

**2019/2020 AEG/GSA Richard H. Jahns Distinguished Lecturer: Scott Lindvall**



Scott received his BS in Geology from Stanford University in 1984 and his MS in Geology from San Diego State University in 1988. Dick Jahns was Scott's undergraduate advisor at Stanford, which makes this award especially meaningful to him. He has spent the majority of his career working for consulting firms specializing in seismic hazards and engineering geology. He currently manages the Lettis Consultants International southern California office.

His interest in geology came at a young age growing up in the Transverse Ranges of southern California. His geologist father, Eric Lindvall, helped instill an appreciation of the outdoors (and therefore geology) and was later instrumental in shaping Scott's career. His interest in earthquakes was triggered at nine years old in the early morning hours of February 7, 1971, with the M6.6 San Fernando earthquake. Experiencing strong ground shaking from the main shock and several large aftershocks in the epicentral region, while dust was slowly rising from rock falls in the surrounding canyons, left a lasting impression.

Scott has performed detailed mapping of surface ruptures of earthquakes in southern California and Turkey, including the 1986 M6.6 Superstition Hills, 1992 M7.3 Landers, 1999 M7.4 zmit (Kocaeli), 1999 M7.1 Düzce, and the 1999 M7.1 Hector Mine earthquake ruptures. Scott's experience in neotectonics, paleoseismology, and geomorphology has enabled him to pursue research projects designed to better quantify the timing of past events, slip rate, surface displacement, and style of deformation on active strike-slip and reverse faults throughout southern California. He has been awarded over a dozen research grants funded by the U.S. Geological Survey National Earthquake Hazards Reduction Program (NEHRP) and the Southern California Earthquake Center (SCEC).

Scott has directed geologic evaluations and seismic source characterizations in a variety of tectonic environments ranging from active plate boundaries to stable cratons. He served on the Technical Integration Team for a multi-year study sponsored by the US Nuclear Regulatory Commission, US Department of Energy, and the Electric Power Research Institute to develop the Central and Eastern United States Seismic Source Characterization for Nuclear Facilities, which has served as the regional seismic source model for hazard evaluations of nuclear facilities since its publication in 2012. Scott has also served on the advisory committee of the Earthquake- Induced Landslides Working Group for the California Geological Survey's (CGS) Seismic Hazards Mapping Program and, more recently, the CGS Special Publication 42 Advisory Panel to update the regulatory guidance on assessing fault rupture hazards in California.

**Annual Meeting Presentation: Crossing the San Andreas Fault: Improving the Resilience of the Los Angeles Aqueduct System**

This talk focuses on the Los Angeles Aqueduct crossing of the San Andreas fault in the Elizabeth Tunnel and describes the detailed surface and subsurface geologic investigations used to characterize the architecture of the fault zone at tunnel depth. Historic fault displacement data from global strike-slip faults are presented along with deterministic and probabilistic fault displacement hazard analyses performed to address the new 2019 performance-based seismic design guidelines for the Los Angeles Department of Water and Power.