How to Apply

Applications are welcomed and encouraged from all qualified individuals regardless of background and identity. To apply, please complete the application on the U-M Careers site. A one page cover letter is required for consideration for this position and should be attached as the first page of your resume. The cover letter should address your specific interest in the position and outline experience that is directly related to this position.

Applicants should prepare the following materials:

- Cover letter describing your specific interest in the position, research accomplishments, and qualifications related to the position

- Curriculum vitae

- Contact information for three professional references

- Representative publications, if available

Applications that do not contain items 1-3 listed above will not be reviewed. Please email Dr. Abby Hutson any application materials that are too large to upload: hutsona@umich.edu.

The hiring committee will begin reviewing applications on 08/10/2024, and this posting will remain open until filled.

Summary

A postdoctoral fellowship is available for a highly qualified individual to join the Cooperative Institute for Great Lakes Research (CIGLR: https://ciglr.seas.umich.edu/). The successful candidate will work with a team of atmospheric and hydrodynamic modelers at CIGLR and the National Oceanic and Atmospheric Administration (NOAA) Great Lakes Environmental Research Laboratory (GLERL) to improve our ability to make climate projections for all aspects of the dynamical system in the Great Lakes Region. Specifically, the candidate will use the Weather Research and Forecasting (WRF) model to dynamically downscale global climate model output from multiple members of the Coupled Model Intercomparison Project Phase 6 (CMIP6) suite. The candidate will also test and evaluate methods to couple a hydrodynamic model of the Great Lakes with the WRF regional climate model (RCM) to best represent the lake-atmosphere feedbacks unique to the region. This project will support multiple interdisciplinary projects within CIGLR and GLERL to provide the high-resolution atmospheric climate projections needed to force hydrodynamic, hydrologic, and ecosystem models.

The primary focus of this project is to create high-resolution atmospheric data guided by future climate projections from global models with the added necessity of including appropriate lake information as a boundary condition for the WRF model. The candidate will be welcome to explore any research questions that arise from analyzing the atmospheric phenomena and climate trends within the coupled model. The postdoc will be expected to maintain a strong record of scholarly publication and presentations at scientific conferences and public meetings.

The appointment will be with CIGLR, which is part of the University of Michigan's School for Environment and Sustainability located in Ann Arbor, Michigan. CIGLR is a collaboration between the University of Michigan and NOAA that brings together experts from academia and government research labs to work on pressing problems facing the Great Lakes region. You will spend the majority of your time at NOAA's Great Lakes Environmental Research Laboratory (GLERL) in Ann Arbor and will collaborate closely with colleagues at CIGLR, GLERL, SEAS and other Great Lakes partners.

This position offers a highly competitive salary plus benefits and comprehensive mentoring for scientific and professional development. The initial appointment is for one year, with opportunity for extension for the second year contingent on performance. Applications will be reviewed on a first-come first-served basis until the position is filled. The position is expected to start during late Fall 2024 or early Winter 2025.

Who We Are

The School for Environment and Sustainability (https://seas.umich.edu/) is a collaborative and interdisciplinary school. Our mission includes contributing to the protection of environmental resources and the achievement of a sustainable society. We accomplish this by generating and sharing knowledge, contributing to policy and engaging managers and stakeholders. The University of Michigan is a top-ranked public university with excellence in research and teaching. Ann Arbor, home to the University of Michigan, is a town known for arts, culture, parks and restaurants.

SEAS is committed to creating and maintaining an inclusive and equitable environment that respects diverse experiences, promotes generous listening and communications, and discourages and restoratively responds to acts of discrimination, harassment, or injustice. Our commitment to diversity, equity and inclusion is deeply rooted in our values for a sustainable and just society.

Responsibilities*

- Use the WRF model to dynamically downscale chosen global climate model projections from the CMIP6 ensemble for the Great Lakes Region for historical, mid-century, and late-century time periods.

- Work with hydrodynamic modelers to couple a three-dimensional lake model with the WRF framework and conduct tests to evaluate optimal coupling performance

- Publish model output on a publicly available repository with sufficient quality-control, maintenance, and metadata.

- Provide model output and support for multiple interdisciplinary projects throughout CIGLR/GLERL.

- Attend regular project meetings to report progress

- Lead at least one manuscript based on research findings for submission to a peer-reviewed journal and present results at a conference(s). A manuscript is expected to be initiated within 6-12 months from the start date

Required Qualifications*

- A Ph.D. in meteorology, geosciences, climate sciences, data science, or a similar field, with a strong background in atmospheric modeling is required

- Experience with the Weather Research and Forecasting model (WRF) is ideal but not required

- Familiarity with data analysis and visualization in a scripting environment using R, Python, or similar software is also necessary

- Strong communication skills and a demonstrated ability to lead the development of manuscripts for refereed journal publication are needed

- Successful candidates must be able to work effectively both as part of a team and independently

Additional Information

Remote and flexible work agreements may be made to support partial off-site work at a remote location.

This position is open only to US Citizens or permanent residents due to federal security clearance required for access to NOAA GLERL facilities and resources.

Application Deadline

Job openings are posted for a minimum of seven (7) calendar days. This job may be removed from posting boards and filled any time after the minimum posting period has ended.

U-M EEO/AA Statement

The University of Michigan is an equal opportunity/affirmative action employer.

Job Detail

JOB OPENING ID
251493

WORKING TITLE
Postdoctoral Fellow in Great Lakes Regional Climate Modeling with WRF

JOB TITLE
RESEARCH FELLOW

WORK LOCATION
Ann Arbor Campus
Ann Arbor, MI

FULL/PART TIME
Full-Time

REGULAR/TEMPORARY
Regular

FLSA STATUS
Exempt

ORGANIZATIONAL GROUP
School Nat Res Envir

DEPARTMENT
SEAS CIGLR

POSTING BEGIN/END DATE
7/10/2024 - 10/01/2024

CAREER INTEREST
Research Fellows