

We invite you to join us.

The Keller Seismic Knowledge Lecture Series

A VIRTUAL SERIES.

The Keller Seismic Knowledge Lecture Series is on a mission to discover and spread knowledge. We proudly invite experts to use this platform to present their leading-edge seismic geotechnical engineering research and work. The series is devoted to curiosity and innovation, with an emphasis on providing knowledge for owners and engineering designers.

Six experts. Six months. Join us for a lecture series that extends from March to August 2023. Details about the speakers and schedule are provided below.

All 60-minute lectures will be conducted virtually via Teams. Earn 1 PDH credit for attending.

LESSONS FROM HISTORY – A PERSONAL PERSPECTIVE

March 23, 11:00am PST



Ziggy Lubkowski will discuss observations and lessons-learned from several earthquake events, including the 1994 Northridge, the 1995 Kobe, the 2004 Indian Ocean, and the 2010 Maule, Chile earthquakes. He will focus on issues including emergency response and social considerations and highlight how lessons learned from these events can change guidelines globally. He will show how we repeat mistakes when we forget history and the importance of basic engineering principles. Mr. Lubkowski will conclude with a comparison between the 1999 Kocaeli and the recent Türkiye-Syria earthquakes.

Profile: [Ziggy Lubkowski | LinkedIn](#)

SHAKE TABLE TESTING IN STUDYING LIQUEFACTION-INDUCED SHALLOW FOUNDATION SETTLEMENT AND MITIGATION MEASURES

April 20, 9:30am PST



Ramin Motamed, PhD, PE will present his research that examines the efficacy of different remedial measures including helical piles, lowering the ground water level, and installing sheet piles in mitigating liquefaction-induced settlement of shallow rigid foundations. The presented results are based on an extensive series of shaking table model tests conducted at large and moderate scale levels. The models were based on similar subsurface ground conditions observed in recent earthquakes where shallow liquefiable soil layers imposed significant damage to the building foundations.

Profile: [Ramin Motamed | Civil & Environmental Engineering | University of Nevada, Reno \(unr.edu\)](#)

LIQUEFACTION SUSCEPTIBILITY AND CYCLIC RESISTANCE TRANSITIONAL SILTS WITH APPLICATION TO SUBDUCTION ZONE EARTHQUAKES

May 16, 12:00pm PST



Armin W. Stuedlein, PhD, PE will present on his work on the cyclic resistance and potential for cyclic failure of low plasticity transitional silt soils. These soils are often challenging to assess using available liquefaction case history- and in-situ penetration test-based methods. This lecture will provide an overview of findings regarding the cyclic behavior of the transitional nonplastic and plastic silt soils and corresponding models developed.

Profile: [Armin Stuedlein, P.E. \(WA\) | College of Engineering | Oregon State University](#)

SEISMIC STABILITY OF PG&E'S DIABLO CANYON NUCLEAR POWER PLANT

June 15, 12:00pm PST



Jeff Bachhuber, C.E.G. will discuss the history of seismic studies and ongoing earthquake monitoring under the PG&E Long Term Seismic Program. The Diablo Canyon nuclear power plant generates 9% of California's electric power and 20% of its carbon-free electricity. It is located in a seismically active area with a potential M7.5 earthquake. The seismic design of the plant is among the highest of any nuclear facility in the world and has a substantial safety margin. The plant has undergone multiple seismic studies, including a reassessment after the damages to the Fukushima nuclear power plant after the 2011 Tohoku earthquake.

Profile: [Jeff Bachhuber, C.E.G. | LinkedIn](#)

APPLICATION OF THE CPT TO EVALUATE SOIL LIQUEFACTION

July 19, 12:00pm PST



Peter K. Robertson, PhD will present a brief overview of advances made in the evaluation of soil liquefaction using the CPT. Examples will be presented to illustrate how the CPT is used to evaluate both seismic and flow liquefaction. The presentation will also discuss the role of uncertainty and risk as it applies to liquefaction assessment.

Profile: [Dr. Peter K. Robertson - Professor Emeritus, Geotechnical Engineering \(cpt-robertson.com\)](#)

A NEW PROBABILISTIC COMMON-ORIGIN APPROACH TO LIQUEFACTION SUSCEPTIBILITY AND TRIGGERING IN CPT-COMPATIBLE SOILS

August 15, 12:00pm PST



Kevin Franke, PhD, PE will present a new probabilistic procedure to assess liquefaction susceptibility and triggering for CPT-compatible soils. It eliminates the need for fines content adjustment, identifies a threshold for fine-grained soils not susceptible to liquefaction, and differentiates the liquefaction resistance of clean sands with varying mineralogy and compressibility. However, it may overpredict liquefaction-induced settlements if clean-sand volumetric strain models are inappropriately applied to clayey soils. Practical guidance is provided for handling clayey soils predicted to "liquefy."

Profile: [Kevin W. Franke | LinkedIn](#)
