Post-doctoral Position at the University of British Columbia as part of the NCE: MEOPAR

The Department of Earth, Ocean & Atmospheric Sciences at the University of British Columbia invites applications for a Postdoctoral Fellow in the field of coupled biological/chemical/physical ocean modelling. The successful applicant will conduct research as part of a group developing a coupled numerical model, based on the NEMO model, of the Strait of Georgia with data assimilation from the Ocean Networks Canada observatory to be run operationally.

The position is for one-year, renewable for a second year and preferred start dates are Nov 2014-Feb 2015. The application deadline is Sep 16, 2014 but will be extended if a suitable candidate has not been found.

Project and Responsibilities

As part of the MEOPAR (meopar.ca) Network of Centres of Excellence, the group at UBC in collaboration with groups at Dalhousie University, Environment Canada and Fisheries and Oceans Canada is developing a coupled bio-chem-physical model, based on the NEMO model, of the Strait of Georgia with data assimilation from the Ocean Networks Canada observatory to be run operationally. That is, run every day, 24-48 hours into the future, with the time scale set by the usefulness of the predictions (e.g. the weather can only be predicted so far into the future). The Strait of Georgia is a deep (400 m), long (120 km) semi-enclosed basin about 30 km wide. Its surface is dominated by freshwater outflow, particularly from the Fraser River. This creates a productive temperate ecosystem with large spatial and temporal variations. Applications for the model are marine prediction for oil spills, object tracking, storm surges and providing three-dimensional interpretation of the observatory data for use in understanding the biology and chemistry of the Strait.

Our group has independently developed a one-dimensional coupled bio-chem-physical model of the Strait of Georgia that has been used, for example: 1) to hindcast and predict the spring bloom in the Strait and 2) determine the seasonal cycles and interannual variation of pH in the Strait. This postdoctoral position will implement the developed bio-chem model into NEMO using the existing PISCES model as a template. Once the model is configured scientific questions to be answered include: what is the spatial/temporal variation of primary productivity in the Strait of Georgia, in particular, how does the more poorly sampled Northern Strait compare to the Southern Strait? What is the role of variation of deep water renewal on the pH in the Strait, compared to say, impacts of freshwater or

biological productivity? What makes Malaspina Strait a biological hotspot? Exact questions to be addressed will depend upon the interests of the selected candidate and input from stakeholder's groups.

Additional responsibilities will include: reporting to MEOPAR, publication of the main results in peer-reviewed international journals and partial supervision of graduate students working on other aspects of the project.

Minimum Qualifications and Experience

A Ph.D. together with a strong background in coupled numerical modelling of ocean systems. Such a background could, for example, be demonstrated with one or more published papers in the field. The position is for one-year, renewable for a second year and preferred start dates are Nov 2014-Feb 2015. Salary is dependent upon educational level and experience; the minimum salary is $46,000 per year plus benefits.

How to Apply

Applications, including a CV, copies of two relevant publications, and the names, e-mails and phone numbers of three referees should be sent to Dr. Susan Allen (sallen@eos.ubc.ca). The application deadline is Sep 16, 2014, but it will be extended if a suitable candidate has not been found.

UBC hires on the basis of merit and is committed to employment equity. All qualified persons are encouraged to apply. We especially welcome applications from members of visible minority groups, women, Aboriginal persons, persons with disabilities, persons of minority sexual orientations and gender identities and others with the skills and knowledge to engage productively with diverse communities. Canadians and permanent residents of Canada will be given priority.