



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



UAA Professional Development Seminar Series

## **Reducing Seismic Risk in Residential Construction**

Presented by: Dr. Polly B. Murray  
Postdoctoral Research Fellow,  
UAA Civil Engineering

**ABSTRACT:** In the aftermath of the November 2018 earthquake, there was a significant discrepancy in the level of damage between houses built within and outside of Anchorage's Building Safety Service Area (BSSA). In the BSSA, residential construction requires plan review by an engineer and inspections throughout the construction process. Outside of it, there is no mechanism for enforcement of building codes. Engineers and inspectors observed many construction errors in earthquake-damaged houses. These errors were far more common outside of the BSSA, where vulnerable building configurations are common as well.

This presentation will focus on an assessment of these vulnerable houses in an effort to determine the extent to which common deficiencies affect seismic capacity. The study includes laboratory testing of wood shear walls and computational analysis of typical houses in Anchorage.

**BIO:** Dr. Murray is a postdoctoral research associate who studies seismic resilience and structural engineering. She earned her PhD from the University of Colorado Boulder in 2021 and worked as a postdoctoral researcher with the National Institute of Standards and Technology before coming to the University of Alaska Anchorage. Her current work focuses on seismic risk of wood frame houses built out of compliance with local codes.

Friday, December 9, 2022

11:45 am - 12:45 pm

Online Via [YouTube Live](#)