



**EERI@UNR Student Chapter Seminar Series**

**Guest Speaker: Dr. Erol Kalkan, P.E., CEO and Founder of QuakeLogic**

**Next Generation Structural Health Monitoring and Smart Cities**

**Friday, February 19, 2021 12:00 p.m.**

**Join us on Zoom! Meeting ID: 827 9799 5502**

**Abstract**

Structural health monitoring (SHM) has gained importance for safety requirements of critical structures including hospitals, high-rise buildings, bridges, dams, tunnels, wind turbines etc. Although these structures are designed and built to operate safely under anticipated static and dynamic loading conditions, deterioration and damage can occur over their lifetime. Extreme events such as earthquakes are the most prevailing source of failure. If damage conditions are not identified rapidly, they may leave the structure vulnerable to further damage. Early diagnosis of damage is also cost-effective, as the cost of fixing minor damage is generally lower than that of major damage.

Our cloud-based SHM system powered by artificial intelligence (AI) utilizes the sensors data to create unique risk management solutions. We provide meaningful and easy-to-understand information immediately after an event such as earthquake. This timely and critical information helps stakeholders such as government authorities, engineers, emergency responders, disaster managers and operators to plan their role in making the people and their structure safer.

**Speaker Biography**

Dr. Kalkan's doctorate degree is in Structural and Geotechnical Engineering from UC Davis. His postdoctoral studies were conducted at the UC Berkeley.

Dr. Kalkan was the recipient of the "2008 ASCE Raymond C. Reese Research Prize in Structural Engineering". He has been also granted "2008 EERI-FEMA NEHRP Professional Fellowship in Earthquake Hazard Reduction".

He authored and co-authored 130 publications.

Dr. Kalkan served as a guest editor of five special journal issues, and he is currently acting as an associate editor for the Journal of Structural Engineering, Engineering Structures, and Seismological Research Letters.