CASE WESTERN RESERVE
UNIVERSITY

Ph.D. Position in the Department of Civil and Environmental Engineering

A fully funded Ph.D. position is available in the Poromechanics Laboratory led by Prof. Suh at the Department of Civil and Environmental Engineering, Case Western Reserve University. The student will work on research in AI/ML and computational geomechanics, including the development of mathematical and computational frameworks for coupled thermo-hydro-chemo-mechanical processes in geomaterials, multiscale modeling of multi-phase porous materials, and interpretable data-driven modeling of complex soil and rock behavior. The anticipated start date is Fall 2026. Highly motivated students with backgrounds in Geomechanics, Geotechnical Engineering, and/or Engineering Mechanics are encouraged to apply.

Required qualifications
Applicants must have completed a B.S. and/or M.S. in Civil Engineering, Mechanical Engineering, Computer Science, Engineering Mechanics, or a closely related field by the start of the position. The candidate must be a highly motivated individual with a strong work ethic and excellent oral and written communication skills. Proficiency in Python is a must, and a strong background in continuum mechanics, finite element method, and/or AI/ML is considered a significant advantage.

How to apply
Applicants should submit a single PDF file containing: (1) a resume or CV, and (2) a sample of work demonstrating mathematical and programming skills to Prof. Suh (hssuh@case.edu). Materials will be reviewed on a rolling basis until the position is filled. ***Candidates must also formally apply to CWRU Graduate Admission*** (visit: https://case.edu/gradstudies/prospective-students/instructions-requirements for details).

About the PI
Dr. Hyoung Suk Suh is an Assistant Professor in the Department of Civil and Environmental Engineering at Case Western Reserve University. He earned his Ph.D. (2022) from Columbia University as a Presidential Fellow, following his B.S. (2015) and M.S. (2017) from Yonsei University, South Korea. Before joining CWRU, he was a Postdoctoral Research Scientist at Columbia University. Dr. Suh's research aims to advance energy and environmental geotechnics by developing theoretical and computational frameworks for poromechanics, with a particular emphasis on multi-physical coupling in geomaterials. Specifically, his work integrates advanced imaging technologies, sub-scale simulations, and machine learning to derive, implement, verify, and validate mathematical models for coupled thermo-hydro-mechanical-chemical problems. Visit https://www.porolab.org for more details.

About CWRU
Case Western Reserve University, located in Cleveland, Ohio, is a leading research university recognized for its rigorous academic programs, interdisciplinary research, and collaborative environment. In *TIME*'s World's Top Universities of 2026, CWRU was named among the Top 25 universities in the world, highlighting its global impact on innovation, leadership, and long-term student success.