

Subject: Recruiting 1-2 postdoctoral scholars and PhD students in coupled biogeochemical cycles at Michigan State University

The Watershed Biogeochemistry in the Anthropocene Lab (<http://gersonlab.weebly.com>) at Michigan State University is recruiting motivated, collaborative, and curious PhD students and postdoctoral scholars in coupled biogeochemical cycles. We study how anthropogenic activities have altered the coupled cycling of nutrients and contaminants through watersheds. While we have historically focused on mercury, we are expanding our focus. We examine the fate, transport, and transformation of these elements within and between terrestrial and aquatic ecosystems, including their consequences for people and animals.

The PhD students and postdoctoral scholars will have flexibility in their research to find a topic that excites them but could focus on one of the following projects: the fate of mercury from artisanal gold mining in Peru, Ghana, or Kenya; the impact of agricultural sulfur use in California vineyards or midwestern croplands; the potential antagonism between mercury and selenium; or the local and global fate of trace elements from human activities. This research will involve a combination of fieldwork, laboratory analyses, lab experiments, and modeling. The student will be expected to work both independently and collaboratively, to communicate results in peer-reviewed scientific articles and conferences presentations, and to share their work with relevant community members and leaders.

The Gerson Lab is part of the [Department of Earth and Environmental Sciences](#) and [Kellogg Biological Station](#) at Michigan State University. Graduate students can also affiliate with the [Ecology, Evolution, and Behavior](#) Program. Collectively, these communities provide great opportunities for students to work and interact with other watershed and ecosystem scientists in a supportive and collaborative environment. We are committed to promoting and enhancing diversity, equity, and inclusion in STEM.

I encourage all students applying to graduate school to check out this [article](#) I co-authored about demystifying the graduate school application process.

Minimum qualifications for PhD positions: Students from a range of academic majors are encouraged to apply, including biology, chemistry, ecology, environmental engineering, environmental science, geochemistry, hydrology, and other related fields. Applicants from historically underrepresented groups in STEM are particularly encouraged to apply. Preference will be given to students with a M.S. degree by the start date, although we will consider all students with a B.A. or B.S.

Desired qualifications for PhD and postdoc positions: Previous research experience and/or relevant coursework, self-motivation, willingness to learn, positive attitude, interest in a

cross-disciplinary approach, ability to work collaboratively in teams, and a commitment to creating an inclusive culture in the research group and more broadly in research science and education.

Note that GRE scores are not required or considered as part of the grad school application. [FreeApp waivers](#) for application fees are available with priority given to those who apply by November 15, though submissions after that date will still be considered for support.

Funding: The PhD positions will be funded on a combination of teaching and research assistantships, which include a competitive stipend for five years (including summers), tuition waiver, and health insurance benefits. The Earth and Environmental Science program also provides funding to support moving costs to East Lansing and the purchase of a personal computer. The postdoctoral position is funded for at least one year (with the potential for an extension for an additional one to two years). For both the PhD students and postdocs, there will also be opportunities for professional development, including presentation of research at conferences.

**I also highly encourage you to apply for competitive fellowships, and I would be happy to work with you to develop your applications.** If you are a graduate student, applications for the NSF Graduate Research Fellowship Program (GRFP) are due in October. If you are a postdoc, I can work with you to compile an application to the MSU Ecology Evolution and Behavior Postdoctoral Fellowship, Smith Fellowship, NSF Biology Postdoctoral Fellowship, or NSF Geoscience Postdoctoral Fellowship, among others. Application deadlines for each of these fellowships differs.

If interested, please review our lab website for more information and then contact Dr. Jacqueline Gerson at [gersonja@msu.edu](mailto:gersonja@msu.edu) to arrange a zoom call. In your email, please include your CV and briefly address the following: 1) your previous research experience and/or relevant skills, 2) your research interests, and 3) why you are interested in joining this lab. **The application deadline for PhD students in Earth and Environmental Sciences is December 7. Initial contact is requested prior to formally applying to the department. Postdoctoral scholar applicants will be considered as they are received.**

Location: Michigan State University is located in East Lansing, Michigan, with Kellogg Biological Station ~1.5 hours away in Hickory Corners, Michigan. MSU is a community of ~50,000 undergraduate and graduate students. East Lansing offers an excellent quality of life, with a reasonable cost of living and access to many outdoor activities (hiking, paddling, biking, cross-country skiing). East Lansing is also ~1 hour from Detroit and Ann Arbor, and ~4 hours from Chicago. MSU is an equal opportunity employer. We encourage applications from women, persons of color, veterans, persons with disabilities and other individuals who can contribute to

the intellectual diversity and cultural richness at Michigan State University. Michigan State University occupies the ancestral, traditional, and contemporary Lands of the Anishinaabeg—Three Fires Confederacy of Ojibwe, Odawa, and Potawatomi peoples. The University resides on Land ceded in the 1819 Treaty of Saginaw.