AEG 2023
PORTLAND OREGON
HAZARDS IN HINDSIGHT
LESSONS FOR THE FUTURE

COLLECTING GEOLOGIC DATA FOR ASSESSMENT OF POTENTIAL HAZARDS USING MULTIPLE SURFACE AND SUBSURFACE METHODS SYMPOSIUM

AEG 2023 Annual Meeting – Portland, Oregon
Thursday, September 21, 2023: 8:00am-5:00pm
Sponsored by Aspect Consulting LLC

Conveners: Gerry L. Stirewalt, Kate McKinley, Courtney Johnson, and David Carpenter

The AEG Geologic and Seismic Hazards Technical Working Group (GASH TWG) will convene a symposium at the 66th Annual Meeting in coordination with AEG's Geophysics TWG. Speakers from academia, consulting firms, technical specialty companies, a National Laboratory, State Geologic Surveys, and Federal and State agencies will discuss various methods for data collection and present practical examples illustrating how the data were used to evaluate potential hazards. Methods include use of trenching, geologic mapping, surface and subsurface geophysics, geotechnical data, soil borings, Digital Surface Models, Unmanned Aerial Vehicles, Lidar, and Interferometric Synthetic Aperture Radar for evaluating hazards related to faulting, volcanism, landslides, subsidence, slope failures, debris flows, rockfall, and earthquake and tsunami sources in the Cascadia Subduction Zone. A Thursday morning Keynote speaker will discuss the multiple methods applied to assess volcanic hazards in the Cascade Range. A Thursday afternoon Keynote speaker will explain how geologic mapping and geophysical data were integrated to locate and connect active faults in southwestern Washington State.

Keynotes:

Weston Thelen	Multi-Disciplinary Approaches to Assessing Volcanic Hazards Across the Cascade Range
Megan Anderson	The Doty Fault System: Finding and Connecting Active Faults by Integrating Geologic Mapping and Geophysical Data in SW Washington State

Speakers:

Stephen Angster	Paleoseismic Evidence for Late Pleistocene and near Historic Ruptures on North-verging Faults within the Seattle Fault Zone: Implications for Complex Hanging Wall Deformation
Colin Chupik	Advantages of Ultra-High-Resolution Imagery from UAVs For Analyzing Surface Fault Ruptures
Josh Wagner	Visual Storytelling: Imagery's Role in Consulting Geology and Geohazard Mitigation
Rich Koehler	Assessment of Slow Slipping Faults: Recent Examples from the Northern Walker Lane, California and Nevada
Chris Slack	Using Satellite-derived Digital Surface Model (DSM) for Quaternary Fault Investigations in a SCR Environment - Western Cape, South Africa
Ryan Coppersmith	Evaluating LiDAR and Satellite Imagery Datasets for Characterizing Faults at INL and Northwest of the Eastern Snake River Plain
Neill Marshall	Earthquakes and Active Faulting of the South Caspian Region (Azerbaijan and Türkmenistan)
Alfredo Rocca	InSAR - Orbital Radar Evolution
James McCalpin	Reconstructing Sackung Displacement Histories by Trenching
Greg Stock	Using Various Remote Sensing Imagery Methods to Understand Rockfall Processes in Yosemite National Park
Stephanie Briggs	Sinking Land - Untangling Subsidence in California's Central Valley
Julian Chesnutt	Subsurface Methods for Environmental Assessment of Landslide Hazards
Janet Sowers	Fault Investigations to Site a Geothermal Landfill in the Imperial Valley
Chad Pritchard	Building a Cross Sectional View of Porcupine Bay Road Landslide using Drones, Geophysics, and Soil Borings, Lincoln County, eastern Washington
William Burns	Using Lidar to Better Understand Landslide and Debris Flow Hazards in Oregon
Alex Grant	Combining Lidar and Geotechnical Data to Constrain Paleoshaking Intensities in the Cascadia Subduction Zone Using Landslides, Liquefaction, and Fragile Geologic Features