



**UAA College of Engineering**  
UNIVERSITY of ALASKA ANCHORAGE



UAA Professional Development Seminar Series

## **Location, Location, Location: What Does the Next Big Earthquake Look Like in Anchorage?**

Presented by John Thornley, PE, PhD, Golder Associates

Anchorage is an earthquake laboratory and we have been learning about the behavior of ground shaking across Anchorage for the past several decades. Due to Anchorage's complex geology, earthquakes shake differently depending on which part of town you are in. This was clearly seen in the recent M7.1 2018 Anchorage Earthquake. How do we use that earthquake, and other recorded earthquakes, to estimate strong shaking in the future? How does that estimated shaking compare to what we design to in the building code? This presentation will describe how the building code represents the seismic hazards in Anchorage, what we have learned from the 2018 earthquake, and what we anticipate from the next big earthquake. Recently developed modeling techniques have been used to estimate strong ground shaking for future events using the small to moderate ground motions recorded in Anchorage and the results of that modeling will be presented and compared to the building code, showing how the ground shakes differently across the city.

John Thornley is a Senior Geotechnical Engineer with Golder Associates in Anchorage. John received his Bachelor's and Master's degrees from University of Nevada Reno. While in Reno John studied geotechnical and earthquake engineering. He recently completed his PhD in earthquake engineering from the University of Strathclyde in Glasgow, Scotland, studying the variable site response of earthquakes across Anchorage. John is currently working on a range of geotechnical projects across Alaska, primarily focusing on transportation and building infrastructure. Recently, John has led the geotechnical repairs for damage to buildings, slopes, and retaining structures damaged in the M7.1 2018 Anchorage Earthquake. He has been involved in a wide variety of site-response characterizations, including seismic hazard analyses (SHAs), in both thawed and permafrost sites. In addition to working at Golder, he is chair of the Municipality of Anchorage Geotechnical Advisory Commission, Earthquake Engineering Research Institute Visiting Professional, and Chair of the Structures and Foundations committee within ASCE's Cold Regions Engineering Division

**Friday, September 24, 2021**

**11:45 am-12:45 pm**

Online Via [YouTube Live](#)