UAA College of Engineering
UNIVERSITY of ALASKA ANCHORAGE

UAA Professional Development Seminar Series

Geotechnical Engineering Reconnaissance of the 2018 Mw 7.1 Anchorage, Alaska Earthquake

Presented by Professor Joey Yang, Civil Engineering Chair

The moment magnitude (Mw) 7.1 Anchorage earthquake on November 30, 2018, is one of the largest earthquakes to strike near a major U.S. city since the 1994 Northridge, California earthquake. No fatalities were reported, but the earthquake caused widespread power outages, structural damage to residential buildings, damage to roadways and railways, and ground failures, such as liquefaction and slope instability in native slopes and anthropogenic fills. This presentation will present a summary of preliminary findings by the NSF-sponsored Geotechnical Extreme Events Reconnaissance (GEER) team, with a focus on the geotechnical aspects of this earthquake (from damage assessment to ground motion characterization). Damage was characterized using a combination of on-ground site mapping and aerial reconnaissance technology and photogrammetry. The team documented damage to highway embankment slopes and bridges, sites where various types of geotechnical ground improvement techniques had been implemented, sites with nearby ground motion recording stations, sites of critical infrastructure, and sites impacted by settlement, liquefaction or slope failure.

Dr. Yang joined UAA as an Assistant Professor in May 2003. He is currently Professor of Civil Engineering, Associate Director of the Alaska University Transportation Center, and Director for Geotechnical and Frozen Ground Engineering Research Laboratory. Dr. Yang's expertise is in geotechnical and earthquake engineering, and he has maintained an active research program with particular interest in cold regions-related topics. He has published more than 70 peer-reviewed papers, including 30 journal articles. Dr. Yang has received research funding in geotechnical/earthquake engineering and cold regions-related research from NSF EPSCoR, U.S. Geological Survey, U.S. Dept. of Interior, U.S. Department of Transportation via Alaska University Transportation Center, U.S. Dept. of Energy through Alaska Energy Authority, State of Alaska Department of Transportation and Public Facilities, and the Municipality of Anchorage.

Friday, April 3, 2020

11:45 am-12:45 pm

Virtual Access Via Livestream