UCI Samueli School of Engineering | Department of Civil and Environmental Engineering

Presented By:
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Assistant Professor
Geotechnical Engineering
Iowa State University

Civil Engineering Seminar Series

Thursday, June 1st, 2017
MDEA
4:00PM to 5:00PM

Offshore Foundation Design for Renewable Energy

This presentation will discuss the current state-of-the-art for offshore foundation design specifically focused on renewable energy such as offshore wind turbines and tidal current turbines. Harvesting renewable energy sources such as wind, wave, and tidal currents have received great interest from researchers, the energy industry and government agencies around the world. Effective and economical foundations are a critical need for the installation of offshore power generation systems. Traditional oil and gas (O&G) structures are designed to minimize effects of environmental loading; however, both wind and tidal current turbines must be designed to interact with the horizontal loading to generate power. This presentation will also address challenges related to the geotechnical engineering design associated with renewable energy installations offshore.

Dr. Cassandra Rutherford is an assistant professor of Geotechnical Engineering in the Department of Civil, Construction and Environmental Engineering at Iowa State University. She graduated with all her Civil Engineering degrees at Texas A&M University. Her research interests include offshore geotechnical engineering, offshore geohazards, renewable energy foundations and the response of marine soils to dynamic and static loading. Dr. Rutherford worked for TDI-Brooks International, an offshore soil sampling company, for 6 years and at the University of Illinois as an assistant professor for 5 years. She is an ASCE Exceed teaching fellow and a member of Offshore Geotechnics technical committee for the International Society of Soil Mechanics and Geotechnical Engineering. She recently received the National Science Foundation CAREER Award for her work on "CAREER: Experimental Modeling of Tidal Current Turbine Foundations: An Integrated Research and Education Plan."

Questions? - cee@uci.edu - (949) 824-7548