

Tier I Canada Research Chair in Spatiotemporal Ocean Data Analytics

Dalhousie University is recognized internationally for our world-class academic programs and as one of Canada's leading research institutions. With our 200th anniversary on the horizon in 2018, Dalhousie welcomes talented scholars to our home by the ocean and to join our mission to make a lasting impact through the discovery, advancement and sharing of knowledge.

Dalhousie is also home to the headquarters of the Ocean Frontier Institute (OFI; www.dal.ca/ofi). As an international hub for ocean science focused on the Northwest Atlantic and Canada's Arctic gateway, OFI will bring together elite researchers and institutes from across the globe to understand our changing oceans and create safe, sustainable solutions for ocean development. Including a \$93.7M award through the Canada First Research Excellence Fund program (CFREF; www.cfref-apogee.gc.ca), government, private and partner contributions, the OFI is a \$220M enterprise.

As a key partner to OFI, the Faculty of Computer Science at Dalhousie University is seeking applications or nominations for a Tier I Canada Research Chair (CRC, <http://www.chairs.gc.ca>) in Spatiotemporal Ocean Data Analytics, within the Faculty of Computer Science. The Chair holder is expected to be an outstanding researcher acknowledged as a world leader in data analytics with a strong interest in applying advanced data analytics methods on ocean data, and a superior record of attracting and supervising graduate students and postdoctoral fellows, and to have a track record of fostering collaborative and interdisciplinary research. Eligible applicants must possess the necessary qualifications to be appointed as full professors or associate professors who are expected to be promoted to the full professor level within one or two years of the nomination. Please consult the CRC website for full program information, including eligibility and selection criteria (http://www.chairs-chaires.gc.ca/program-programme/nomination-mise_en_candidature-eng.aspx).

Spatiotemporal data involves both space and time information. It includes tracking of moving objects (e.g. ships in the ocean, containers in a port, workers in a shipbuilding factory, sensor-equipped fish or ocean gliders), or measurements over time from sensors distributed in space (e.g. acoustic or video sensors in the ocean bottom, weather data over space and time through satellites or weather stations, sensor data from the path of a hurricane). The chair will focus on algorithms and systems to support sensemaking of spatiotemporal data to enable optimal use of the resources to obtain specific insights and support policy objectives by decision makers. Spatiotemporal patterns are important both for scientific investigation, and for the exploitation of the data for economic and policy purposes.

The Faculty of Computer Science (<http://www.cs.dal.ca>) has 30 faculty members, including one Tier I CRC, two Tier II CRCs, a third Tier II CRC in the process of approval by the CRC Secretariat, and over 200 graduate students. These include master's and doctoral students in Computer Science, masters in Electronic Commerce, Computational Biology and Bioinformatics, and Health Informatics, and Interdisciplinary PhD students. Through its Big

Data Analytics Institute the Faculty of Computer Science is a focal point of research on all aspects of Big Data, building on the Faculty's research strength and substantial research funding in this area, involving about half of the active research faculty. The Faculty has research strengths in areas related to the Chair such as knowledge management, data mining, computer networks, privacy and security, databases, information systems, human computer interaction, and visualization. It has strong ties to the Faculties of Science, Medicine and the School of Information Management.

Dalhousie University (<http://www.dal.ca>) is a member of the U15 research intensive universities in Canada and the Faculty of Computer Science is a research intensive Faculty. It receives funding from sources including NSERC, CANARIE, the Nova Scotia Health Research Foundation, Genome Canada, the Tula Foundation, the Green Shield Foundation, VARDEC, IRDC, CIHR, Industry Canada and CFI. It has close working relationships with the local IT industry supported through MITACS internships, NSERC CRD and Strategic Project grants. Significant computing resources are available through the ACENet clusters, with researchers supported by in-house ACENet consultants. The Tier I CRC in Spatiotemporal Ocean Data Analytics is expected to build on and further develop these strengths by building new partnership opportunities. The Chair will have a reduced teaching load, and the opportunity to apply for CFI funding to support the acquisition of infrastructure through the John R. Evans Leaders' Fund (JELF).

The proposed chair is closely related to initiatives within Dalhousie and in the broader Ocean Data Science community: the Marine Environmental Research Infrastructure for Data Integration and Application Network (MERIDIAN) Consortium, the resources of which it will make use of, and the associated research centers, the global Ocean Tracking Network (OTN), Ocean Networks Canada (ONC), which operates the NEPTUNE and VENUS cabled ocean observatories, the Marine Environmental Observation Prediction and Response (MEOPAR) NCE, and the Institut des sciences de la mer de Rimouski (ISMER).

Dalhousie is located in Halifax, Nova Scotia (<http://www.halifaxinfo.com>), which is the largest city in Atlantic Canada and affords its residents a high quality of life.

Applicants should email an application letter, curriculum vitae, a statement of research and teaching interests, sample publications, a completed Self-Identification Questionnaire, which can be found at www.dal.ca/becounted/selfid), and the names, email addresses and physical addresses of three referees (who will only be contacted for the short-listed applicants at the interview stage), to appointments@cs.dal.ca. All documents are to be submitted to the email address above as PDF files.

Deadline: **January 5, 2017** (or until positions are filled).

This Tier I CRC is reserved for external recruitment. Only candidates who are external to Dalhousie University may apply. Dalhousie is committed to fostering a collegial culture grounded in diversity and inclusiveness. The university encourages applications from qualified Aboriginal people, persons with a disability, racially visible persons, women, persons of minority sexual orientations and gender identities, and all qualified candidates who would contribute to the diversity of our community. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.