

## Biographical Sketch

### Kanthasamy K. Muraleetharan

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David Ross Boyd and Presidential Professor  
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### (A) PROFESSIONAL PREPARATION

University of Peradeniya	Sri Lanka	Civil Engineering	B.S., 1983
University of California	Davis, CA	Civil Engineering	M.S., 1987
University of California	Davis, CA	Civil Engineering	Ph.D., 1990

### (B) APPOINTMENTS

2015-Present	Associate Director for Infrastructure & Engineering, National Institute for Risk & Resilience, University of Oklahoma, Norman, OK
2005-Present	Professor, School of Civil Engineering and Environmental Science, University of Oklahoma, Norman, OK
2000-2005	Associate Professor, School of Civil Engineering and Environmental Science, University of Oklahoma, Norman, OK
1994-2000	Assistant Professor, School of Civil Engineering and Environmental Science, University of Oklahoma, Norman, OK
1993-1994	Lecturer, Department of Civil Engineering, University of California, Irvine, CA
1988-1994	Senior Project Engineer, Project Engineer, Senior Staff Engineer, and Staff Engineer, the Earth Technology Corporation, Irvine, Long Beach, Huntington Beach, San Bernardino, CA

### (C) PRODUCTS

#### (i) Most Closely Related to the Proposed Project

1. Zhang, B., and **Muraleetharan, K.K.** 2018. Liquefaction of Level Ground Unsaturated Sand Deposits Using a Validated Fully Coupled Analysis Procedure. *International Journal of Geomechanics*. ASCE, 18(10).
2. Harvey Jr., P.S., Heinrich, S.K., and **Muraleetharan, K.K.** 2018. A Framework for Post-earthquake Response Planning in Emerging Seismic Regions: An Oklahoma Case Atudy. *Earthquake Spectra*. 34(2):503-525.
3. Taghavi, A., **Muraleetharan, K.K.**, and Miller, G.A. 2017. Nonlinear Seismic Behavior of Pile Groups in Cement-improved Soft Clay. *Soil Dynamics and Earthquake Engineering*. 99:189-202.
4. Liu, C., Soltani, H., **Muraleetharan, K.K.**, Cerato, A.B., Miller, G.A., and Sritharan, S. 2016. Cyclic and Seismic Response of Single Piles in Improved and Unimproved Soft Clays. *Acta Geotechnica* 11: 1431-1444.
5. Soltani, H., **Muraleetharan, K.K.**, and Runolfsson, T. 2016. Modal Identification of a Centrifuge Soil Model Using Subspace State Space Method. *Soil Dynamics and Earthquake Engineering* 88:280-296.

(ii) *Other Significant Products*

1. Ravichandran, N., **Muraleetharan, K.K.**, Taylor, L.M., and Mish, K.D. 2016. Uniform Gradient Element Formulation with Hourglass Control Scheme for Solving Fully Coupled Finite Element Governing Equations for Saturated Soils. *International Journal of Geomechanics ASCE*, 16(1).
2. Quiroga, A.J., Thompson, Z.M., **Muraleetharan, K.K.**, Miller, G.A., and Cerato, A.B. 2017. Stress-strain Behavior of Cement-improved Clays: Testing and Modeling. *Acta Geotechnica*. 12:1003-1020.
3. Fleming, B.J., Sritharan, S., Miller, G.A., **Muraleetharan, K.K.** 2016. Full-scale Seismic Testing of Piles in Improved and Unimproved Soft Clay. *Earthquake Spectra* 32(1):239-265.
4. Liu, C., and **Muraleetharan, K.K.** 2012. Coupled Hydro-mechanical Elastoplastic Constitutive Model for Unsaturated Sands and Silts. I: Formulation. *International Journal of Geomechanics ASCE* 12(3): 239–247.
5. Kolar, R.L, Sabatini, D.A., and **Muraleetharan, K.K.** 2009. Sooner City: Reflections on a Curriculum Reform Project. In: *Designing Courses for Significant Learning: Voices of Experience*, L. D. Fink and A.K. Fink (eds.). Jossey-Bass, San Francisco. pp. 89-95.

**(D) SYNERGISTIC ACTIVITIES**

- Sooner City Project: A Co-PI for this NSF funded major curriculum reform project. This project introduced civil engineering students to design from day one and provided a unifying theme to the entire undergraduate civil engineering curriculum at the University of Oklahoma. For the project, incoming freshman were given a plot of undeveloped land that, by the time they graduated, was turned into a blueprint for certain segments of the city. Design tasks included all facets of the traditional civil engineering program. The project was unique in that it threaded a common design theme throughout the curriculum, yet did so in a flexible, cost-effective manner that required no change in the traditional sequencing of courses. This project also led to other innovations such as just-in-time learning and in-class active learning.
- EERC Review Teams: Selected by NSF to be one of the eleven Site Visit Team Members to review the request for renewal from the Mid-America Earthquake Center (MAE) (2001). MAE Center was one of the three NSF Earthquake Engineering Research Centers (EERC). Also served on the NSF MAE Center Site Visit Teams in 2002 and 2003.
- NEES Facilities Review Teams: Served on the NSF Site Visit Teams for the Rensselaer Polytechnic Institute (RPI), and the University of California, Davis, Network for Earthquake Engineering Simulation (NEES) geotechnical centrifuge testing facilities, 2002.
- Port of Los Angeles' Pier 400 Project: An approximately \$1 billion project that created 580 acres of new land by dredging and backfilling behind rock dikes. Performed dynamic finite element analyses and planned and coordinated the centrifuge model tests.
- Professional Registrations: Professional Engineer (CA, since 1992), Geotechnical Engineer (CA, since 2002).