

POSTDOCTORAL RESEARCHER, COMPUTATIONAL ECOHYDROLOGY, LAND SURFACE MODEL DEVELOPMENT AND EVALUATION

Interested in learning and gaining valuable interdisciplinary research experiences, from data science to modeling in ecohydrology and water related fields to enrich your modeling and data analytics experiences? Please apply for this postdoctoral position in the civil & environmental engineering at the University of Pittsburgh.

We are recruiting a highly self-motivated postdoctoral research scholar for a funded project with a start date of summer 2021 or fall 2021. The initial appointment is for one year with the possibility of extension for additional one to two years depending on performance and the project needs. The postdoctoral researcher would work under the supervision of Professor Xu Liang (email: xuliang@pitt.edu) at the University of Pittsburgh (<https://www.engineering.pitt.edu/XuLiang/>).

Project Description:

The postdoctoral researcher, as part of a larger project team, would work on developing and evaluating a new land surface and eco-hydrological model based on new theory (e.g., optimality) and newly available rich observations. These related aspects of the modeling development work are part of an international collaborative project where a next-generation model of the terrestrial biosphere and its interactions with the carbon cycle, water cycle and climate will be developed. The goal of the entire project is to eventually yield more reliable projections of future climates which could give a newfound ability to address issues in sustainability, including the potential to maintain the biosphere's capacity to regulate the carbon cycle while benefiting human well-being and development. The postdoctoral researcher will have an opportunity to work with top scientists around the world from multiple universities/institutions with diverse expertise.

Candidate Qualifications/Requirements:

- Hold a Ph.D. degree prior to the start date of the postdoctoral appointment with research experiences in at least one or more of the following areas: land surface modeling, eco-hydrological modeling, regulation of plant hydraulics on land-atmosphere interaction, computational hydrology; and knowledge on VIC (Variable Infiltration Capacity) model, VIC+ model, and vegetation dynamic modeling would be a plus;
- Possess strong coding skills in at least C and/or Python, additional skills in GIS, Matlab, R, and Fortran are a plus, and have modeling experiences over large spatial scales;
- Possess excellent oral and written communication skills
- Lead the preparation of research publications for submission to peer-reviewed academic journals based on the research undertaken
- Be able to manage own academic research and associated activities along with the ability to work independently and within a multidisciplinary team as required;

- Have a strong work ethic and time management skills;
- Candidates should be highly self-motivated, responsible, intellectually curious and enthusiastic about the project research, and interested in model development by writing computer codes;
- Be committed to advancing diversity and inclusion.

Additional experiences in the following aspects are highly desirable:

- Have experiences of coupling different models (e.g., a land surface model with a dynamic vegetation model)
- Be able to handle and analyze large datasets;
- Be familiar with numerical methods (e.g., finite difference, finite volume, and/or finite element methods)

Review of applications will begin immediately and will continue until the position is filled. For further information or questions about this position you may contact: Professor Xu Liang directly (xuliang@pitt.edu).

How to apply:

Your application should include:

- Cover letter
- Curriculum Vitae
- 1-page statement of your career goals and how this position will help you achieve your goals
- Unofficial academic transcripts for B.S. and graduate studies
- Contact information for three references

*Please apply to **Requisition 21003101 at join.pitt.edu***

Please also E-mail your application materials to xuliang@pitt.edu.

Candidates from underrepresented minority groups and women are strongly encouraged to apply for this position. The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer and values equality of opportunity, human dignity and diversity, EOE, including disability/vets. The University of Pittsburgh offers an excellent health insurance benefit together with other benefits.

Pittsburgh has been consistently ranked as one of the most livable cities in the US (<https://www.visitpittsburgh.com/media/press-kit/pittsburgh-accolades/>).