a diverse team of scientists studying past, present, and future climate.

For more information, and to submit an application, follow [this link](#). Informal enquiries, including to discuss potential projects, can be addressed to Graeme MacGilchrist [gam24@st-andrews.ac.uk](mailto:gam24@st-andrews.ac.uk).