Opportunities for Two Postdoctoral Fellows at Dalhousie University to Help Develop a Relocatable Ocean Prediction System

Canada requires rapidly deployable environmental prediction systems to help guide its response to marine emergencies along its coastline and offshore areas. To help meet this need, a Network of Centres of Excellence called Marine Environmental Observation Prediction and Response (MEOPAR, www.meopar.ca) has recently been established. One of MEOPAR's initial projects will develop a forecast system that can be set up shortly after a marine emergency in order to provide short-term forecasts (hours to days) of the physical properties of the ocean. The system will be based on the Nucleus for European Modelling of the Ocean (NEMO) model and tested initially in the Strait of Georgia and subsequently on the Scotian Shelf. The forecast system will be developed in close collaboration with researchers from Environment Canada and Fisheries and Oceans Canada who are participating in the complementary Canadian Operational Network of Coupled Environmental PredicTion Systems (CONCEPTS) in partnership with Mercator-Océan (France) for the NEMO aspects.

MEOPAR will fund two postdoctoral fellows to help develop the relocatable ocean prediction system. The successful applicants will have a recent Ph.D. in Physical Oceanography, Atmospheric Science or related discipline, and a demonstrated ability to communicate results in the form of scholarly articles. Further details on the two positions are given below.

Postdoctoral Position 1: Development of relocatable capabilities

The successful applicant will work on high-resolution regional ocean modeling, develop a relocatable capability based on NEMO, and carry out research based on the models developed. Initial steps will include assembling large geophysical, hydrographic, atmospheric forcing and large-scale datasets needed to run the ocean models. The successful applicant will work with a team of modellers, including co-supervisors Dr. Harold Ritchie and Dr. Youyu Lu. Excellent programming skills, experience in handling and processing large data sets, and familiarity with state-of-the-art ocean or atmospheric models, are required.

Postdoctoral Position 2: Development of ocean data assimilation and forecast capabilities

The successful applicant will help develop the ocean data assimilation capabilities of the relocatable model. Particular attention will be paid to assimilation of point observations made on the continental shelf and slope, and the simultaneous downscaling of information from coarser resolution, larger scale operational models. The successful applicant will be an important member of the initial project team and will work primarily with Professor Keith R. Thompson. Experience in running and developing state-of-the-art, data assimilative models of the ocean or atmosphere is required.

Both appointments will begin as soon as possible and will initially be for one year. Extensions may be granted for two more years subject to performance. The annual salary will be commensurate with qualifications and experience.

All qualified candidates are encouraged to apply; however in accordance with Canadian immigration requirements, Canadian citizens and permanent residents of Canada will be given priority. Dalhousie University is an Employment Equity/Affirmative Action employer. The University encourages applications from qualified Aboriginal people, persons with a disability, racially visible persons and women.

Application Procedure:

Applicants should send a statement of interest, curriculum vitae (including a list of publications), and the names and addresses of three references to:

Jackie Hurst
Department of Oceanography
Dalhousie University
1355 Oxford Street
PO BOX 15000
Halifax, Nova Scotia
Canada, B3H 4R2

Email: Jackie.Hurst@dal.ca (Submission by e-mail is encouraged.)
Fax: (902) 494-3877.

Review of applications will start immediately and continue until suitable candidates are found.