



Penn

BiCycles
Lab

PENN BIOGEOCHEMICAL CYCLES LAB

Research Coordinator Senior - Earth and Environmental Science, School of Arts and Sciences

Location:

Philadelphia, PA, USA

Term:

2.5 years with reappointment after 1 year

Position summary:

The Penn BiCycles Lab in the Department of Earth and Environmental Science at the University of Pennsylvania is looking for a motivated and organized Research Specialist with interest in using a diverse array of instrumentation for Earth science research. Research in the BiCycles Lab focuses on aquatic and interface biogeochemistry, with current interests in nutrient cycling, chemical weathering, and toxic element transport in polar and alpine systems. The BiCycles Lab utilizes a range of lab and field-based instrumentation to make observations of the Earth system, from glacier surfaces to rivers to coastal ocean. This position offers the opportunity of joining a dynamic and welcoming young lab that is conducting exciting research in regions of the planet that are undergoing rapid change. The position also offers opportunities for personal and professional growth, exposure to a collegial research community, and opportunities to supervise, mentor and collaborate with industry, students, and early career researchers.

If you have any questions and for further information, please contact Dr. Jon Hawkings (hawkings@sas.upenn.edu).

Job Description:

The Research Coordinator will work closely with members of the Penn BiCycles Lab, lab collaborators, and other interested users within EES, Penn, and industry. This position will support the research activities of the lab through assisting in operation of instrumentation, which includes an inductively coupled mass spectrometer, mercury analyzer, nutrient analyzer (via flow injection analysis), fluorescence and absorbance spectrometer, and total organic carbon analyzer. The position includes assisting lab users in sample preparation (e.g. purifying analytical reagents, digest of samples on hotplates and via microwave digestion, sample diluting/spiking/acidifying, use of correct and appropriate reference materials etc...) and writing standard operating protocols for instruments and other laboratory equipment (e.g. acid stills, hot plates, centrifuge etc...).

The Research Coordinator will lead training on analytical instrumentation and sample preparation, be responsible for organization of the lab (including ensuring all lab users keep workspaces clean, tidy and safe), maintain lab/field supplies as the point of contact for consumables ordering (with input from the PI), and be a lab point of contact for health and safety issues. This position will also provide basic instrument maintenance as per manufacturer recommendations and work closely with instrument manufacturers to organize more advanced maintenance. Finally, the Research Coordinator will help prepare and ship equipment for fieldwork, and help maintain the lab's core fieldwork supplies (water quality sondes, CTD instrumentation and remote camp field kit such as solar batteries and solar panels). The Research Coordinator will have the opportunity to participate in fieldwork if desired. The BiCycles Lab is fully committed to fostering a diverse, equitable and inclusive atmosphere, and all new personnel should strive to support a non-discriminatory, inclusive, and supportive atmosphere.

Qualifications:

Bachelor's degree with 3-5 years of related experience in research and project management, or equivalent combination of education and experience, is required. A Master's or PhD in an Earth and environment science related subdiscipline (e.g. biogeochemistry, chemical oceanography, organic geochemistry) with strong analytical experience is preferable.

The position requires someone with a technical background in inductively coupled plasma mass spectrometry, including data processing and interpretation, and a keen interest in analytical instrumentation for Earth sciences. The candidate should show a strong desire to learn about new instrumentation, analytical best practice (particularly in aquatic biogeochemistry) and basic instrument maintenance. Organizational and clear communication skills are essential, including the ability to work with interdisciplinary and multicultural lab user across career stages. At least three years of analytical laboratory experience is essential. The ideal candidate will be motivated, have a passion for Earth and environmental science research, have excellent communication skills, and have prior experience with some of the existing lab analytical instrumentation (importantly ICP-MS theory and techniques).

Experience with wet chemical nutrient analysis, total organic carbon analysis, spectrofluorometry and/or low-level trace metal analysis in waters is desirable and preferred. Additionally, research experience in analytical biogeochemistry would be welcome. It would be beneficial if the applicant is comfortable handling large datasets and performing exploratory data analysis on mass spectrometry data.

Working environment:

The Department of Earth and Environmental Science (EES) at University of Pennsylvania combines elements of geology, physics, chemistry, biology and mathematics to study the Earth and its relationship with biological organisms. Areas of inquiry range from the atomic and molecular to the largest scales, from ancient times to the present and into the future. Research in the Department encompasses minerals and rocks, soils and sediments, mountains and landscapes, the atmosphere, the hydrosphere and climate, fossilized and living organisms, and human impacts on the environment.

Penn's landscaped urban campus is an accredited arboretum. Near its eastern edge, [Hayden Hall](#), our main building, houses the Department's administration and most of our members and laboratories. Some faculty have space in neighboring [David Rittenhouse Laboratory](#) or in the [Department of Biology](#). [The Water Center](#) is located in the [McNeil Building](#), in central campus. All our facilities are within a short walk and indeed, all twelve Penn schools are easily

accessible, which stimulates and simplifies our collaboration with colleagues around the campus.

Our department brings together faculty, students, postdoctoral scientists and staff of diverse origins and identities. As laid out in the departmental [statement on diversity, equity, and inclusion](#), we strive to provide a collegial learning and working environment that feels safe and inclusive for everyone.

We will strive to improve recruitment and retention of underrepresented groups. We will focus strongly on encouraging and mentoring undergraduates through their first course in our Department, provide a supportive environment throughout their time as Earth Science or Environmental Studies majors and enable opportunities and financial support for basic Earth science research and for projects confronting real-life environmental issues. We will encourage and support our students, faculty and staff toward community engagement, especially relating to environmental issues and social justice. We will partner with local, national and international communities to improve the diversity pipeline in the Geosciences, beginning even in primary school.

The University of Pennsylvania, the largest private employer in Philadelphia, is a world-renowned leader in education, research, and innovation. This historic, Ivy League school consistently ranks among the top 10 universities in the annual U.S. News & World Report survey. Penn has 12 highly-regarded schools that provide opportunities for undergraduate, graduate and continuing education, all influenced by Penn's distinctive interdisciplinary approach to scholarship and learning. As an employer Penn has been ranked nationally on many occasions with the most recent award from Forbes who named Penn one of America's Best Employers By State in 2021.

Penn offers a unique working environment within the city of Philadelphia. The University is situated on a beautiful urban campus, with easy access to a range of educational, cultural, and recreational activities. With its historical significance and landmarks, lively cultural offerings, and wide variety of atmospheres, Philadelphia is the perfect place to call home for work and play.

The University offers a competitive benefits package that includes excellent healthcare and tuition benefits for employees and their families, generous retirement benefits, a wide variety of professional development opportunities, supportive work and family benefits, a wealth of health and wellness programs and resources, and much more.

COVID-19 vaccination is a requirement for all positions at the University of Pennsylvania. New hires are expected to be fully vaccinated before beginning work at the University. For more information about Penn's vaccine requirements and the use of Penn Open Pass, visit the [Penn COVID-19 Response website](#) for the latest information.