Diane Moug
Assistant Professor
Civil & Environmental Engineering, Portland State University

Biography

I joined the Civil & Environmental Engineering department at Portland State University (PSU) as an Assistant Professor in 2017. Prior to joining PSU, I earned my M.S. and Ph.D. from the University of California, Davis, and my undergraduate degree in Geological Engineering from the University of British Columbia. I have three years of experience as a geotechnical engineering consultant at mine waste storage facilities and oil sands sites in Chile, Alaska, Northern Alberta, and Guatemala. My research program focuses on characterization of unique and problematic soils with the cone penetration test, including intermediate soils and diatomaceous soils. My research also examines microbially induced desaturation as a liquefaction hazard mitigation method for fine-grained soils. I teach undergraduate and graduate classes at PSU, where I focus on providing students hands-on experiences in geotechnical site investigation, numerical modeling, and laboratory work. I am currently a co-chair of EERI's Younger Members Committee and am a member of DFI's Site Characterization Committee. As part of the DFI committee, I am working on a collaborative project between PSU students, DFI committee members, and the GI to contribute subsurface investigation information to the GeoTechTools website.

Candidacy Statement

I believe that coming from PSU, I will bring a valuable and unique perspective to the USUCGER board. This perspective comes from being part of PSU's two-person geotechnical engineering research program that was started less than five years ago, and PSU being an urban serving university with a large community college transfer student population. In addition to supporting USUCGER's ongoing activities, I plan to have two primary focuses that leverage my experiences at PSU and align with the USUCGER mission to develop and expand high quality research and education:

(1) Early-career mentoring. USUCGER recently announced plans to start an early-career mentoring program. Being a part of a small and recently-established geotechnical engineering research program, I understand how important external mentoring resources can be. External mentoring and advocacy were critical to us finding a research direction and growing our program as two early-career researchers. As a USUCGER board member, I would plan to actively help develop the direction and focus of this mentoring program. My particular focus would be ensuring that its scope benefits faculty members at small geotechnical programs and/or urban serving institutions.

(2) Outreach and Curriculum for Community College Students. Community colleges are an important pathway to engineering careers in the United States. For instance, at PSU over 70% of the undergraduate engineering degree recipients transferred from a community college. However, prior to a student's transfer from community college to a four-year institution, most students will have had no or very little exposure to geotechnical engineering. I believe that we are currently underserving this population of potential geotechnical engineers and researchers. As a USUCGER board member, I would work with other members to ensure that we are also serving this student population. This would include working with USUCGER members and community college instructors to develop curriculum packages and outreach modules that could be incorporated into community college courses, with the aim of exposing soon-to-be transfer student to geotechnical engineering challenges, case studies, and projects.