

Postdoctoral position modeling sea lamprey movement in response hydraulic patterns

We are seeking a keen postdoctoral researcher to contribute to a collaborative project relating sea lamprey movements to the hydraulic patterns in their environment at multiple spatiotemporal scales. The analysis will apply the Eulerian-Lagrangian agent method, a state-of-the-art cognitive-based computer model that integrates 2-D and 3-D movement tracks obtained via telemetry with water flow patterns captured by high-resolution hydraulics models of the aquatic environment. The project is a part of broader efforts to improve our understanding of how sea lamprey respond to hydraulic patterns and to use this knowledge to facilitate trap placement and selective passage, and support sea lamprey control in the Great Lakes.

The research project involves collaboration between scientists from the University of Guelph, Great Lakes Fishery Commission, US Army Corps of Engineers, and the US Geological Survey. The postdoctoral researcher will lead the identification of behavioural decision rules that predict sea lamprey responses to hydraulic stimuli (e.g., water velocity, pressure, acceleration). The researcher will also lead the publication of scientific papers and the presentation of project results at scientific conferences and workshops. The researcher will reside at the University of Guelph, but, from time to time, may need to travel between collaborating institutions.

The duration of the position will be two years. The ideal candidate will have a strong background, including a PhD, in ecology or animal behaviour, strong quantitative and modeling skills, and a demonstrated ability to communicate science effectively via publications and conference presentations.

Applicants are requested to submit a cover letter, CV, relevant publications, and names and contact information for three references to both Rob McLaughlin (rlmclaug@uoguelph.ca) and Dan Zielinski (dzielinski@glfc.org). We will start screening applications on 15 February 2020. The anticipated start date for the position is 1 May 2020, but there can be some flexibility.

At the University of Guelph, fostering a culture of inclusion is an institutional imperative (<http://bit.ly/2yVClqd>). The University invites and encourages applications from all qualified individuals, including from groups that are traditionally underrepresented in employment, who may contribute to further diversification of our Institution.