

Postdoctoral Associate,Earth Sciences (Geology)
University at Buffalo

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Posted Feb. 21, 2025, set to expire Jun. 21, 2025

Job Title Postdoctoral Associate,Earth Sciences (Geology)
Department Earth Sciences
Institution University at Buffalo
Buffalo, New York

Date Posted Feb. 21, 2025

Application Deadline Open until filled
Position Start Date Available immediately

Job Categories Post-Doc

Academic Field(s) Geology/Geosciences - General
Earth Sciences

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Job Description

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Postdoctoral Associate,Earth Sciences (Geology)

Position Information

Position Title: Postdoctoral Associate,Earth Sciences (Geology)

Classification Title: Postdoctoral Associate

Department: Earth Sciences

Posting Link: <https://www.ubjobs.buffalo.edu/postings/55694>

Job Type:

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Full-Time

Posting Detail Information

Position Summary

As a **Postdoctoral Associate** in the [Department of Earth Sciences](#), this position will support an investigation entitled "Toward ice sheet surface data assimilation: Employing satellite observation and machine learning to improve model representation of ice sheet surface melt". The candidate will work under the direction of Prof Nowicki and in collaboration with multiple UB faculty and students as well as our external collaborators located at NASA Goddard Space Flight Center and NASA Jet Propulsion Laboratory. The work consists of contributing to the development of a machine learning algorithm to improve the modeled surface meltwater in the Goddard Earth Observing (GEOS) model. Advocating and adapting the model based on collaborator feedback is key to the success of the effort, so the postdoctoral associate will be in communication with team member and will be required to present the project at workshop and conferences as well as in publications.

Duties will include but are not limited to:

- Helping develop a novel approach to produce surface meltwater over the Greenland ice sheet, which requires state of the art research. Identify prognostic meltwater error sources by training a machine learning algorithm on Greenland satellite - model surface melt differences and characterize what atmospheric forcings are most strongly associated with meltwater production biases using GEOS.
- Generate a machine learning-developed meltwater production bias dataset (1980-2025). Collecting and preparation of dataset (observational or models) or parameterization to be included in GEOS. This requires identifying suitable dataset/parameterizations from literature reviews, accessing datasets from data archive and observation servers, or developing novel analysis methods. Creating scripts for analysis and post-processing to create datasets or tools for use by GEOS. (35%).
- Presenting material and approach to the team. This requires participating in the scientific discussions of the project, presentation at team meetings, workshop and conference meetings but also follow up with team members via email/phone/zoom calls (15%).
- Presenting finding to the broader community at conferences, workshops and via publications. This requires writing and verbal skills, as well as developing and maintaining collaborations and networks (15%).

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- Being a part of the [University at Buffalo community](#).

As an Equal Opportunity / Affirmative Action employer, the Research Foundation will not discriminate in its employment practices due to an applicant's race, color, religion, sex, sexual orientation, gender identity, national origin and veteran or disability status.

Minimum Qualifications

Doctoral degree in an area related to Earth Science, Polar Science, Glaciology or Civil Engineering

Preferred Qualifications

- experience in data compilation and analysis
- experience with large dataset (observations or models)
- experience with computing languages such as python, R or MATLAB
- experience with presenting at conferences and writing manuscripts
- experience with leadership
- experienced at exhibiting independence, networking and ability to be outgoing strongly preferred

Salary Range

\$50,000 - \$52,000

Special Instructions Summary

Is a background check required for this posting?

No

Contact Information

Contact's Name: Sophie Nowicki

Contact's Pronouns:

Contact's Title:

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Empire Innovation Professor

Contact's Email: sophien@buffalo.edu

Contact's Phone: 716-645-3489

Posting Dates

Posted: 02/05/2025

Deadline for Applicants: Open Until Filled

Date to be filled: 04/03/2025

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Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

N/A

University at Buffalo

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