



BOISE STATE UNIVERSITY

COLLEGE OF ENGINEERING
Department of Civil Engineering

Boise State Assistant Professor [Kevin Roche](#) is recruiting one Ph.D. student to join the [Hydrologic Interfaces and Processes Laboratory](#) for **Fall 2025**. This position is fully funded and supports student tuition, benefits, and a graduate stipend. While there is flexibility on the potential research projects, all projects focus on bacterially mediated reactive transport in confined geometries. Potential projects include:

- Using experiments and modeling to investigate the fate of pharmaceuticals and their degradation byproducts in river sediments ([learn more](#)).
- Investigating feedbacks between mass transport, microbial growth, and reactions in confined flows (e.g., groundwater, the human gut) using microfluidics ([learn more](#)).

The student will be a member of the [Department of Civil Engineering](#) and will join an interdisciplinary Ph.D. program that best suits their skills and interests. Our lab highly values diverse perspectives and welcomes applicants from a range of backgrounds. I am committed to fostering a diverse, equitable, and inclusive research group whose trajectory is shaped by the unique backgrounds of its members. [Click here for resources](#) that support Boise State University's commitment to a diverse and inclusive on-campus culture.

Minimum Qualifications

- B.S. degree in engineering, physics, earth sciences, microbiology, chemistry, mathematics, or a related degree with relevant quantitative coursework.
- Strong passion for learning and an eagerness for applying analytical skills to solve complex problems.
- Willingness to work both independently and in team settings on open-ended tasks.

Preferred Qualifications

- M.S. degree in engineering, physics, earth sciences, microbiology, chemistry, mathematics, or a related degree with relevant quantitative coursework.
- Prior research experience performing laboratory experiments (e.g., columns, microfluidics, biofilm growth), coding (e.g., Python, Matlab), and data analysis.
- Prior experience disseminating knowledge in written (e.g., publication) and oral formats (e.g., conference presentations)

How to inquire

Please email Kevin Roche (kevinroche@boisestate.edu) before applying, and include:

- *A brief intro:* Share who you are and what draws you to working in the HIP laboratory. Please explain how your relevant skills or experience align with the lab's research goals.
- *Project info:* Include any specific interests and questions you have about the project themes described/linked above.
- *Supporting documents:* Attach your CV or resume, contact info for two professional references, as well as any additional materials that might be useful for me, such as previous conference abstracts, publications, unofficial transcripts, and theses.



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Students will join an interdisciplinary Ph.D. program that best suits their skills and interests, with program options including: Engineering, Materials Science, Mechanical and Biomedical, or Geosciences. Please see the [Graduate College webpage](#) for more information including links for applying. Application due dates are program dependent. Priority given for applications received by Jan 15.

Boise State's [College of Engineering](#) is the largest and top-ranked engineering college in Idaho. College has experienced tremendous growth through increasing enrollment, research activity, and influence in the community. Research activity of faculty has tripled since 2017 (\$6M in FY17 and \$18M in FY23). [Boise State University](#) sits along the Boise River Greenbelt in the heart of Idaho's rapidly growing capital city. A unique blend of city amenities and outdoor access – including 180+ miles of nearby trails – make it one of the [highest rated cities](#) in the U.S. for livability.

Sincerely,

Kevin Roche
Assistant Professor of Civil Engineering
Boise State University