PhD Position – modelling coupled the human-ocean system of northwest Atlantic

A PhD project is available to model historical-to-future changes in the coupled human-ocean system of the northwest Atlantic, as part of the COD-REMAP project. The student will be based at Dalhousie University within the research group of Katja Fennel, as part of the Ocean Frontier Institute.

The Gulf of Maine and Scotian shelf have emerged as a hotspot of oceanic change. Rapid warming and deoxygenation, coupled with intense industrial fishing, have led to dramatic shifts in the ecosystem. But the fundamental processes at work are still poorly quantified, as are the interactions between the drivers of change.

This PhD project will take advantage of a rich observational database and use state-of-the-art coupled ocean-biogeochemistry-ecosystem-fishery modeling to produce a better understanding of the processes underlying this dramatic history of change. This will lead to improved process understanding with global applications. In so doing, it will help produce a better predictive ability for what might lie ahead, including contextual guidance for management.

Applicants must have an undergraduate degree in marine science, physics, mathematics, computational life sciences or a related field. Quantitative skills are critical, as is an interest in programming, data analysis, and high performance computing. Some background in environment/oceanography is desirable but not required.

Start date: Sept. 2019

Deadline to apply: Feb. 6

Please email katja.fennel@dal.ca and eric.galbraith@icrea.cat, and include ‘COD-REMAP’ in the subject line.