



**PHD FELLOWSHIP IN
HYDROLOGY AT THE
UNIVERSITY OF
COLORADO BOULDER**



Dear Colleagues,

The Institute of Arctic and Alpine Research (INSTAAR) at the University of Colorado Boulder (CU) invites applicants for a Ph.D. Student in cold region hydrology.

For full consideration, apply by Dec. 15, 2019. The position will remain open until filled.

A start date is negotiable, ideally spring or summer, 2020.

Project: *The climate impacts on Alaskan and Yukon rivers, fish, and communities as told through co-produced scenarios*

The successful applicant will work on an exciting new research project funded by the National Science Foundation's *Navigating the New Arctic* Program. The project seeks to assess climate change impacts on hydrology, rivers, fish, and Native communities in Alaska and upstream western Canada. The successful applicant will use continuous specific conductance and river temperature measurements to improve large-scale model simulations of groundwater contributions, river hydrology, ice, and water temperatures. The project has strong collaboration among scientists at CU, the USGS, and the National Center for Atmospheric Research (NCAR) to simulate historical and future climate, land surface, and river conditions. The student will be encouraged to engage in outreach activities and occasional fieldwork*.

The student will be co-advised by Keith Musselman and Michael Gooseff. Work will be done in collaboration with Joshua Koch (USGS), Noah Molotch (CU), Nicole Herman-Mercer (USGS), Ryan Toohey (USGS), Cassandra Brooks (CU), Andrew Newman (NCAR), Joe Hamman (NCAR), Karl Lindenschmidt (University of Saskatchewan), Mike Carey (USGS), research staff at the Yukon River Inter-Tribal Watershed Council, along with several others.

The fellowship includes a tuition waiver and health insurance. Funding is available for travel to conferences and workshops. The student's home department would either be the Department of Civil, Environmental and Architectural Engineering or the Department of Geography, depending on the student's fit and interests.

Required Qualifications:

Strong written and verbal communication skills; self-motivation; proficiency with Unix, MATLAB, R, and/or python; effective decision-making skills; ability to work effectively with colleagues from diverse backgrounds including Native Alaskan and First Nations people.

Preferred Qualifications:

M.S. in engineering, hydrology, geography, or a closely related field; High Performance Computing experience is preferred. The successful candidate will use cutting edge cold-regions hydrology models to simulate current and future scenarios. Thus, we prefer backgrounds that include some combination of river modeling, cold region hydrology, and large data management and processing. Field experience in cold and remote environments is preferred*. We highly encourage applicants from under-represented groups, including people of color, women, LGBTQ+, and people with disabilities.

Application:

Interested candidates can contact Keith Musselman (keith.musselman@colorado.edu) or Mike Gooseff (michael.gooseff@colorado.edu). Please include your CV and GRE scores. Review of candidates will begin on Dec. 1st. CU Graduate School Admissions details can be found here: <https://www.colorado.edu/graduateschool/admissions>

* This project can optionally involve field work at remote sites in Alaska (mid-June through mid-August). To insure inclusion of all qualified potential applicants, participating in this field work is not required.

Thank you and please share,

Keith and Mike