

CURRICULUM VITAE

Kayen, R.E., Ph.D., P.E.

Professor, Adjunct Faculty
Civil and Environmental Engineering Department, University of California Berkeley.

Senior Research Civil Engineer
United States Geological Survey, Pacific Science Center, Menlo Park, CA

EDUCATION

University of California, Berkeley, California, Ph.D. in Civil Engineering, 1993.

Dissertation Title: Accelerogram-energy approach for prediction of earthquake-induced ground liquefaction

Graduate Advisor: James K. Mitchell

University of California, Berkeley, California, M.S. in Civil Engineering, 1989.

California State University, East Bay, California, M.S. in Geology, 1988

Tufts University, Medford, Massachusetts, B.S.C.E. Double Major Civil Engineering & Geology, 1981.

AWARDS AND HONORS

2017 *ASCE GeoEngineering Distinguished Lecturer, ASCE-SFGI & U.C. Berkeley*

2016 *Vice-Chairman, Int'l. Assoc. Engineering Geology (IAEG), Marine Engineering Commission*

2010 *Ames Honor Award, NASA-Ames Research Center, Mountain View, CA*

2007 *Best Paper, Int'l Conf. Landslides & Climate Change, Isle of Wight, UK 2007*

2006 *ASCE Thomas A. Middlebrooks Award, Geotechnical Engineering Award, Amer. Soc. Civil Engrns.*

2001 *U.S. Department of Justice Commendation awarded by Environmental Division, 2001*

1993 *Malcolm Stacey Fellowship, University of California, 1990-1993*

1990 *Jane Lewis Fellowship in Mining, University of California at Berkeley, 1989-1990*

1989 *USGS Sustained Service Award, 1989*

1983 *American Alpine Club, elected membership (following 1st solo ascent of El Capitan, West Buttress).*

PROFESSIONAL QUALIFICATIONS

Registered Professional Engineer in California, No. C0050246 since June, 1992

Society Membership: ASCE, EERI, SSA, ISSMFE American Geophysical Union

PROFESSIONAL SERVICE

Editorial Board, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 1996-2005.

ASCE - TCLEE - Ports and Harbors Committee. 2002-present.

GEER-Geotechnical Extreme Event Reconnaissance, NSF, Founding member and Steering Committee, 2006-2016.

SELECTED RECENT PUBLICATIONS

Kayen, R., Kokusho, T., Hazarika, H., Dashti, S., Calderon, J. R., Franke, T. K., Oettle, N. K., Wham, B., Louis-Kayen, G., Sitar, R., Louis-Kayen, N. (in press) Geotechnical Extreme-Event Reconnaissance (GEER) Investigation To The 2016 Mw 6.0, Mw 6.2, And Mw 7.0 Kumamoto Japan Earthquakes. Lowland Technology International date; Volume (Issue No.): pp-pp: International Association of Lowland Technology (IALT): ISSN 1344-9656.

Kayen, R.E. (2017) Seismic Displacement of Gently-Sloping Coastal and Marine Sediment Under Multidirectional Earthquake Loading, Special Issue in Engineering Geology, 'New Advances in Coastal Engineering Geology and Geotechnics,' Engineering Geology, Elsevier 227(2017)84-92.

Kayen, R., Dashti, S., Kokusho, T., Hazarika, H., Franke, K., Oettle, N.K., Wham, B., Calderon, J.R., (2016) GEER Reconnaissance of the 2016 Kumamoto Earthquakes. Japan Soc. Civ. Engrns. Journal of Disaster, FS2016-E-0007.

Stewart, J.P., Steven L Kramer, S.L, Kwak, D.Y., Greenfield, M.W, Kayen, R.E., Tokimatsu K., Bray J.D., Beyzaei, C.Z. Cubrinovsk, M., Sekiguchi, T., Nakai, S. Bozorgnia, Y. (2016) PEER-NGL project: Open source global database and model development for the next-generation of liquefaction assessment procedures. Soil Dyn. Earthquake Engnrng. Volume 91, December 2016, Pages 317-328 <http://dx.doi.org/10.1016/j.soildyn.2016.07.009>

- Hazarika, H., Kokusho, T., Kayen, R.E., Dashti, S., Tanoue, Y., Kuroda, S., Kuribayashi, K., Daisuke Matsumoto, D., Furuichi, H. (2016) The Geotechnical Damage Brought By The 2016 Kumamoto Earthquake, Japan, Bulletin of the Intl. Soc. Soil Mech. Geotech. Engrng. ISSMGE.
- Kayen, R., Moss, R., Thompson, E., Seed, R., Cetin, K., Kiureghian, A., Tanaka, Y., and Tokimatsu, K. (2013). "Shear-Wave Velocity-Based Probabilistic and Deterministic Assessment of Seismic Soil Liquefaction Potential." *J. Geotech. Geoenviron. Eng.*, 139(3), 407–419. [http://dx.doi.org/10.1061/\(ASCE\)GT.1943-5606.0000743](http://dx.doi.org/10.1061/(ASCE)GT.1943-5606.0000743).
- Jorge F. Meneses and Robert Kayen, "General Report - Case Histories on Failure and Remediation of Geotechnical Earthquake Engineering" (April 29, 2013). International Conference on Case Histories in Geotechnical Engineering., Session Keynote Lecture. http://scholarsmine.mst.edu/icchge/7icchge/session_13/4
- Carkin, B.A., and Kayen, R.E., 2013, Settlement of the USS Arizona, Pearl Harbor, Hawaii: U.S. Geological Survey Scientific Investigations Report 2013–5096, v. 1.1, 154 p., <http://pubs.usgs.gov/sir/2013/5096/>.
- Brady R. Cox, Ross W. Boulanger, Kohji Tokimatsu, Clinton M. Wood, Akio Abe, Scott Ashford, Jennifer Donahue, Kenji Ishihara, Robert Kayen, Kota Katsumata, Tadahiro Kishida, Takaji Kokusho, H. Benjamin Mason, Robb Moss, Jonathan P. Stewart, Kazushi Tohyama, and Dimitrios Zekkos (2013) Liquefaction at Strong Motion Stations and in Urayasu City during the 2011 Tohoku-Oki Earthquake. *Earthquake Spectra*: March 2013, Vol. 29, No. S1, pp. S55-S80. doi: <http://dx.doi.org/10.1193/1.4000110>
- Thompson, E. M., L. G. Baise, Y. Tanaka, and R. E. Kayen (2012). A taxonomy of site response complexity, *Soil Dynamics and Earthquake Engineering*, Vol 41, pp. 32-43.
- C. Ledezma, S. Ashford, T. Hutchinson, R. Moss, P. Arduino, R. Kayen, J. Bray, S. Olson, and Y. Hashash, (2012), Effects of Liquefaction-Induced Ground Failure on Bridges, Roads, and Railroads, *Earthquake Spectra*, Vol. 28, No S1, June 2012, pp s119 – s143.A
- R. E. S. Moss, R. E. Kayen, L.-Y. Tong, S.-Y. Liu, G.-J. Cai, J. Wu (2011) Retesting of Liquefaction and Nonliquefaction Case Histories from the 1976 Tangshan Earthquake, *J. Geotech. Geoenviron. Eng.* 137(4), 334-343 (2011);
- Thompson, E. M., Baise, L. G., Kayen, R. E. and Guzina, B. B. (2009). Impediments to predicting site response: seismic property estimation and theoretical simplifications, *Bulletin of the Seismological Society of America* 99 (5), pp. 2927-2949.
- Scasserra, G., Stewart, J.P., Kayen, R.E., and Lanzo, G. (2009). Database for earthquake strong motion studies in Italy. *Jour. of Earthquake Engineering*, 13 (6) 852-881.
- J. P. Stewart, J. Hu, R. E. Kayen, A. J. Lembo Jr., B. D. Collins, C. A. Davis, and T. D. O'Rourke, 2009. Use of airborne and terrestrial Lidar to detect ground displacement hazards to water systems, *ASCE J. Surv. Eng.*, vol. 135, no. 3, pp.113–124, Aug. 2009.
- Kayen, R. , Brandenburg, S.J., Collins, B.D., Dickenson, S, Ashford, S., Kawamata, Y., Tanaka, Y., Koumoto, H., Yashinsky, M., Abrahamson, N., and Tokimatsu, K. (2009). "Niigata-Chuetsu Oki Earthquake of July 16, 2007: Geotechnical and Seismological Aspects." *Earthquake Spectra*, EERI, 25(4) 777-802.