

The Faculty of Engineering at Dalhousie University invites applications for a Tier 1 Canada Research Chair (CRC) in “**Advanced Design for Water-Energy Sustainability**” which will be held in the Department of Civil and Resource Engineering and be associated with the Centre for Water Resources Studies (CWRS). The appointment will be a tenured position at the rank of Professor. Applicants must have an undergraduate degree in either Civil or Environmental Engineering, or a closely related engineering discipline. Applicants should possess a PhD in either engineering or science and be eligible for and committed to registration as a Professional Engineer in a Canadian province. The successful candidate is expected to conduct research and supervise graduate students in the Civil and Environmental areas, and to develop, lead and grow a strong, externally funded research program.

Globally, the demand for safe water and sanitation is captured by the United Nations Sustainable Development Goal (SDG) 6: Clean Water and Sanitation. Overall, drinking water and wastewater systems account for approximately 3% of energy use in the United States, adding over 45 million tons of greenhouse gases annually. Further, the current design paradigm for water treatment is such that 40% of operating costs for drinking water systems can be for energy; while wastewater is known to be an incredible source of energy that often goes underutilized because of legacy design choices. As Canada has the largest freshwater resources and is a leading energy country, we have a unique opportunity to be a global leader that stewards our water resources, while creating forward choices in energy utilization and generation in the water/wastewater treatment field, that could have global implications. Dalhousie has the complement of global leading water/wastewater technology, materials characterization, and clean energy research that could host a CRC in this rapidly emerging field. The proposed CRC in Advanced Design for Water-Energy Sustainability would work at this interface, grow opportunities with global leading companies, and address social consequences of clean water.

Over the past 10-15 years, the Department of Civil and Resource Engineering and the CWRS has established an international reputation for leading water research. Internationally, Times Higher Education (THE) released the 2021 Impact Rankings, which assess and evaluate university success in delivering the United Nations SDGs. Dalhousie ranked 16th (of 520) in the world and 3rd in Canada for research, outreach and stewardship in relation to SDG6: Clean Water and Sanitation. The university’s success toward SDG6 comes from a combination of institutional water stewardship and research strength in this area. The ideal candidate will be expected to build on this international reputation and to develop a new area in the field of water and energy that will lead Dalhousie and the CWRS team in finding clean water solutions while intentionally considering the climate crisis. Over the course of the CRC, the candidate will collaborate locally, nationally, and internationally with leading engineers and scientists to tackle this global challenge. Accordingly, it is anticipated that the research initiated out of this program will address a regional need but have broad global impact and directly address SDG 6 Clean Water & Sanitation; SDG 11 Sustainable Cities and Communities; and SDG 13 Climate Action.

The candidate will be a key team player in the CWRS, which currently hosts Canada Research Chairs and a NSERC CREATE program and annually boasts more than \$3.0M in research expenditures as a cluster of faculty members. The CWRS community would support the candidate through academic collaboration and participation in new and existing research activities. The CWRS community is networked across many professional and academic organizations including: the Atlantic Canada Water & Wastewater Association, the Canadian Water Network, the International Water Association, etc.

Dalhousie is the leading graduate and research university of Atlantic Canada, with more than 20,000 students, including 3500 in graduate programs, from 115 countries. It is located in Kijipuktuk (Halifax)– the major centre in the scenic Atlantic region and a city widely known for its high quality of life. Further information about the Faculty and the university can be obtained at [www.dal.ca/Engineering](http://www.dal.ca/Engineering).

The CRC program was established by the Canadian Federal Government with the purpose of attracting outstanding researchers to the Canadian university system. Tier 1 Chairs are intended for exceptional scholars acknowledged by their peers as world leaders in their fields. Please contact Dalhousie’s Office of Research Services and see the CRC website (<http://www.chairs.gc.ca>) for more information on eligibility.

Please note that the offer of a tenured position at the rank of full Professor is conditional on your successful Tier 1 Canada Research Chair in Advanced Design for Water-Energy Sustainability application.

Dalhousie University commits to achieving inclusive excellence through continually championing equity, diversity, inclusion, and accessibility. In keeping with the principles of employment equity and the CRC program's equity targets, and with an aim to increase diversity within Engineering, this position is designated to candidates who self-identify as women AND as Indigenous persons (especially Mi'kmaq) or racialized persons (including persons of Black/African descent and especially African Nova Scotians). All such qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. Dalhousie recognizes that candidates may self-identify in more than one equity-deserving group, and in this spirit, encourages applications from persons with disabilities and persons identifying as members of 2SLGBTBQ+ communities. (See <https://www.dal.ca/dept/vpei/equity-inclusion/employment-equity.html> for definitions of the equity-deserving groups). (See <https://www.dal.ca/dept/vpei/equity-inclusion/employment-equity.html> for definitions of the equity-deserving groups).

Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. The treaties recognized in this region are those of Peace and Friendship. We also acknowledge the histories, contributions, and legacies of the African Nova Scotian people and communities who have been here for over 400 years.

Dalhousie recognizes that career paths can be diverse and that career interruptions may occur. Applicants are encouraged to include, in their cover letter, an explanation of the impact that any career interruptions may have had on their record of research achievement.

Review of applications will commence on December 15, 2022 and will continue until the position is filled. It is anticipated that the chosen candidate will submit a nomination package to the CRC program by October 17, 2023, and would start the position July 1, 2024. Applications should include a detailed curriculum vitae, a two-page summary of the candidate's proposed research program, a statement of teaching interests and philosophies, and names of three references. All applications are to be submitted online at: <https://dal.peopleadmin.ca/postings/11977>

Dalhousie University recognizes its obligation to accommodate candidates in order to ensure full, fair, and equitable participation in the hiring process. Our complete Accommodation Policy can be viewed online at: [www.dal.ca/policies](http://www.dal.ca/policies). For further information on this position, or to request accommodation at any stage in the search process, please contact Shelley Parker ([Shelley.Parker@dal.ca](mailto:Shelley.Parker@dal.ca)).