



## **Postdoctoral Fellow in Coastal Community Resilience to Shipping Disruptions**

Many coastal communities are heavily dependent on maritime transportation for the ingress and egress of people and resources. Major disruptions to maritime transportation services can have significant impacts on the safety, health, and wellbeing of coastal populations, and have important economic implications. Effective planning of preparedness and response is essential for successful emergency management.

To facilitate planning of coastal community resilience to shipping disruptions, an integrated systems-level approach is needed. In particular, models for maritime transportation routes can provide insights in their suitability as critical nodes for ingress and egress of populations and resources, in case of a major disruption such as a catastrophic earthquake event. Closely linked to this is the modeling and evaluation of the capacity and function of marine port infrastructure and services under such a major disruption. Also the wider upstream and downstream impacts of shipping disruptions, and the evaluation of alternative transportation modes, need consideration.

The development of approaches applicable to the problem described above, their implementation to specific case studies, and the evaluation of their utility and relevance, are important for answering societal needs. This research will focus on the maritime transportation network along the British Columbia, Washington State and Alaska coastline, with specific focus on areas near Victoria and Vancouver. Selected smaller-scale case studies will also be considered for maritime and coastal areas in Nova Scotia. Throughout the research implementation, strong interaction with stakeholders is envisaged through analytic-deliberative processes.

### **POSITION**

Our Industrial Engineering Department is seeking a Postdoctoral Fellow in Coastal Community Resilience to Shipping Disruptions to play a pivotal role in research coordination, implementation and management of a project focusing on these topics. The postdoc will join a dynamic, dedicated group working with Prof. Ronald Pelot and Prof. Floris Goerlandt at Dalhousie University, and collaborate closely also with Prof. Stephanie Chang from the University of British Columbia and Prof. David Bristow from the University of Victoria. The successful candidate will work closely with the project team to: (i) plan the research; (ii) collect, integrate and manage data for the model development; (iii) develop the integrated model for the selected geographical areas; (iv) assess its relevance and utility; (v) perform project management tasks such as coordinating stakeholder engagement activities, preparing reports, and disseminating the results to diverse audiences.

The postdoc will be employed by Dalhousie University ([www.dal.ca](http://www.dal.ca)), and must be physically based in Halifax, Nova Scotia. Due to the significant focus on the Canadian West Coast in the case studies, a research period at the University of British Columbia ([www.ubc.ca](http://www.ubc.ca)) in Vancouver, British Columbia, is foreseen. This will be under the supervision of Prof. Stephanie Chang.

The postdoc will have opportunities to develop his or her own research agenda associated with the Shipping Resilience project, and have the opportunity for extending his or her professional network through the MEOPAR Network. Participation in academic career development programs offered by Dalhousie University is encouraged.

### **FUNDING**

The position is available from April 1, 2018, through November 30, 2020 (max. 32 months), subject to confirmation of project funding. Salary will be commensurate with qualifications and experience. This position is co-funded by Emergency Management British Columbia (EMBC) and the Marine Environmental Observation Prediction and Response (MEOPAR) Network of Centres of Excellence ([www.meopar.ca](http://www.meopar.ca)).



## **QUALIFICATIONS**

The ideal candidate will be someone who:

- Holds a Ph.D. in a relevant field (e.g., industrial engineering, civil engineering, risk analysis and management, transportation engineering, or a related field)
- Has experience in quantified vulnerability and risk analysis, and/or transportation modeling
- Has interest and experience in conducting interdisciplinary, applied research
- Has the interest and ability to learn new research methods as needed for attaining the objectives
- Has experience in using relevant software (e.g. simulation modeling, statistical analysis,...)
- Has experience conducting interviews and surveys
- Is skilled in working with large datasets
- Has demonstrated high productivity in producing peer-reviewed publications
- Has knowledge of or strong interest in following areas (particularly across Canada): coastal communities, marine-related social and economic activities, maritime transportation, port infrastructure and services, coastal hazards and vulnerabilities, earthquakes and tsunamis
- Has strong time management, organizational, and project management skills
- Works well both independently and as part of an interdisciplinary team
- Is able to communicate effectively with researchers in various disciplines and with non-academic members of governments, communities, and the private sector.

## **APPLICATION**

Applicants should submit a detailed curriculum vitae including a list of publications, two to three representative publications, a statement of research interests, and three reference letters by email to Prof. Ronald Pelot ([ronald.pelot@dal.ca](mailto:ronald.pelot@dal.ca)) with "MEOPAR PDF" as the subject line. Applications will be considered from March 1, 2018, until the position is filled. Please address any inquiries to Prof. Pelot.