

# Postdoctoral Scholar Position at the University of Washington

Link to application submission: <http://apply.interfolio.com/114088>

## Position Description

The Environmental Geophysics and Computation Group at the University of Washington seeks a Postdoctoral Scholar who will work on the recently funded NSF Project “Improving model representations of Antarctic ice-shelf instability and break-up due to surface meltwater processes”. This project involves collaborative research between Alison Banwell (Boulder), Doug MacAyeal (U. Chicago), Joshua Cuzzone (UCLA), Nicole Schlegel (JPL), and Brad Lipovsky (main supervisor of the Postdoctoral Scholar at UW). The preferred start date is January 3, 2022.

The ideal candidate will build a coupled process-scale model of **ice shelf hydrology, flow, flexure, and fracture (H3F)** using an open source **finite element** library (such as FEniCSx, FireDrake, deal.II, MOOSE, etc.). Modern methods will be used to describe pervasively fractured media. The candidate will then incorporate this model into the Ice Sheet System Model (ISSM) using **machine learning** (statistical emulation) methods. This work will be carried out in an **Open Science** environment that leans heavily on open source software and workflow reproducibility in a version-controlled setting. More details about the Group’s vision are available at <https://github.com/bradlipovsky/group-vision>.

The successful candidate will receive a salary commensurate with research experience but not less than **\$65,478 in year one and \$69,264 in year two**. They will receive support for computing, travel to conferences, publications, and fieldwork. The position is initially one year but will be reappointed to longer (at least one additional year) based upon satisfactory progress toward agreed-upon goals. The University of Washington is located in **Seattle, WA, a culturally diverse city with vibrant arts, music, sports, and food scenes, an international airport, and opportunities for ocean and mountain adventures at your doorstep**. Postdoctoral scholars are represented by UAW 4121 and are subject to the collective bargaining agreement, unless agreed exclusion criteria apply. For more information, please visit the University of Washington Labor Relations website at <https://hr.uw.edu/labor/>. Initial appointments will be made for 12 months, renewable after that time.

## Qualifications

A PhD, or foreign equivalent, in computational geophysics or other computational sciences, is required. Candidates must have a demonstrated track record in scientific computing.

Experience with machine learning tools, continuum mechanics, and high performance computing (HPC) workflows are desirable.

## Application Instructions

This position remains open until filled. Applicants will be asked to provide a current CV with links to any open code repositories (e.g., GitHub or Zenodo; repo links optional but preferred), a short research statement, and two representative publications. Review of the applications will start immediately. Applications received by November 15 will receive the fullest consideration but we will continue reading applications after that date.

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