Postdoctoral research positions in arctic hydrological-biogeochemical modeling

The Climate System Research Center (CSRC, <http://www.geo.umass.edu/climate/>) at the University of Massachusetts-Amherst serves to advance understanding of the nature and causes of climate change, and the effects that those changes have had on the environment. This research leads to a better understanding of how the climate system functions. Its mission emphasizes high quality climate research at an international level, the education and training of student scholars, and outreach to the public through interactions with the media and public lectures.

Overview: The CSRC seeks two postdoctoral scholars to develop, refine, and implement numerical models and advance understanding of linked hydrological and biogeochemical flows defining river systems across the western Arctic. The overarching goal of the research is to quantify the timing and magnitude of terrestrial water, carbon, and energy exports across the region, and assess associated impacts of climate change. The research is supported by grants from NSF, NASA, and DOE and involves collaborations with investigators at the University of Alaska, the University of Montana, and the University of Texas.

In one appointment the successful candidate will lead efforts to add new components to a coupled modeling framework, conduct simulations, and analyze results. In the second appointment the successful candidate will lead development of model algorithms to account for dynamics controlling the generation/leaching of carbon into streams and the photo- and microbial processing of dissolved organic carbon (DOC) in river systems. CSRC scholars engage the broader scientific community by publishing peer-reviewed journal articles, presenting results at conferences, and participating in working groups examining arctic water and carbon cycle dynamics. Two years of funding is available, and the anticipated start date is in fall 2019. Initial appointment will be for one year with a possibility of renewal for a second year. The positions carry full health care and other benefits and salary is commensurate with experience.

Requirements and Desired Skills: Completed Ph.D. by time of appointment in atmospheric science, biology, biogeochemistry, ecology, hydrology, or related field; background in biogeochemistry or hydrology in the context of modeling and analysis; experience in development and application of hydrological/biogeochemical/land-surface models; demonstrated proficiency in scientific programming languages such as Fortran and C/C++; expertise in shell scripting and/or data languages used to analyze and interpret large spatial data sets (Matlab, R, Python); and excellence as evidenced by publication of authored manuscripts in refereed journals and presentations at scholarly conferences. Excellent written and spoken communication skills in English are required.

To Apply: applicants should submit a cover letter describing relevant experience and qualifications, and a curriculum vitae, to Michael Rawlins <rawlins@geo.umass.edu>. Letters of recommendation will be sought from qualified candidates. The University of Massachusetts strives to be a community supportive of diverse perspectives and identities. All applications should speak directly to the candidate’s ability to work collaboratively with colleagues and engage effectively in scholarly research. Review of applications will continue until the positions are filled.