



## Doctoral Research Assistantship Utah State University

Department of Civil and Environmental Engineering  
and Utah Water Research Laboratory



### PhD/Post-Doc Position in Arctic Hydrology

Seeking a PhD student or post-doc to work on a project funded by the Department of Energy. This project will study **permafrost hydrological and biogeochemical processes in cold-region watersheds by advancing the state-of-the-art numerical models**. The student will apply a model-data integrative approach that combines field data collection and numerical models (i.e., process-based hydrologic models), leveraging the power of high-performance computing. The project aims to improve understanding of the permafrost flow and reactive transport processes across the hillslope-riparian zone and through river systems. The student will have the opportunity to conduct field work in Alaska and collaborate with researchers from the University of Texas Austin, University of Michigan, and Oakridge National Laboratory. This fully funded position (i.e., Research Assistantship) will remain open until filled.

#### Qualifications:

- MS/PhD degree in Civil and Environmental Engineering or other closely related fields (e.g., hydrology, geoscience, and environmental science) at the time the program begins.
- Strong quantitative skills and prior experience in hydrologic modeling (e.g., process-based models) and programming (e.g., Python, R) are preferred.
- Strong written and verbal communication skills.

#### Faculty contacts:



**Dr. Bethany Neilson**  
[bethany.neilson@usu.edu](mailto:bethany.neilson@usu.edu)



**Dr. Pin Shuai**  
[pin.shuai@usu.edu](mailto:pin.shuai@usu.edu)

Find more information about the PIs at:  
<https://engineering.usu.edu/cee/people/faculty/index>

#### Application:

Email a **current curriculum vitae, unofficial transcripts**, and a **1-page research statement** that briefly discusses how your background aligns with the research project **as soon as possible** to the faculty contacts.

Apply for admission through the USU graduate school:  
<https://gradschool.usu.edu/>

#### Start Date:

**Fall Semester  
2024**

Additional information and application instructions:  
<https://uwrl.usu.edu/opportunities>