The Geo-Institute Embankments, Dams and Slopes Technical Committee will live-stream the *session "EDS Extreme Event - Wildfires and Slope Stability"* on Friday, December 12, at 2 PM EST. The talks include:

Talk # 1*: Fire, flood, and mud: Assessing postfire debris-flow hazards across Western U.S.* (Presented by Dr. Jason Kean, U.S.G.S.)

This presentation will discuss post wildfire debris-flow hazards across the Western U.S. including increased runoff, erosion, and debris-flow volume.

***Talk* # 2: *A Socio-Behavioral Compartmental Model for Wildfire Response* (Presented by Gregory Baecher, Ph.D., NAE, Dist.M.ASCE)**

This presentation will discuss the dynamic, real-time nature of public engagement with wildfire hazards. This study leverages crowd-sourced social media data for measuring public wildfire response. The findings offer insights for engineers, policymakers, emergency responders, and risk communication strategies with the increased the frequency and intensity of wildfires, posing risks to communities, infrastructure, and the environment.

Talk # 3: *Vertical Land Motion as a Hazard Multiplier: Amplifying Exposure and Vulnerability to Extreme Events* (presented by Manoochehr Shirzaei, Ph.D., M.ASCE)

Vertical land motion is increasingly recognized as a critical hazard multiplier, intensifying the impacts of extreme events on urban infrastructure and vulnerable communities. In this presentation, I will highlight cases of differential settlement beneath aging dams that likely contributed to catastrophic failures during extreme weather events, resulting in significant loss of life. Additionally, I will present high-resolution InSAR and GNSS observations from major U.S. cities, revealing widespread subsidence affecting over 20% of urban land area and placing approximately 34 million people and 29,000 buildings at elevated risk. These deformations exacerbate vulnerability to compounding hazards such as flooding, hurricanes, and earthquakes. Despite their importance, subsidence effects are often absent from conventional hazard assessments, leading to underestimation of flood depths, increased structural stress, and potential cascading failures in critical infrastructure systems. Drawing on recent geodetic analyses and real-world case studies, this talk will demonstrate how land subsidence amplifies multi-hazard exposure and risk. I will also outline practical strategies for integrating vertical land motion metrics into dynamic risk models,

infrastructure design standards, and climate adaptation policies to enhance resilience in rapidly evolving urban environments.

Talk #4: <u>Evolving Approaches for Seismic Reliability and Safety of Embankment Dams and Levees</u>
(presented by Dr. Khaled Chowdhury, Ph.D., M.ASCE)

This presentation will discuss the evolution of the state of practice in seismic-related functionality criteria for embankment dams and levees, considerations for evaluating and improving performance reliability of embankment dams and levees, and limitations of common seismic analyses that can be compensated for by designing for improved reliability.