



Postdoctoral Researcher Position in Hydrology, Urban Climate and Environmental Science

Department of Climate and Space Sciences and Engineering College of Engineering University of Michigan

Anticipated Start Date: June 2025 (Flexible)

The Department of Climate and Space Sciences and Engineering at the University of Michigan invites applications for a two-year postdoctoral researcher position to work on an exciting interdisciplinary project focused on evaluating the role of urban greening in reducing atmospheric carbon dioxide concentrations and buffering communities from the potential amplification of environmental and health-related risks associated with climate change. The successful candidate will work under the supervision of Prof. Mohammed Ombadi and Prof. Adriana Bailey and will have the opportunity to collaborate with a dynamic research team at the intersection of climate science, engineering, public health and urban sustainability.

Research Project:

The research project aims to explore the co-benefits of urban greening initiatives for mitigating risks associated with flooding, urban heat island effects, and air quality. By leveraging data-driven methods, including machine learning, regression, and causal inference, the postdoctoral researcher will contribute to understanding how urban greening can improve urban resilience to climate change and enhance public health.

Responsibilities

- Conduct data-driven analyses of urban greening impacts on the risk of flooding, urban heat island and air quality.
- Develop and implement machine learning models, statistical techniques (e.g., regression, causal inference), and other data analytics methods.
- Collaborate with faculty members, graduate students, and external partners on research, manuscript preparation, dissemination of results and project development.
- Contribute to the writing of research papers and grant proposals.
- Present research findings at academic conferences and seminars.

Qualifications

• A PhD in hydrology, civil and environmental engineering, atmospheric science, environmental science, or a related field.





- Strong proficiency in data-driven methods, particularly machine learning, regression, and causal inference.
- Fluency in coding (e.g., Python).
- Strong analytical skills and the ability to work with large datasets.
- Excellent written and verbal communication skills.
- Ability to work independently and as part of a collaborative research team.

How to apply

- A cover letter outlining your research experience and interest in the position, including the contact information of at least two references who can speak to your qualifications and research experience.
- A current CV, including a list of publications and relevant skills.
- Send the application materials to Prof. Ombadi (<u>ombadi@umich.edu</u>).

Anticipated Start Data: The position is anticipated to start in June 2025, with some flexibility in the exact start date.

Application Deadline: January 15, 2025. Position will remain open until filled.

Salary and Benefits

- The postdoctoral position is for two years, with potential for renewal based on performance.
- Salary is \$65,000.
- The University offers a comprehensive benefits package, including health insurance.

About the Department: The Department of Climate and Space Sciences and Engineering is part of the College of Engineering at the University of Michigan, one of the nation's leading research institutions. The department provides a dynamic, collaborative, and interdisciplinary research environment. The University of Michigan offers an outstanding academic and professional environment with access to a wide range of research facilities and resources.

About the University: The University of Michigan is a top-ranked public research university known for its commitment to academic excellence, innovation, and community engagement. Located in Ann Arbor, Michigan, the University offers a vibrant academic community, rich cultural life, and a strong commitment to diversity, equity, and inclusion.