

**Investigating processes that influence submarine ice-melt
at the ocean interface of tidewater glaciers in Alaska & Greenland**
with Nash, Pettit & Wengrove @ Oregon State University

Position: We seek several full-time (12-month, extendable to 24 or more) postdoctoral scholars to join our team of ocean and ice scientists at Oregon State University to study the dynamics of ice melt at tidewater glacier interfaces.

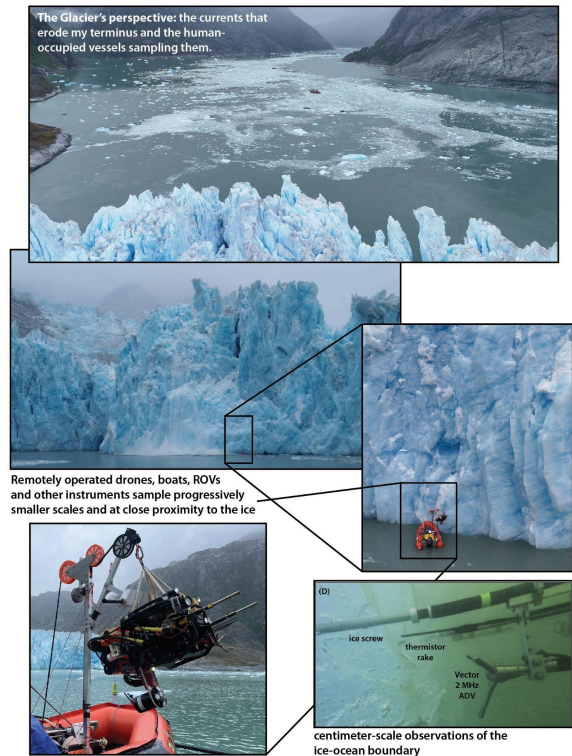
Recent field measurements and laboratory studies reveal new details of the ice-melt process not represented within the current generation of melt models. While we have gained considerable insight from these data, we still lack the necessary information to know how to reconcile melt models and observations.

The successful applicants will bring new strengths in interpreting observations through theory, lab and/or modeling to our group. The opportunity to join cruises to collect data is possible but not required. Directions for exploration should focus around melt dynamics, and could include understanding the influence of:

- ice morphology on near-glacier flow circulation patterns
- bubbles trapped in the ice on heat exchange at the ice-ocean interface
- sediment raining down on the ice on circulation and heat exchange at the ice-ocean interface
- oscillatory flow and unsteady eddies on the mixing of heat at the ice-ocean interface
- feedback with fractures and calving (and, pending funding, extension to ice shelf melt dynamics may be possible).

Postdocs will work under the mentorship of Principal Investigators of Dr. Jonathan Nash, Dr. Meagan Wengrove, and Dr. Erin Pettit (each Postdoc will have a primary supervisor depending on their field of expertise).

The positions are renewable for a second and third year if the postdoctoral scholar remains within five years from receipt of their doctoral degree*; reappointment depends on performance and continued funding availability and is at the discretion of the Principal Investigators and the OSU Office of Postdoctoral Programs. Stipend and benefits conform with postdoctoral scholar standards at OSU (<http://gradschool.oregonstate.edu/postdocs>).



Responsibilities: The successful applicant will lead specific components of larger research projects; collaborate to design field data collection strategies; process, analyze, and archive data; communicate research findings; prepare research manuscripts for peer-reviewed journal publications; present research at scientific conferences and public outreach events; develop and assist with writing grant proposals; assist in the training of undergraduate and graduate students in thesis or dissertation preparation, research methods, and computational/mathematical methods; and collaborate with other members of the OSU team and the international project teams. As a postdoctoral fellow, OSU allows up to 15% of the time for professional development activities.

Required Qualifications: A Ph.D. in Physics, Oceanography, Geosciences, Computational Mathematics, Mechanical Engineering, Civil and Environmental Engineering, or a similar field.

- Experience with one or more of the following topics: ice-ocean melt physics, nearshore processes, oceanography, environmental fluid mechanics, sediment dynamics, glacier dynamics.
- Experience with CFD, DNS, and/or LES numerical modeling is valued, but not required.
- Experience with various approaches to process-based modeling (FEM, DEM, etc) and/or ice sheet modeling is valued, but not required.
- Experience with field data collection methods and analysis in oceanography or glaciology is valued.
- Strong communication skills and a desire to work as part of a scientifically diverse team.

Preferred Qualifications: Strong background in ice/ocean interactions and field experience in a polar environment. We highly encourage applicants from under-tapped groups.

Position Available: Start between Sept 2025 and Sept 2026; within the College of Earth, Ocean, and Atmospheric Sciences and/or College of Engineering at Oregon State University in Corvallis.

Application: Please contact us for further information or to express interest. For full consideration, apply by Sept 15, 2025 at <https://exploreice.org/pd-ice-ocean>. Applicants will submit a PDF including: (1) a cover letter describing academic experience, qualification; and interest in the position; (2) a curriculum vitae, including current employment and contact information; (3) graduate transcripts (University's unofficial transcripts are ok); (4) list of relevant coursework; (5) names and email addresses of three professional references; and (6) list with links to relevant published research and/or preprints of relevant research not yet published.

Application materials should be addressed to Drs Nash, Wengrove, and/or Pettit and uploaded as a single pdf using the link at the above website. (Jonathan.Nash, Meagan.Wengrove and Pettiter at OregonState.edu)