Jiayao (Jade) Wang

Jan 9th | 12:00 PM

EB 510

FROM DIATOMS TO DESIGNS: A JOURNEY THROUGH SOIL SCIENCE AND GEOTECHNICAL ENGINEERING

Abstract

Diatomaceous soil, composed largely of fossilized diatoms, is a unique material found in different parts of the world including southern and central Oregon. My doctoral research explored its unusual behavior—high compressibility yet high shear strength—through field and laboratory testing, empirical property correlations, and constitutive modeling. These findings were applied to practical engineering problems, such as embankment construction and pile capacity prediction, offering valuable insights for geotechnical design in regions with diatomaceous deposits.

In the second part of this presentation, I will introduce life as a geotechnical consultant and share insights into some of the projects I have worked on at Shannon & Wilson, highlighting the transition from academic research to real-world engineering practice.

Biography

Jiayao (Jade) Wang is a geotechnical engineer at Shannon & Wilson, where she contributes to a wide range of geotechnical engineering projects. Her responsibilities include performing engineering analyses, preparing technical reports, developing custom scripts to streamline and enhance analytical processes, engaging in literature reviews and research to support project objectives and innovation, and conducting field explorations and construction observations.

Jade joined Shannon & Wilson in 2023 after completing her Ph.D. in geotechnical engineering at Oregon State University. Her doctoral research focused on diatomaceous soil, where she investigated soil behavior, established correlations between various soil properties, and developed insights to inform geotechnical design in such complex soil conditions. She holds a Bachelor's degree in civil engineering (2015) and a Master's degree in structural engineering (2018), both from Tongji University, China.