zintellect
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Opportunity Title: Understanding the drivers of time-evolving glacier motion from spaceborne observations
Opportunity Reference Code: 0240-NPP-MAR26-JPL-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0240-NPP-MAR26-JPL-EarthSci

How to Apply All applications must be submitted in Zintellect

Please visit the NASA Postdoctoral Program website for application instructions and requirements: How to Apply | NASA Postdoctoral Program (orau.org)

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 3/1/2026 6:00:59 PM Eastern Time Zone

Description **About the NASA Postdoctoral Program**

The NASA Postdoctoral Program (NPP) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

One of the most consequential impacts of climate changes is an increase in ice loss from glaciers and ice sheets. Such losses are largely responsible for increasing rates of sea level rise. Despite confidence that ice loss will accelerate into the future, the magnitude of such acceleration is still highly uncertain due to still limited understanding of the rate controlling processes that modulate ice flow. A recent explosion in the number of sensor capable of measuring ice flow from space, and the maturation of projects targeted at extracting comprehensive records of ice flow (e.g. NASA's ITS_LIVE project), create a unique opportunity to apply machine learning and neural network methodologies, in conjunction with simplified ice sheet models, to advance understanding of ice sheet basal processes and their evolution through time. To that end we are seeking an NPP applicant to develop methodologies to invert for time-evolving basal friction from massive volumes of surface flow observations. The successful candidate will work under the supervision of Dr. Alex Gardner (Sea Level and Ice Group) and will have the opportunity to collaborate with researchers from across the lab and with close collaborators at M.I.T., Brown University, University of Grenoble, and the California Institute of Technology, dependent on the candidate's desired research.

Field of Science: Earth Science

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Advisors:
Alex Gardner
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Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found at: https://www.nasa.gov/oiir/export-control.

Eligibility is currently open to:

- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

Questions about this opportunity? Please email npp@orau.org

Qualifications

Preferred Qualifications for the Ideal Applicant

- PhD in Cryosphere Sciences or similar field
- Strong background in machine learning and neural networks
- Advanced understanding of remote sensing principles
- Experience working with large remote sensing datasets
- Strong programing skills with a preference for Python and Julia languages
- Strong record of peer-reviewed publications
- Demonstration of open science practices

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.