

# Dimitrios Zekkos, Ph.D., P.E.

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Professor

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## EDUCATION

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2002 – 2005 : Doctor of Philosophy (PhD), University of California at Berkeley. Department of Civil & Environmental Engineering, Geoengineering Program.

2001 –2002 : Master of Science (MSc), University of California at Berkeley. Department of Civil & Environmental Engineering, Geoengineering Program, GPA: 4.0/4.0.

1996 – 2001 : Joint B.S/M.Eng. (5-year required program), University of Patras, Department of Civil Engineering, Greece. Grade: 7.78/10, Average Ranking: 3<sup>rd</sup>/138.

## AWARDS-HONORS

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### Awards – Honorary Lectures

- 21<sup>st</sup> Jennings Lecturer, South African Institution of Civil Engineers, Geotechnical Division, Johannesburg, October 15 2024, October 16 2024, Durban, October 17 2024, Cape Town, South Africa.
- 14th Annual GZA Lecturer, ASCE Metropolitan Section Geo-Institute Chapter, New York, February 15 2024.
- 2019 Rackham Faculty Recognition Award, University of Michigan. This award recognizes mid-career faculty who have demonstrated remarkable contributions to the University of Michigan through outstanding achievements in scholarly research and/or creative endeavors; excellence as a teacher, advisor and mentor; and distinguished participation in the service activities of the university and elsewhere.
- 2017 Shamsheer Prakash Research Award, Shamsheer Prakash Foundation. International award for excellence in research.
- 2014 Collingwood Prize, American Society of Civil Engineers (ASCE). Awarded for the paper: Zekkos, D., Kabalan, M., and Flanagan, M. (2013). “Lessons Learned From Case Histories of Dynamic Compaction at Municipal Solid Waste Sites.” Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 139(5), 738-752.
- 2013 Outstanding Innovator Award, International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). This award is “in recognition of innovations in Geo-engineering that have a pronounced impact on geo-engineering practice, research and education. The term “innovation” is used broadly to describe any major, unprecedented achievements that led to a major advancement in our profession.”
- 2013 Faculty Excellence Award, Civil and Environmental Engineering Department, University of Michigan.
- 2012 Arthur Casagrande Professional Development Award, American Society of Civil Engineers (ASCE). “For his contributions to the advancement of solid waste engineering and dedicated service and leadership in promoting geo-engineering research, education and practice through the creation of a pioneering website and online journal.”
- 2012 Great Lakes District of Chi Epsilon James M. Robbins Excellence in Teaching Award. Students in each of the 17 Universities in the Great Lakes District nominate one faculty member per institution to compete for this award for excellence in teaching at the district level.
- 2011 Outstanding Research Mentorship Award, Undergraduate Research Opportunities Program (UROP), University of Michigan (awarded to top 5 faculty sponsors out of approximately 750 university-wide).
- 2010 Thomas A. Middlebrooks Award, American Society of Civil Engineers (ASCE). Awarded for the paper: Bray, J. D., Zekkos, D., Kavazanjian, E., Jr., Athanasopoulos, G. A., Riemer, M. F. (2009), “Shear Strength of Municipal Solid Waste,” Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 135 (6):709-722, which was judged worthy of special commendation for its merit as a contribution to geotechnical engineering.
- 2003 Outstanding Graduate Student Instructor Award, University of California at Berkeley. In recognition of exceptional achievements as a Graduate Student Instructor of CE172 “Introduction to Rock Mechanics.”
- 2002 Harry Bolton Seed Award, University of California at Berkeley. Awarded to the M.S. student who completes “in an exemplary manner” the program in Geoengineering in the Department of Civil & Environmental Engineering.

### Other Recognitions

- 2017 Prize, Great Challenge Competition, US Bureau of Reclamation (USBR) and US Army Corps of Engineers, “Detecting the Movement of Soils (Internal Erosion) Within Earthen Dams, Canals, Levees, and their Foundations” (with Prof. Jean-Louis Briaud, Texas A&M)

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- 2013 Technical Committee of the Year, ASCE Geo-institute, Geoenvironmental Technical Committee, Vice Chair.
- Honorable Award, Eurasian National University, Kazakhstan, for great contributions in ISSMGE Board Activity during 2009-2013 term.
- Eminent Engineer, Tau Beta Pi, December 2012.
- 2010 Outstanding Research Mentorship Award, Honorable Mention, Undergraduate Research Opportunities Program (UROP), University of Michigan (awarded to top 8 sponsors out of approximately 700)
- Chi-Epsilon, member, University of Michigan Chapter, Member, December 2009.

### Academic Scholarships/Fellowships

- Graduate Research Assistantship, University of California at Berkeley (8/2002 – 11/2005)
- Graduate Fellowship, Civil & Environmental Engineering Department, University of California at Berkeley (January 2002).
- Graduate Teaching Assistantship, University of California at Berkeley (Fall 2001-CEE171; Spring 2002-CE172).

### PROFESSIONAL HISTORY

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- 7/2022-present: Professor, Department of Civil and Environmental Engineering, University of California at Berkeley
- 2015-present: Founder & CEO, ARGO-E LLC, Moraga, CA, USA
- 2002- present: Founder and Partner, ARGO-E Group, Athens, Greece
- 1/2020-6/2022: Associate Professor, Department of Civil and Environmental Engineering, University of California at Berkeley
- 7/2014- 12/2019: Associate Professor, Department of Civil and Environmental Engineering, University of Michigan.
- 9/2017-12/2019: Associate Professor, Department of Earth and Environmental Science, University of Michigan (dry appointment).
- 1/2016-7/2016: Visiting Professor, Geotechnical Engineering Department, School of Civil Engineering, National Technical University of Athens (NTUA).
- 9/2008-6/2014: Assistant Professor, Department of Civil and Environmental Engineering, University of Michigan.
- 11/2005-6/2008: Engineer, Geosyntec Consultants, Oakland California.

### PUBLICATIONS

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The ASCE reference format (<http://www.asce.org/Content.aspx?id=29605>) is used for the references. Current graduate student names are single underlined. Former graduate student names are double underlined. Undergraduate student names are single underlined and noted by an asterisk \* after their name.

#### Books / Chapters in books – Special Publications

##### Books Edited or Authored

1. Zekkos, D., (2024). Geoenvironmental Engineering, ASCE Manual of Practice No. 159. American Society of Civil Engineers. ISBN (print):9780784416235.
2. Baser, T., Farid, A., Fei, X., Zekkos, D. (eds.) (2023). 9th International Congress on Environmental Geotechnics. Proceedings, 25-28 June 2023, Chania, Greece. Vol. 1-5. Argo-e Group, ISBN 978-618-86739-0-8.
3. Zekkos, D., and Stark, T. D. (eds.) (2023). Highway 1 Rat Creek Embankment Failure: 2021 Reconnaissance and Analysis, Geotechnical Special Publication 337, American Society of Civil Engineers <https://doi.org/10.1061/9780784484579>
4. Pradel, D., Lobbestael, A., Athanasopoulos-Zekkos, A. Brooks, C., Champagne, C. Clark, M. Dobson, R., Edmonds, D., Esser, A., Gong, W., Hille, M., Manousakis, J., Marion, N., Martin, H., Midttun, N., Niemi, N., Oommen, T., Townsend, K., Yanites, B., Zekkos, D. (2021) May 19, 2020 Edenville and Sanford Dam Failures: Report on Field Reconnaissance Observations, ASCE Geo-Institute, Geotechnical Special Publication 327.
5. Zekkos, D., Farid, A., De, A., Reddy, K., Yessiler, N., (eds.) (2016) *Sustainability and Resiliency in Geotechnical Engineering*, Proceedings of Geo-Chicago 2016, ASCE Geotechnical Special Publication 269, Chicago, Illinois, August 14–18, 2016.
6. Farid, A. De, A., Reddy, K., Yessiler, N., Zekkos, D. (eds.) (2016). *Geotechnics for Sustainable Energy*, Proceedings of Geo-Chicago 2016, ASCE Geotechnical Special Publication 270, Chicago, Illinois, August 14–18, 2016.

- De, A., Reddy, K., Yessiler, N., Zekkos, D., Farid, A.(eds.) (2016). *Sustainable Geoenvironmental Systems*, Proceedings of Geo-Chicago 2016, ASCE Geotechnical Special Publication 271, Chicago, Illinois, August 14–18, 2016.
- Reddy, K., Yessiler, N., Zekkos, D., Farid, A., De, A., (eds.) (2016). *Sustainable Materials and Resource Conservation*, Proceedings of Geo-Chicago 2016, ASCE Geotechnical Special Publication 272, Chicago, Illinois, August 14–18, 2016.
- Yessiler, N., Zekkos, D., Farid, A., De, A., Reddy, K., (eds.) (2016) *Sustainable Waste Management and Remediation*, Proceedings of Geo-Chicago 2016, ASCE Geotechnical Special Publication 273, Chicago, Illinois, August 14–18, 2016.
- Zekkos, D. (2015). Geotechnical Section co-Editor, “*Encyclopedia of Earthquake Engineering*” Springer. Editors-in-Chief: Michael Beer, Ioannis A. Kouglioumtzoglou, Edoardo Patelli, Ivan Siu-Kui Au.
- Rollins, K., Zekkos, D. (2012), eds. “*Geotechnical Engineering State of the Art and Practice, Keynote Lectures from Geocongress 2012*,” March 25-29, 2012, Geotechnical Special Publication No. 226, ASCE, Va., 832 pp.
- Zekkos, D. (2011) ed., “*Geotechnical Characterization, Field Measurements, and Laboratory Testing of Municipal Solid Waste*,” ASCE Geotechnical Special Publication No. 209, ASCE, Va., 249 pp.

### Chapters in Books

- Zekkos, D., Qian, X., Fassett, J., & Bareither, C. (2024). Municipal Solid Waste: Characterization and Engineering Properties. In *Geoenvironmental Engineering: Site and Contaminant Characterization, Containment Facilities, Solid Waste Materials, and Contaminated Ground Interventions* (pp. 117-128). Reston, VA: American Society of Civil Engineers.
- Kavazanjian, E., Zekkos, D., & Zalachoris, G. (2024). Seismic stability of waste containment systems. In *Geoenvironmental Engineering: Site Contaminant Characterization, Containment Facilities, Solid Waste Materials, and Contaminated Ground Interventions* (pp. 259-285). American Society of Civil Engineers (ASCE).
- Gourc, J-P., and Zekkos, D. (2019). “Chapter 5.1. – Waste Mechanical Properties.” In *Solid Waste Landfilling*, Cossu R. & Stegmann R. (eds.), Elsevier, 193-210.
- Gourc, J-P., and Zekkos, D. (2019). “Chapter 5.2. – Mechanical Stability at Landfill Scale.” In *Solid Waste Landfilling*, Cossu R. & Stegmann R. (eds.), Elsevier, 211-228.
- Zekkos, D., Matasovic, N., El-Sherbiny, R., Athanasopoulos-Zekkos, A., Towhata, I., Maugeri, M. (2011). “Chapter 4: Dynamic Properties of Municipal Solid Waste,” in *Geotechnical Characterization, Field Measurements, and Laboratory Testing of Municipal Solid Waste*, ASCE Geotechnical Special Publication No. 209, Zekkos, D. ed., ASCE, Va., 112-134.
- Bray, J. D., Zekkos, D., Merry, S. M. (2011). “Chapter 3: Shear Strength of Municipal Solid Waste,” in *Geotechnical Characterization, Field Measurements, and Laboratory Testing of Municipal Solid Waste*, ASCE Geotechnical Special Publication No. 209, Zekkos, D. ed., ASCE, Va., 44-75.

### **Refereed Journal Papers**

- Asteriou, P., Zekkos, D., & Manousakis, J. (2025). Fully remote assessment of rockfall incidents based on crowdsourced imagery. *Bulletin of Engineering Geology and the Environment*, 84(4), 204.
- Clark, M. K., Zekkos, D., & Manousakis, J. (2025). Enabling 3D landslide event statistics using satellite and UAV-enabled topographic differencing. *Landslides*, 22(4), 1041-1058.
- Medwedeff, W. G., Clark, M. K., & Zekkos, D. (2025). Regional back-analysis of earthquake triggered landslide inventories: A 2D method for estimating rock strength from remote sensing data. *Journal of Geophysical Research: Earth Surface*, 130(1), e2023JF007471.
- Chen, C. M., Hollingsworth, J., Clark, M. K., Chamlagain, D., Bista, S., Zekkos, D., Siwakoti, A., & West, A. J. (2025). Erosional cascade during the 2021 Melamchi flood. *Nature Geoscience*, 18(1), 32-36.
- Admassu, K. A., Lynch, J., Athanasopoulos-Zekkos, A., Zekkos, D., & Benhamida, B. (2024). Risk-based asset management framework for highway retaining wall systems using wireless structural health monitoring data. *Advances in Structural Engineering*, 27(16), 2929-2949.
- Kim, J., Athanasopoulos-Zekkos, A., & Zekkos, D. (2024). The Effect of Initial Static Shear Stress on Liquefaction Triggering of Coarse-Grained Materials. *Journal of Geotechnical and Geoenvironmental Engineering*, 150(10), 04024099.
- Jo, Y., & Zekkos, D. (2024). Analysis of long-term MSW settlement based on field data measured at two closed landfills. *Environmental Geotechnics*, 1-16.
- Kitsis, V., Athanasopoulos, G. A., Zekkos, D. (2024). Kinematic Response of a Gravity Retaining Wall in the Cephalonia, Greece, 2014 Earthquakes, *Geotechnical and Geological Engineering*, 1-24 <https://doi.org/10.1007/s10706-024-02776-7>
- Gong, W., Zekkos, D., and Clark, ., (2023), The influence of seismic displacement models on spatial prediction of regional earthquake-induced landslides. *Engineering Geology*. 325, <https://doi.org/10.1016/j.enggeo.2023.107288>

10. Gong, W., Zekkos, D., and Clark, M. (2023). A pseudo-3D methodology for regional-scale back-analysis of earthquake-induced landslides. *Engineering Geology*, <https://doi.org/10.1016/j.enggeo.2023.107277>.
11. Roy, J., Rollins, K. M., Athanasopoulos-Zekkos, A., & Zekkos, D. (2023). Correlation between Shear-Wave Velocity and Dynamic Cone Resistance for Gravelly Soil. *Journal of Geotechnical and Geoenvironmental Engineering*, 149(9), 04023081.
12. Amatya, P., Scheip, C., Déprez, A., Malet, J. P., Slaughter, S. L., Handwerger, A. L., Emberson, R., Kirshbaum, D., Jean-Baptiste, J., Huang, M-H, Clark, M. K., Zekkos, D., Huang, J-H, Pacini, F., Boissier, E., (2023). Learnings from rapid response efforts to remotely detect landslides triggered by the August 2021 Nippes earthquake and Tropical Storm Grace in Haiti. *Natural Hazards*, 118 (3), 2337-2375
13. Zalachoris, G., Zekkos, D., Yerro, A., Bowers, G. A., & Wissmann, K. J. (2023). 3D Numerical Assessment of Rammed Aggregate Pier Performance under Dynamic Loading in Liquefiable Soils. *Journal of Geotechnical and Geoenvironmental Engineering*, 149(3), 04023001.
14. Hubler, J. F., Athanasopoulos-Zekkos, A., & Zekkos, D. (2023). Pore Pressure Generation of Gravelly Soils in Constant Volume Cyclic Simple Shear. *Journal of Geotechnical and Geoenvironmental Engineering*, 149(2), 04022130.
15. Trigg, M. A., Dehghani, M. S., Kesete, Y. Y., Carr, A. B., Trigg, S. G., Zekkos, D., Lopez, D., Pertierra, M., van Westen, C.J., Jetten, V. and Ogden, F.L. (2023). Realities of bridge resilience in Small Island Developing States. *Mitigation and Adaptation Strategies for Global Change*, 28(1), 1.
16. Kallimogiannis, V., Saroglou, C., Zekkos, D., & Papadimitriou, A. (2022). Back-analyses of co-seismic landslides in carbonate fault rocks due to the Mw 6.5 earthquake (2015) in Lefkada island, Greece. *Engineering Geology*, 309, 106850.
17. Valkaniotis, S., Papathanassiou, G., Marinos, V., Saroglou, C., Zekkos, D., Kallimogiannis, V., Karantanellis, E., Farmakis, I., Zalachoris, G., Manousakis, J. and Ktenidou, O.J. (2022). Landslides Triggered by Medicane Ianos in Greece, September 2020: Rapid Satellite Mapping and Field Survey. *Applied Sciences*, 12(23), 12443.
18. Rollins, K. M., Roy, J., Athanasopoulos-Zekkos, A., Zekkos, D., Amoroso, S., Cao, Z., Milana, G., Vassallo, M., & Di Giulio, G. (2022). A New V s-Based Liquefaction-Triggering Procedure for Gravelly Soils. *Journal of Geotechnical and Geoenvironmental Engineering*, 148(6), 04022040.
19. Roy, J., Rollins, K. M., Athanasopoulos-Zekkos, A., Harper, M., Linton, N., Basham, M., Greenwood, W. & Zekkos, D. (2022). Gravel liquefaction assessment using dynamic cone penetration and shear wave velocity tests based on field performance from the 1964 Alaska earthquake. *Soil Dynamics and Earthquake Engineering*, 160, 107357.
20. Zhou, H., Lynch, J., & Zekkos, D. (2022). Autonomous wireless sensor deployment with unmanned aerial vehicles for structural health monitoring applications. *Structural Control and Health Monitoring*, 29(6), e2942.
21. Medwedeff, W. G., Clark, M. K., Zekkos, D., West, A. J., & Chamlagain, D. (2022). Near-Surface Geomechanical Properties and Weathering Characteristics Across a Tectonic and Climatic Gradient in the Central Nepal Himalaya. *Journal of Geophysical Research: Earth Surface*, 127(2), e2021JF006240.
22. Rollins, K. M., Roy, J., Athanasopoulos-Zekkos, A., Zekkos, D., Amoroso, S., & Cao, Z. (2021). A New Dynamic Cone Penetration Test–Based Procedure for Liquefaction Triggering Assessment of Gravelly Soils, *Journal of Geotechnical and Geoenvironmental Engineering*, 147(12).
23. Loli, M., Mitoulis, S. A., Tsatsis, A., Manousakis, J., Kourkoulis, R., & Zekkos, D. (2022). Flood characterization based on forensic analysis of bridge collapse using UAV reconnaissance and CFD simulations. *Science of The Total Environment*, 153661. <https://doi.org/10.1016/j.scitotenv.2022.153661>
24. Zalachoris, G., Zekkos, D., Athanasopoulos-Zekkos, A., Gerolymos, N. (2021) “The Role of Liquefaction on the Seismic Response of Quay Walls during the 2014 Cephalonia, Greece, Earthquakes”, *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, 147 (12), 04021137.
25. Greenwood, W., Zekkos, D., and Lynch, J. (2021). UAV-Enabled Subsurface Characterization using Multichannel Analysis of Surface Waves, *Geotechnical and Geoenvironmental Engineering*, ASCE, 147 (11), 04021120.
26. Little, T. A., Morris, P, Hill, M. P., Kearse, J., Van Dissen, R. J., Manousakis, J., Zekkos, D. and Howell, A.. "Coseismic deformation of the ground during large-slip strike-slip ruptures: Finite evolution of “mole tracks”." *Geosphere* (2021) <https://doi.org/10.1130/GES02336.1>.
27. Townsend, K., F., Clark, M., and Zekkos, D. (2021). The control of depositional and erosional histories on the near-surface strength of clastic sedimentary rocks. *Journal of Geophysical Research - Earth Surface* <https://doi.org/10.1029/2020JF005694>
28. Datta, S., and Zekkos, D. (2021). The Influence of Waste Composition on Landfill Gas Generation Model Parameters, *Environmental Geotechnics* <https://doi.org/10.1680/jenge.20.00058>
29. Medwedeff, W. G., Clark, M. K., Zekkos, D., & West, A. J. (2020). Characteristic landslide distributions: An investigation of landscape controls on landslide size. *Earth and Planetary Science Letters*, 539, 116203.
30. Schaefer, M., Teeuw, R., Day, S., Zekkos, D., Weber, P., Meredith, T., & Van Westen, C. J. (2020). Low-cost UAV surveys of hurricane damage in Dominica: automated processing with co-registration of pre-hurricane imagery for change analysis. *Natural Hazards*, 1-30.

31. Athanasopoulos, G. A., Kechagias, G. C., Zekkos, D., Batilas, A., Karatzia, X., Lyrantzaki, F., & Platis, A. (2020). Lateral spreading of ports in the 2014 Cephalonia, Greece, earthquakes. *Soil Dynamics and Earthquake Engineering*, 128, 105874.
32. Greenwood, W., Lynch, J., Zekkos, D. (2019). Applications of UAVs in Civil Infrastructure, *Infrastructure Systems, J. Infrastruct. Syst.*, 2019, 25(2): 04019002.
33. Datta, S., Zekkos, D., Fei, X., McDougall, J. (2018). Waste-composition-dependent ‘HBM’ model parameters based on degradation experiments, Environmental Geotechnics, *Environmental Geotechnics*, 1-10.
34. Zekkos, D., Greenwood, W., Manousakis, J., Athanasopoulos-Zekkos, A., Clark, M., Cook, K.L. and Saroglou, C. (2018). Lessons Learned from the Application of UAV-Enabled Structure-From-Motion Photogrammetry in Geotechnical Engineering. *International Journal of Geoengineering Case Histories*, Vol.4, Issue 4, p.254-274. doi:10.4417/IJGCH-04-04-03
35. Hubler, J. F., Athanasopoulos-Zekkos, A., & Zekkos, D. (2018). Monotonic and cyclic simple shear response of gravel-sand mixtures. *Soil Dynamics and Earthquake Engineering*, 115, 291-304.
36. Saroglou, H., Asteriou, P., Zekkos, D., Tsiambaos, G., Clark, M., Manousakis, J. (2018) “UAV-enabled reconnaissance and trajectory modeling of a co-seismic rockfall in Lefkada”, *Natural Hazards and Earth System Sciences*, 18(1):321-333. DOI: 10.5194/nhess-18-321-2018
37. Fei, X., Zekkos, D. (2018), “Coupled experimental assessment of physico-biochemical characteristics of municipal solid waste undergoing enhanced biodegradation” *Geotechnique*, DOI: 10.1680/jgeot.16.p.253
38. Zekkos, D., Athanasopoulos-Zekkos, A., Hubler, J., Fei, X., Zehrab, K. H., Marr, W. A. (2017) “Development of a large-size cyclic direct simple shear device for characterization of ground materials with oversized particles”, *ASTM Geotechnical Testing Journal*, March 2018 Volume 41 (2), 263-279, DOI: 10.1520/GTJ20160271 .
39. Nevett, L., Tsigarida, E., Archibald, Z., Stone, D., Horsley, T., Ault, B., Panti, A., Lynch, K. M., Pethen, H., Stallibras, S. M., Salminen, E., Gaffney, C., Sparrow, T. J., Taylor, S., Manousakis, J., and Zekkos, D. (2017). Towards a multi-scalar, multidisciplinary approach to the classical greek city: The Olynthos project. *The Annals of the British School at Athens*, 112, 155-206. doi:10.1017/S0068245417000090
40. Von Voigtlander, J., Clark, M., K., Zekkos, D., Greenwood, W., W., Anderson, S. P., Anderson, R. S., Godt, J. W. (2017) Influence of Weathering on Seismic Velocities of a Basalt Climosequence, *Earth Surface Processes and Landforms*. DOI: 10.1002/esp.4290.
41. Fei, X., Zekkos, D. (2017), “Comparison of Direct Shear and Simple Shear Response of MSW”, *Environmental Geotechnics Journal*, September 2017, DOI: 10.1680/jenge.16.00036
42. Zekkos, D., Clark, M., Whitworth, M., Greenwood, W., West, J., Roback, K., Li, G., Chamlagain, D., Manousakis, J., Quackenbush, P., Medwedeff, W., Lynch, J., (2017). Observations of landslides caused by the April 2015 Gorkha earthquake in Nepal based on land, UAV and satellite reconnaissance. *Earthquake Spectra*, 33(S1), S95–S114, December 2017; DOI: 10.1193/121616EQS237M.
43. Carlson, C., Zekkos, D. (2017) “A Metric to Screen Acceptable Velocity and Displacement Time Histories of Modified Ground Motions”, *Earthquake Spectra*, 33 (4), 1495-1512 <https://doi.org/10.1193/011117EQS012M>.
44. Stahl, T., Clark, M. K., Zekkos, D., Athanasopoulos-Zekkos, D., Willis, M., Medwedeff, W., Knoper, L., Townsend, T., and Jin, J. (2017). Earthquake science in resilient societies, *Tectonics*, doi: 10.1002/2017TC004604
45. Hubler, J., Athanasopoulos-Zekkos, A., Zekkos, D. (2017). “Monotonic, Cyclic and Post-Cyclic Simple Shear Behavior of Three Uniform Gravels.” *Journal of Geotechnical and Geoenvironmental Engineering*, 143(9), September 2017. DOI: [http://dx.doi.org/10.1061/\(ASCE\)GT.1943-5606.0001723](http://dx.doi.org/10.1061/(ASCE)GT.1943-5606.0001723). Editor’s Choice paper in October 2017.
46. Roback, K., Clark, M. K., West, J., Zekkos, D., Li, G., Gallen, S. F., Chamlagain, D., Godt, J. W. (2018). "The size, distribution, and mobility of landslides caused by the 2015 Mw7.8 Gorkha earthquake, Nepal." *Geomorphology*, 301, 121-138, <https://doi.org/10.1016/j.geomorph.2017.01.030>.
47. Zekkos, D., Fei, X. (2016). “Comparison of Constant Load and Constant Volume Shearing Response in Simple Shear Testing of Municipal Solid Waste.” *Waste Management*, <http://dx.doi.org/10.1016/j.wasman.2016.09.029>.
48. Zekkos, D., Athanasopoulos-Zekkos, A., Grizi, A., Greenwood, W. (2016). “The May 25th 2011 Railroad Embankment Failure in Ann Arbor, Michigan, As a Means for Teaching Geotechnical Engineering.” *International Journal of Geoengineering Case Histories*, 3 (4), 234-245. doi: 10.4417/IJGCH-03-04-03
49. Zekkos, D., Fei, X., Grizi, A., Athanasopoulos, G. A. (2016). “Response of Municipal Solid Waste to Mechanical Compression.” *Journal of Geotechnical and Geoenvironmental Engineering*, 10.1061/(ASCE)GT.1943-5606.0001608 , 04016101.
50. Fei, X., Zekkos D., Lei, L., Woods, R. D., Sanford, L. (2015). “Geoenvironmental Characterization of Water Treatment Lime Sludge” *Environmental Geotechnics Journal*. 2 (6), 319-325.
51. Greenwood, W., Zekkos, D., and Sahadewa, A. (2015). ”Spatial Variation of Shear Wave Velocity of Waste Materials from Surface Wave Measurements.” *Journal of Environmental and Engineering Geophysics*, 20(4), 287-301.
52. Fei, X., Zekkos, D., Raskin, L. (2016). “Quantification of parameters influencing methane generation due to biodegradation of municipal solid waste in landfills and laboratory experiments.” *Waste Management* 55, 276-287.

<http://dx.doi.org/10.1016/j.wasman.2015.10.015>

53. Carlson, C., Zekkos, D., Athanasopoulos-Zekkos, A. (2015) Predictive Equations to Quantify the Impact of Spectral Matching on Ground Motion Characteristics. *Earthquake Spectra*, 32 (1), 125-142.
54. Sahadewa, A., Zekkos, D., Woods, R. D., Stokoe, K. H. (2015). "Field Testing Method for Evaluating the Small-strain Shear Modulus and Shear Modulus Reduction of Solid Waste." *ASTM Geotechnical Testing Journal*, June 2015, 38 (4), 427-441.
55. Hoyos, L R., DeJong, J. T., McCartney, J. S., Puppala, A. J., Reddy, K. R., and Zekkos, D. (2014). "Environmental Geotechnics in the U.S. Region: A Brief Overview." *Environmental Geotechnics Journal*, DOI: 10.1680/envgeo.14.00024, Available online: March 31 2015.
56. Carlson, C. P., Zekkos, D. and McCormick, J. P. (2014). "Impact of time and frequency domain ground motion modification on the response of a SDOF system." *Earthquakes and Structures*, 7(6), 1283-1301. DOI: 10.12989/eas.2014.7.6.1283
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### Refereed Conference Papers & Geotechnical Special Publications

1. Li, T., Blunts, P., Gomberg, D., & Zekkos, D. Soil Moisture Estimates from Remote Sensing, In Situ Testing, and Laboratory Testing at an Active Landslide. In *Geotechnical Frontiers 2025* (pp. 12-21).
2. Blunts, P., Zekkos, D., Clark, M. (2024). Electromagnetic Induction-Based Regional Subsurface Characterization of Mountainous Environments: Examples from Puerto Rico, Geo-Congress 2024, 547-556
3. Kassem, M., Gong, W. Zekkos, D. Clark, M., Hughes, S. (2024). Pseudo-Three-Dimensional Back-Analysis of Rainfall-Induced Landslides in Utuado, Puerto Rico Geo-Congress 2024, 579-589
4. Huang, J. R., Zekkos, D., and Clark, M.C (2024). Co-Seismic Landslide Mobility Assessment Using Machine Learning Models Geo-Congress 2024, 475-484
5. Gomberg, D., Zekkos, D. (2024). Near Surface Soil Moisture Estimation through Fusion of UAV-Enabled Thermal, Optical, and Multispectral Hyperspatial Imagery at the Oak Ridge Earthflow, Geo-Congress 2024, 537-546
6. Jo, Y., Cha, W., Zekkos, D. Kim, Y., Jang, Y. S. (2023), Long-term settlement model calibration based on field-monitored data at a multi-stage MSW landfill in South Korea, 9th International Congress on Environmental Geotechnics (ICEG2023), 25-28 June 2023, Chania, Greece <https://doi.org/10.53243/ICEG2023-450>
7. Huang, J. R., Zekkos, D. (2023), Satellite-based change detection for mining instability, 9<sup>th</sup> International Congress on Environmental Geotechnics (ICEG2023), 25-28 June 2023, Chania, Greece. <https://doi.org/10.53243/ICEG2023-450>
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72. Zekkos, D., Carlson, C. (2011). “Scaling vs. Modification of Ground Motions and Impact on Seismic Analyses of a MSW Landfill.” *Proc., 5<sup>th</sup> International Conference on Earthquake Geotechnical Engineering*, January 10-13, 2011, Santiago, Chile.
73. Zekkos, D., and Flanagan, M. (2011). “Case Histories-Based Evaluation of the Deep Dynamic Compaction Technique on Municipal Solid Waste Sites.” *Proc., Geocongress 2011*, March 13-16, 2011, Dallas, TX.

74. Bray, J. and Zekkos, D. (2011). "Research Needs in Solid Waste Mechanics." *Proc., Geotechnical Characterization, Field Measurement, and Laboratory Testing of Municipal Solid Waste, International Symposium on Waste Mechanics 2008*, March 13, 2008, New Orleans, LA, 228-234.
75. Zekkos, D., Flanagan, M. (2010). "Effectiveness of the Deep Dynamic Compaction Technique on Municipal Solid Waste Landfills." *Proc., 6<sup>th</sup> Hellenic Geotechnical and Geoenvironmental Engineering Conference*, September 27-30, 2010, Volos, Greece.
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79. Zekkos, D., Guisinger, A. L., Medley, E., Vellone, D. A. (2008). "Geological, Rock and Mining Engineering, Including Underground Structures and Excavations, and Subsidence of Deltas." General Report on Sessions 6a and 6b, *6<sup>th</sup> International Conference on Case Histories in Geotechnical Engineering*, August 11-16, 2007, Arlington, VA.
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91. Zekkos, D. P., Bray, J. D., Riemer, M. F. (2006). "Shear Modulus Reduction and Material Damping Relationships for Municipal Solid-Waste." *Proc., 8<sup>th</sup> U.S. National Conference on Earthquake Engineering*, April 18-22, 2006, San Francisco, CA, Paper No. 1324.
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94. Zekkos, D.P., Bray, J.D., Der Kiureghian, A. (2004). “Reliability of Shallow Foundation Design using the Standard Penetration Test.” *Proc., 2<sup>nd</sup> International Conference on Site Characterization*, September 19-22, 2004, Porto, Portugal, 2, 1575-1582.
95. Zekkos, D.P., Athanasopoulos, A.G., Athanasopoulos, G.A. (2004). “Deep Supported Excavation in Difficult Ground Conditions in the City of Patras, Greece – Measured vs. Predicted Behavior.” *Proc., 5<sup>th</sup> International Conference on Case Histories in Geotechnical Engineering*, April 13-17, 2004, New York, NY

### Refereed conference summaries or abstracts

1. Many abstracts in AGU conferences (available upon request).
2. Clark, M., West, A. J., Li, G., Roback, K., Zekkos, D., (2016). “Landslide mobility and connectivity with fluvial networks during earthquakes” (invited), *Eos Trans., Fall Meet. Suppl., Abstract session EP32C-08*.
3. Clark, M., Anderson, S. P., Anderson, R. S., Zekkos, D., (2016). “Effect of weathering on the mechanical strength of layered basalts”, *Geological Society of America Annual Meeting, Denver, CO USA 2016. Sesion T55, Paper no. 6-6*.
4. Clark, M. K., Gallen, S., West, A. J., Chamlagain, D., Roback, K., Lowe, K., Niemi, N., W. Greenwood, J. Bateman, D. Zekkos, (2015). “Coseismic landslides associated with the 2015 Gorkha earthquake sequence in Nepal” (invited), *Eos Trans., Fall Meet. Suppl., Abstract session S42C-02*.
5. Clark, M., Zekkos, D., West, A. J., Gallen, S., Roback, K., Chamlagain, D., Athanasopoulos-Zekkos, A., Greenwood, W., Bateman, J., Partenio, M., Li, G., Cook, K., Godt, J., Howat, I., Morin, P., (2016). Coseismic landsliding associated with the 2015 Gorkha earthquake sequence, Nepal, *Geophysical Research Abstracts*, vol. 18, EGU2016-9361-1, EGU General Assembly 2016.
6. Greenwood, W., Clark, M., Zekkos, D., Von Voigtlander, J., Bateman, J., Lowe, K., Hirose, M., Anderson, S., Anderson, R., and Lynch, J. (2016). Assessment of rock mechanical properties and seismic slope stability in variably weathered layered basalts, *Geophysical Research Abstracts*, Vol. 18, EGU2016-11787, 2016, EGU General Assembly 2016
7. Fei, X., and Zekkos, D. (2015). "Influential factors on methane generation and settlement of municipal solid waste during degradation - experiments and literature synthesis." *Proc., 1st International Conference on Geo-Energy and Geo-Environment*, The Hong Kong University of Science and Technology.
8. Fei, X., Zekkos, D., Tibbetts\*, S., Raskin, L., (2013). “Characterization of Microbial Community During Anaerobic Digestion of the Organic Fraction of Municipal Solid Waste in Bioreactor Landfill Simulators.” *Proc., 13<sup>th</sup> World Congress on Anaerobic Digestion*. June 25-28 2013, Santiago de Compostela, Spain.

### Abstracts in non-refereed conference proceedings

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2. Fei, X., Zekkos, D., Raskin, L. (2011). “Characterization of Biodegradation Processes in Municipal Solid Waste Landfills for Long Term Performance Prediction.” *2011 AEESP Education and Research Conference*, Association of Environmental Engineering and Science Professors, July 10-12, 2011, Tampa, FL.
3. Zekkos, D., Sahadewa, A., Woods, R. D. (2011). “Shear Wave Velocity of Municipal Solid Waste. Field Measurements – Model Development and Calibration.” *Quake Summit 2011*, July 9-11, 2011, Buffalo, NY.
4. Zekkos, D., Zalachoris, G., Stokoe, K. II, Sahadewa, A., Woods, R. D. (2010). “Towards an In Situ Evaluation of Dynamic Properties of Municipal Solid Waste.” *Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP)*, April 10-14, 2011, Charleston, SC.
5. Zekkos, D. (2001). “Deep Supported Excavation in Soft Saturated Cohesive Soil for the Construction of a two story underground garage in Patras. Construction – Measurement – Behavior Analysis.” *1<sup>st</sup> Hellenic Civil Engineering Students Conference*, 7-8 May 2001, Patras, Greece.

### Publications in popular press/magazines

1. Zekkos, D. and Stark, T. D. (2024). Geoforensic Investigation of the Highway 1 Rat Creek Drainage Crossing Failure, *GeoStrata Magazine Archive* 28 (2), 26-33
2. Zekkos, D., Clark, M., Gong, W., Manousakis, J., & Greenwood, W. Landslides Driven by Extreme Events: Can We Learn More from More of Them?. *Geo-Strata Magazine*, 23(3), 44-51.
3. Zekkos, D., Greenwood, W., Manousakis, J., Lynch, J. (2016). The Rise of UAVs signals A New Era In Geotechnics,

- Geo-Strata Magazine, September-October issue, 72-77.
- Zekkos, D. (2016). "Military geotechnics in the ancient world." *Geo-Strata*, January-February 2016, 34-38.
  - Zekkos, D. (2013). "Updated Methods for Estimating Geotechnical Properties of Municipal Solid Waste." *Geo-Strata*, July-August 2013, ASCE, Reston, VA, 17(4), 28-33.
  - Carlson, C. and Zekkos, D. (2011). "Understanding the Impact of Ground Motion Modification Techniques on the Seismic Design of Geotechnical and Structural Systems." U.S. Society for Dams (USSD) Newsletter, (154), 30-33.
  - Zekkos, D. (2007). "The Siege of Ancient Tyre in 332 B.C.: An Offshore Construction Success." *Geo-Strata*, September-October 2007, 8 (5), 14-16 and 28.
  - Zekkos, D. P., Athanasopoulos, A. (2004). "Milos Island: Working with Earth for More than 9000 Years." Cover story in *AEG (Association of Engineering Geologists) News*, 47 (1), 16-18.
  - Zekkos, D. (2003). "The Geoengineer Website: An Invitation for Resource and Experience Exchange," *Geo-Strata*, Fall 2003.
  - Zekkos, D., Athanasopoulos, A., Manousakis, J. (2003). "Geotechnical Engineering Experiences in the Homeric Poems," *Newsletter of the Technical Chamber of Greece*, issue 2231, January 20, 2003.

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- Zekkos, D., Sari, S. B (2023). Data Report on Large-Diameter Simple Shear Testing of Alluvial Soils at Montana Resources Site. Geotechnical Research Report No. UCB/GT/2023-02 Department of Civil and Environmental Engineering University of California at Berkeley. December 12 2023.
- Zekkos D., Zalachoris G., Alvertos, A. E., Aatya P. M., Blunts P., Clark M., Dafis S., Farmakis I., Ganas A., Hille M., Kalimogiannis V., Karagiannidis A., Karantanellis E., Khan K., Kirshbaum D., Kourkoulis R., Kotroni V., Ktenidou O.-J., Lagouvardos K., Loli M., Makrinikas A., Marinos V., Manousakis J., Nikas K., Panousis D., Papathanassiou G., Saroglou C., Simopoulos A., Stanley T., Tsavalas A., Valkaniotis S. (2020). "The September 18-20 2020 Medicane Ianos Impact on Greece - Phase I Reconnaissance Report". Geotechnical Extreme Events Reconnaissance Report, GEER-068, <https://doi.org/10.18118/G6MT1T>.
- Nikolaou, S., Zekkos, D., Assimaki, D. and Ramon Gilsanz (2014). "Earthquake Reconnaissance January 26/February 2<sup>nd</sup> 2014 Cephalonia Events, Greece." Version 1 Report for Web Dissemination GEER Association Report No. GEER-034 in collaboration with EERI and ATC. Available at: <http://geerassociation.org/>
- Dimitriadi V., and Zekkos D., (2014), "2014 Resource Guide for Educators in Geotechnical Engineering." Geoengineer.org Report GEO-2014-01, October 2014. Available at: <http://www.geoengineer.org/publications/2014-resource-guide-for-educators-in-geotechnical-engineering>
- Sahadewa, A., Zekkos D. (2012). "In Situ Shear Wave Velocity Measurements, BKK Landfill, West Covina, California." University of Michigan Geotechnical Engineering Research Report UMGE-2012/01, December 17 2012
- Cortese, G.\*, Zekkos, D., Athanasopoulos-Zekkos, A. (2012a). "Network for Women in Civil and Environmental Engineering – First Annual Report." May 31 2012, University of Michigan.
- Cortese, G.\*, Zekkos, D., Athanasopoulos-Zekkos, A. (2012b). "Results of 2011 Undergraduate and Graduate Survey." September 15, 2012, University of Michigan.
- Athanasopoulos, A., Zekkos D. (2006), "Geoengineering, refereed journals and case histories: A survey." Geoengineer.org report GEO/01/06, September 2006.
- Zekkos (Zekkos), D. P. (2005), "Evaluation of static and dynamic properties of Municipal Solid-Waste." dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, Department of Civil and Environmental Engineering, University of California, Berkeley, Fall.
- Zekkos, D. (2001), "Deep Supported Excavation in soft saturated cohesive soil for the construction of a two story underground garage in Patras. Construction – Measurement – Behavior Analysis." Undergraduate Degree thesis, University of Patras, Greece, June 2001.

### Non-refereed conference proceedings

- Nikolaou, S., Pehlivan, M., Sacks, A., Volterra, J. L., Hashash, Y., Assimaki, D., Zekkos, D. (2015). "Rapid Geotechnical Reconnaissance Technologies for Multi Hazards." ASCE Metropolitan Section Infrastructure Group technical seminar on *Emerging Technology in Infrastructure Management and Monitoring*, March 17 2015.

### Abstracts in non-refereed conference proceedings

- Zekkos, D. (2012). "In Situ Assessment of the Linear and Nonlinear Dynamic Properties of Municipal Solid Waste." *Quake Summit 2012*, July 9-12, 2012, Boston, MA.
- Fei, X., Zekkos, D., Raskin, L. (2011). "Characterization of Biodegradation Processes in Municipal Solid Waste

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- Landfills for Long Term Performance Prediction.” *2011 AEESP Education and Research Conference*, Association of Environmental Engineering and Science Professors, July 10-12, 2011, Tampa, FL.
3. Zekkos, D., Sahadewa, A., Woods, R. D. (2011). “Shear Wave Velocity of Municipal Solid Waste. Field Measurements – Model Development and Calibration.” *Quake Summit 2011*, July 9-11, 2011, Buffalo, NY.
  4. Zekkos, D., Zalachoris, G., Stokoe, K. II, Sahadewa, A., Woods, R. D. (2010). “Towards an In Situ Evaluation of Dynamic Properties of Municipal Solid Waste.” *Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP)*, April 10-14, 2011, Charleston, SC.
  5. Zekkos, D. (2001). “Deep Supported Excavation in Soft Saturated Cohesive Soil for the Construction of a two story underground garage in Patras. Construction – Measurement – Behavior Analysis.” 1st Hellenic Civil Engineering Students Conference, 7-8 May 2001, Patras, Greece.

### **FUNDED RESEARCH GRANTS (total of \$10,715,124)**

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#### **As Principal Investigator (external grants) (total of \$4,256,568):**

1. Environmental Protection Agency (EPA), “Next-Generation Landfill Monitoring: A Multi-Scale Approach to Measuring Emissions for Evaluating and Financing Interventions”, with Co-PIs Ken Alex (UC Berkeley) and Duren (Carbon Mapper). \$1,000,000. November 2023-October 2026.
2. Yuba Water, “Next Generation Levee Monitoring Technologies”, with Co-PI Kenichi Soga. \$125,000. June 2025-May 2026.
3. NSF, “Collaborative Research: Coupling erosion, weathering & hydrological function in an active orogenic system”, with PIs Josh West & David Okaya (USC), Marin Clark (Univ. of Michigan). UC Berkeley share: \$451,243. August 2020-July 2024.
4. USGS, Co-seismic landslide susceptibility of clastic sedimentary rocks: Collaboration Research between the University of Michigan and the University of California, Berkeley, January 2021- May 2022, \$28,889 (UCB share).
5. Knight Piesold, “Large-size Monotonic and Cyclic Simple Shear of Gold Leach Ore,” \$66,000, April 2020-May 2021.
6. World Bank, “UAV-enabled mapping of damaged sites in Dominica,” \$49,725, August 18 2017 – August 31 2018. PI: Dimitrios Zekkos. Co-PI: Marin Clark (UM EES).
7. USGS, “Characterization of landslides and rock mass strength leveraging the 2015 Mw 6.5 Lefkada earthquake in Greece,” \$90,740, August 1 2017 – July 31 2018. PI: Dimitrios Zekkos. Co-PI: Marin Clark (UM EES).
8. Geosyntec Consultants, “Simple Shear Testing of Hazardous Waste at BKK Landfill,” \$111,000, June 2015 – September 2016. PI: Dimitrios Zekkos.
9. National Science Foundation, “CyberSEES: TYPE 2: Sustainably Unlocking Energy from Municipal Solid Waste Using a Sensor-Driven Cyber-Infrastructure Framework,” \$1,199,600, Sept. 2014-August 2018. PI: Dimitrios Zekkos. Co-PIs: Edwin Olson, (UM ECS), Jerome Lynch (UM CEE).
10. National Science Foundation, “Scalable and Autonomous Post-Event Geo-Characterization from UAAV-based Quantitative Surface Measurements,” \$389,845, Sept. 2014-August 2017. PI: Dimitrios Zekkos. Co-PIs: Vineet Kamat (UM CEE), Jerome Lynch (UM CEE).
11. National Science Foundation, “NEESR-CR: Seismic Response of Landfills: *In situ* Evaluation of Dynamic Properties of Municipal Solid Waste: Comparison to Laboratory Testing and Impact on Numerical Analyses,” \$693,770, Sept. 2010-August 2014. PI: Dimitrios Zekkos. Co-PIs: Neven Matasovic (Geosyntec Consultants) and Mark Tufenkjian (California State University, Los Angeles).
12. Conetec, Inc., “Collaboration Agreement between the University of Michigan and Conetec Education Foundation,” \$106,500, January 2013 – December 2017.
13. Geosyntec Consultants, “In Situ Characterization of Dynamic Properties of Hazardous Waste at BKK Landfill,” \$24,996, June 2012 – June 2015. PI: Dimitrios Zekkos.
14. Geosynthetics Research Institute, “Impact of municipal solid waste biodegradation on separator geotextile,” \$15,000, May 2012 – May 2014. PI: Dimitrios Zekkos (with PhD advisee Xunchang Fei).

#### **As Principal Investigator (internal grants) (total of \$364,316) :**

15. UC Berkeley, “Bringing the field experience in the classroom: Augmenting Education in Natural Disasters using Virtual and Mixed Reality”, \$15,000, Berkeley Collegium Grant, Co-PIs: N. Sitar, R. Kayen, May 2021-April 2023.

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16. University of Michigan, “U-M as an Agent of Change in Transforming a Greenhouse Gas Emission Problem into a Sustainable Energy Production Solution”, \$60,000, Planet Blue Renewable Energy Demonstration Project, Sept 2018-May 2020. PI: Zekkos
17. University of Michigan, “Pipeline Enhancement to support a community of excellence for under-represented minority students in civil and environmental engineering programs”, \$11,000, Rackham Graduate School. PI: Dimitrios Zekkos. Co-PIs: Athanasopoulos-Zekkos, Love, Demond, Clack.
18. University of Michigan, “MCUBED: Drone-enabled Photogrammetry for the Characterization of Earthquake-Induced Landslides” \$60,000, Sept. 2015-August 2017. PI: Dimitrios Zekkos. Co-PIs: Marin Clark (EES), Jerome Lynch (CEE).
19. University of Michigan Plane Blue Initiatives, “PBSIF: Transforming Campus Waste”, \$30,000, May 2016 – May 2017 (with PhD advisee Julie Bateman).
20. University of Michigan Center for Research on Learning and Teaching (CRLT), “Gilbert Whitaker Grant Fund: Enhancing Undergraduate Student Engagement in Geotechnical Engineering Beyond the Classroom Using Online Applications” \$6,000, January 2015-December 2016. PI: Dimitrios Zekkos
21. University of Michigan Center for Research on Learning and Teaching (CRLT), “Opening the Classroom to the Profession: Assessment of Web-based Class Projects on Student Learning,” \$8,000, May 2014-April 2015. PI: Dimitrios Zekkos
22. Horace Rackham School of Graduate Studies (UM), “Continuation of UM Network for Women in Civil and Environmental Engineering (NEWinCEE),” \$77,600, September 2013 – August 2015. PI: Dimitrios Zekkos. Co-PIs: Adda Athanasopoulos-Zekkos (UM CEE), Avery Demond (UM CEE) and Nancy Love (UM CEE).
23. Horace Rackham School of Graduate Studies (UM), “UM Network for Female Excellence in Civil Engineering (NEWinCEE),” \$96,736, September 2011 – August 2013. PI: Dimitrios Zekkos. Co-PIs: Adda Athanasopoulos-Zekkos (UM CEE), Gustavo Parra-Montesinos (UM CEE), Avery Demond (UM CEE), Sang-Huyn Lee (UM CEE).

### **As Co-Principal Investigator (external grants) (total of \$6,089,240)**

24. California Energy Commission (CEC), “Seismic risk assessment of natural gas storage and pipeline infrastructure”, PI: Kenicho Soga, Co-PIs: Jonathan Bray, Matthew Dejong, Dimitrios Zekkos, \$3,000,000, March 2024-February 2027.
25. National Aeronautical Space Agency (NASA), “Enabling landslide disaster risk reduction and response throughout the disaster life cycle with a multi-scale toolbox” \$1,856,663.36, May 2019-April 2023, Co-PI(s): Zekkos, D., Clark, M. U of M share: \$695,103
26. National Science Foundation, “Collaborative Research: Integrated Field and Laboratory Based Assessment of Liquefaction Triggering and Residual Strength of Gravelly Soils,” \$322,124, September 2017 – August 2018, PI: Athanasopoulos-Zekkos, Co-PI: D. Zekkos
27. National Science Foundation, “RAPID: Collaborative Research: Topographic Change and Cascading Hazards Following the Mw7.8 Kaikoura (New Zealand) Earthquake,” \$46,517, December 2016-November 2017, PI: Marin Clark (UM EES), co-PI: D. Zekkos, A. Athanasopoulos-Zekkos.
28. National Science Foundation, “Collaborative Research: Landslides related to the 2015 Mw7.8 Gorkha earthquake, from ground motion and hazard to geomorphic response,” \$285,660.00, September 2016 – August 2019. PI: Marin Clark (UM EES), Co-PI: D. Zekkos.
29. Michigan Department of Transportation (MDOT), “Asset Management of Retaining Walls,” \$314,943.19. Sept. 2016 – August 2018. PI: Adda Athanasopoulos-Zekkos (UM CEE). Co-PI: Dimitrios Zekkos (UM CEE), Jerome Lynch (UM CEE)
30. Michigan Department of Transportation (MDOT), “Sedimaging: Image-Based Soil Characterization,” \$130,000. September 2010 – August 2011. PI: Roman Hryciw (UM CEE). Co-PI: Dimitrios Zekkos (UM CEE).
31. Chinese National Science Foundation, “Strength Evolution and Disaster Mechanism of Sewage Sludge and MSW Mixture Landfill,” \$133,333, Sept. 2014-August 2017, PI: Dr. Li Lei, Hohai University. Co-PI: D. Zekkos.

### **As Co-Principal Investigator (internal grants) (total of \$5,000)**

32. University of Michigan ADVANCE, “Faculty Leading Change in CEE” \$5,000. PI: Clack, Co-PI: Love, Zekkos

**RESEARCH STUDENTS SUPERVISED**

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**PhD students**

1. Andhika Sahadewa, Thesis title: “In-Situ Assessment of Linear and Nonlinear Dynamic Properties of Municipal Solid Waste”. Graduation Date: 5/2014.  
Currently Assistant Professor, Civil Engineering, Bandung Institute of Technology, Indonesia.
2. Clinton Carlson, Thesis title: “Assessment of the Effects of Ground Motion Modification on Ground Motions and Seismic Response of Geotechnical Systems”. Graduation Date: 9/2014.  
Currently with Geosyntec Consultants, Atlanta, Georgia.
3. Xunchang Fei, PhD Candidate, Thesis title: “Experimental Assessment of coupled physical-biochemical-mechanical-hydraulic processes of Municipal Solid Waste Undergoing Biodegradation” Graduation Date: 12/2015.  
Currently: Assistant Professor, Civil and Environmental Engineering Department, Nanyang Technological University (NTU), Singapore
4. William Greenwood, PhD student, “UAV-enabled Surface and Subsurface Characterization for Post-Earthquake Geotechnical Reconnaissance”, Graduation Date: 5/2018.  
Currently Assistant Professor, Department of Civil and Environmental Engineering, San Jose State University
5. Sampurna Datta, PhD student, “A Computational Model for Coupled Hydraulic-Biochemical-Mechanical Processes of Municipal Solid Waste Degradation.” Graduation date: 12/2020.  
Currently Engineer at Kornforth Consultants, Portland, Oregon.
6. Hao Zhou, PhD student, “UAV-enabled Multichannel Analysis of Surface Waves.” Graduation date; 6/2021. Co-advisor with Jerome Lynch (Univ. of Michigan).  
Currently Engineer at Tesla, Inc. Oakland, CA.
7. William Medwedeff, PhD student, “Geomechanical characterization of landslides from the 2015 Gorkha earthquake, Nepal.” Co-advised with Prof. Marin Clark (University of Michigan). Graduation date: 1/2022.  
Currently with Washington Geological Survey
8. Weibing Gong, PhD student, “Regional modelling of co-seismic landsliding” Graduation date: 6/2023.  
Currently: Assistant Professor, University of Missouri Science and Technology (Missouri S&T).
9. Jih-Rou Huang, PhD student, “Applications of Artificial Intelligence (AI) Techniques on Remote Sensing Data for Ground Failure Detection, Mobility Assessment, and Infrastructure Monitoring”. Graduation date: 8/2024. Currently: Fugro Pacific.
10. Parker Blunts, PhD student, “Coupled characterization of geomechanical and geochemical processes of critical zones in Nepal and implications in landslide susceptibility. Graduation date: 6/2025 (expected).
11. Mirna Kassem, PhD student, “Regional landsliding of precipitation-induced landslides”, 2021-2025 (expected)
12. Yitong Yang, PhD student, “Multi-scale characterization of methane emissions from landfills”, 2024-2027 (expected)
13. Mingliang Tang, PhD student, “UAV-enabled Multi-spectral data fusion for geoinfrastructure monitoring, 2024-2027 (expected).
14. Treves Li, PhD student, “Scalable EM for 3D subsurface characterization of geo-infrastructure”, 2024-2028.

**MSc students**

1. Yongjian Wei, 2019, “Large-size Simple Shear testing of sandy soils”
2. Michael Flanagan, 2010, “Deep Dynamic Compaction of Municipal Solid Waste Landfills.”
3. Matt Hambright, 2010, “Characterization of Municipal Solid Waste Incineration Ash.”
4. Mohammad Kabalan, 2010, “Development of Triaxial Testing Device for Testing of Incinerated Ash.”
5. Stephanie Guisbert, 2010, “Impact of Ground Motion Modification on Geotechnical Seismic Response Analyses.”
6. Lu Chen, 2014, “Reuse of Municipal Water Treatment Sludge.”
7. Lauren Riedle, 2015, “Life Cycle Analysis of Sustainable Energy Reactor Facilities.”
8. Michael Partenio, 2016, “Mechanical Properties Characterization of Hazardous Waste.”
9. Julie Bateman, 2017, “Field Measurements of Emissions on MSW landfills.”
10. Chenghang Liu, 2018, “Soil characterization using Infrared Thermography.”
11. Gabriel Draughon, 2019, “Sensing-based Energy Harvesting from Solid Waste.”
12. Cassandra Champagne, 2020, “UAV-based assessment of Municipal Solid Waste landfills.”
13. Jih-Rou Huang, 2020, “3D back-analysis of rapid drawdown failure of Sparmos Dam”
14. Drew Gomberg, 2021, “Towards a System Level Approach to Landslide Assessment: The example of Berkeley Hills” (capstone project).

**Undergraduate Students**

Total number of undergraduate students directed on research projects: 50

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Number of women undergraduate students: 23 (46%)

Number of underrepresented minority undergraduate students: 7 (14%)

1. Vanessa Hernandez-Deniz, Summer 2022, “Simple Shear Testing Apparatus”
2. Jacob Lion, Fall 2021-Spring 2022, “Virtual Reality in geotechnical engineering” & “Cyclic Simple Shear of Gravelly Soils”
3. Ritvick Balla, Spring 2022, “Structure from Motion of Wildfire Affected Areas in Santa Cruz”
4. Iain Ferguson, Fall 2017-Winter 2018, “Understanding the impact of natural disasters on infrastructure using social media”
5. Shurong Liang, Winter 2017-Winter 2018, “Effect of initial shear stress on the cyclic response of gravels”
6. Nataly Figueroa, Spring 2016-Winter 2017, “Assessment of composting as a sustainable waste management technology”
7. Brinda Yarlagadda, Spring – Summer 2016, “Energy from Waste”, Marian-Sarah Parker Program
8. Mehul Kulkarni, Fall 2015-Winter 2016, “Degradation of MSW with seepage in laboratory landfill simulators”, UROP
9. Andrea Ventola, Fall 2015-Winter 2016, “Cyclic Simple Shear Testing of Gravelly Soils”, independent study
10. Tianhao Zhou, Summer 2015, “Image-based characterization of basaltic rock specimens”, SURE
11. Jad Zalzal, Summer 2015, “Degradation of MSW in laboratory landfill simulators”, international visiting UG
12. Paul Maamari, Summer 2015, “Laboratory testing of Elastizel foam cement” international visiting UG
13. Alesha Jackson, Summer 2015, “Cyclic Simple Shear Testing of Gravelly Soils”, SROP
14. Theau Heral, Fall 2014-Winter 2015, “Use of drone technology in civil engineering infrastructure”, UROP
15. Shihcheng Chu, Fall 2014-Winter 2015, “Simple shear testing of MSW”, UROP
16. Rebecca Martin, Fall 2014-Winter 2015, “A review of ancient hydraulic projects”, UROP.
17. Michael Schiavone, Fall 2014-Winter 2015, “A review of ancient fortifications projects”, UROP.
18. Danielle Park, Fall 2014-Winter 2015, “A review of ancient engineering projects in the Bible”, UROP.
19. Andrew Tamer, Spring-Summer 2014, “Large-scale Simple Shear Testing of Municipal Solid Waste,”
20. Rachel Thompson, Spring-Summer-Fall 2014, “Liquefaction Resistance of Gravelly Soils,” Network for Women in Civil and Environmental Engineering (NeWinCEE) Summer Program.
21. Hannah Wasserman, Spring-Summer 2014, “Undrained Shear Strength of Gravelly Soils,” Network for Women in Civil and Environmental Engineering (NeWinCEE) Summer Program.
22. Charles Davis, Spring-Summer 2014, ‘Characterization of Municipal Water Treatment Sludge,’ Summer Research Opportunities Program (SROP).
23. Paro Sen, Fall-Winter 2014, “Degradation of Municipal Solid Waste,” UROP.
24. Alex Gildee, Fall-Winter 2014, “Simple Shear Testing of Municipal Solid Waste,” UROP
25. Xavier Rivera-Hernandez, Spring-Summer 2013, “Large-Scale Simple Shear Testing of Gravelly Soils,” Summer Research Opportunities Program (SROP).
26. Jose Rivera-Perez, Spring-Summer 2013, “Large-Scale Simple Shear Testing of Gravelly Soils,” SROP.
27. Calvin Nyakundi, Spring-Summer 2013, “Large-Scale Simple Shear Testing of Municipal Solid Waste,” College Outreach and Diversity Program.
28. Jane Gregg, Spring-Summer 2012 & Spring-Summer 2013, “Monitoring of Degradation of Municipal Solid Waste in Landfill Simulators,” Network for Women in Civil and Environmental Engineering (NeWinCEE) Summer Program.
29. Jiacheng Li, Winter 2013 and Spring-Summer 2013. “In-situ Crosshole and Downhole of Municipal Solid Waste,” 2 credits of independent study and Summer Undergraduate Research in Engineering Program (SURE).
30. Saya Kajiwara, Fall 2012-Winter 2013, “Shear Wave Velocity Measurements on Various Waste Materials,” Undergraduate Research Opportunities Program (UROP).
31. Kelley Langlois, Fall 2012-Winter 2013, “Monitoring of Degradation of Municipal Solid Waste in Landfill Simulators,” UROP.
32. Renee Wiwel, Fall 2012-Winter 2013, “In-situ Crosshole and Downhole of Municipal Solid Waste,” UROP.
33. Sachin Jain, Fall 2012-Winter 2013, “Development of Landfill Simulators in the Laboratory,” UROP.
34. Gina Cortese, Spring-Summer 2012, “Development of Outreach Material for NeWinCEE,” NeWinCEE.
35. Savannah Tibbets, Spring-Fall 2012, “Monitoring of Degradation of Municipal Solid Waste in Landfill Simulators,” Marian Sarah Parker Scholars Program (MSP) & NeWinCEE.
36. Kristina Vaclarek, Spring-Summer 2012, “Assessment of the Impact of Ground Motion Modification on the Response of a Single Degree of Freedom System,” SURE.
37. Michael Klein, Spring-Summer 2012, “Large-Scale Cyclic Simple Shear Testing in Ottawa Sand,” SURE.
38. Stacia Simonsen, Spring-Summer 2011, “Monitoring of Degradation of Municipal Solid Waste in Landfill Simulators,” MSP.

39. Mohammad Kabalan, Fall 2010-Winter 2011, Spring Summer 2011, “Laboratory Testing of Incinerated Waste,” UROP and SURE.
40. Alex Demetriou, Fall 2011-Winter 2012, “Monitoring of Degradation of Municipal Solid Waste in Landfill Simulators,” UROP.
41. Zach Jones, Fall 2011-Winter 2012, “Monitoring of Degradation of Municipal Solid Waste in Landfill Simulators,” UROP.
42. Rob Glew, Fall 2011-Winter 2012, “Development of a Software for the Evaluation of damping from surface wave measurements,” UROP.
43. Dimitris Tolios, Fall 2010-Winter 2011, “Evaluation of Damping from Surface Wave Measurements,” UROP.
44. Sita Syal, Fall 2009-Winter 2011, “Characterization of Incinerated Waste,” UROP.
45. Sarah Chronister, Spring-Summer 2010, “Geotechnical Characterization of Incinerated Waste,” Michigan STEM Academy.
46. Anna Kathleen James, Spring-Summer 2010 “Geotechnical Characterization of Waste Materials,” SURE.
47. Zaher Hamzeh, Fall 2009-Winter 2010, “Inversion of Shear Wave Velocity Measurements,” UROP.
48. Osai Robinson, Fall 2009-Winter 2010, “Dam Construction in the Ancient World,” UROP.
49. Stephanie Guisbert, Spring - Summer 2009, “Impact of Ground Motion Modification on Analyses,” Summer independent study.
50. Adam Lobbstaël, Spring -Summer 2009, “Application of Seismic Geophysics in Landfills,” Summer independent study.

#### **Post-Doctoral Advisees**

1. Xunchang Fei, January 2016-September 2016
2. Jongchan Kim, 2020-2023
3. Wonjun Cha, 2022-2023
4. Youngseok Jo, October 2022-present

#### **Research Scholars Hosted**

1. Renee Gerring, University of Liberia, University of Michigan African Presidential Scholars Program (UMAPS), September 2014-February 2015.
2. Lilei Li, Associate Professor, Hohai University, China

## **TEACHING EXPERIENCE**

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### **Faculty Instructor:**

#### *At the University of California, Berkeley:*

1. CE179 upper-level undergraduate course “Geosystems Design”, University of California at Berkeley, Berkeley (Fall 2020, Fall 2021)
2. CE170A upper-level undergraduate course “Infrastructure Sensing and Modelling” University of California at Berkeley, Berkeley (Fall, 2020, Fall 2021, Fall 2022, Fall 2023, Fall 2024).
3. CE176 upper-level undergraduate course “Environmental Geotechnics”, University of California at Berkeley, Berkeley (Spring 2021)
4. CE171 upper-level undergraduate course “Rock Mechanics”, University of California at Berkeley, Berkeley (Spring 2022, Spring 2024)
5. CE273 graduate level course “Advanced Geotechnical Testing and Design”, University of California at Berkeley, Berkeley (Spring 2022, Spring 2024, Spring 2025)
6. CE270 graduate level course “Advanced Geomechanics”, University of California at Berkeley, Berkeley (Fall 2022, Fall 2023)
7. CE268G graduate level course “Ground Construction”, University of California at Berkeley, Berkeley (Spring 2025).

#### *At the University of Michigan:*

1. CEE 345 undergraduate level course “Geotechnical Engineering”, University of Michigan, Ann Arbor (Fall 2018, Fall 2017, Fall 2016, Fall 2015, Fall 2013, Winter 2012, Fall 2010, Winter 2010).
2. CEE 544 graduate level course “Rock Mechanics”, University of Michigan, Ann Arbor (Winter 2017, Winter 2015, Fall 2012, Fall 2009).

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3. CEE 549 graduate level course "Geoenvironmental Engineering", University of Michigan, Ann Arbor (Fall 2019, Fall 2017, Fall 2015, Winter 2014, Winter 2013, Fall 2010, Winter 2009).
4. CEE 542 graduate level course "Soil and Site Improvement", University of Michigan, Ann Arbor (Fall 2016, Winter 2014, Fall 2011, Fall 2008).
5. CEE 546 graduate level course "Slopes, Dams and Retaining Structures", University of Michigan, Ann Arbor (Winter 2008).
6. CEE 541 graduate level course 'Soil Sampling and Testing', University of Michigan, Ann Arbor (Fall 2013) (instructor for 25% of the course).
7. CEE 840 "Geotechnical Seminar Series", University of Michigan, Ann Arbor (Fall 2014, Winter 2013, Fall 2012, Winter 2012, Fall 2011, Winter 2010, Fall 2009).

### Short Courses Taught

1. Zekkos, D., Bray J. D., Athanasopoulos-Zekkos, Abrahamson, N., Kayen, R., Sitar, N. "Geotechnical earthquake engineering", online 3-module, four half days for each module. Organized by the Geological Engineering Foundation. Feb-April 2024, Jan-March 2025.
2. Zekkos, D., Soga, K., Kayen, R., Johnson K. "New Technologies for Geo-Infrastructure Sensing and Monitoring", online 2-day short course, Organized by the Geological Engineering Foundation. 2-day Short Course Lead Organizer and instructor. Offered four times: 23-23 January 2021, 20-21 May 2021, 8-9 May 2022, 7-8 May 2023.
3. Instructor for USACE Prospect Course 247 on Seismic Stability of Earthen Dams, on topic "Laboratory Testing for Seismic Evaluations of Embankment Dams": Offered three times: July 13-17 2020, July 2021, August 2022, August 2023.
4. Zekkos, D. "Lessons learned from previous post extreme-event reconnaissance", GEER training workshop, April 1 2023.
5. Franke, K., and Zekkos, D. "The use of small unmanned aerial vehicles for post-disaster geotechnical reconnaissance." Educational Webinar delivered on April 20 2016, Geotechnical Engineering Extreme Event Reconnaissance Association (GEER). Available at: <http://geerassociation.org/geer-activities/short-courses>

## PROFESSIONAL CONTRIBUTIONS

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### Conference – Workshop Organization

- Conference Chair, 9<sup>th</sup> International Congress on Environmental Geotechnics, June 2023, Chania, Greece.
- Member, Steering Committee, 3<sup>rd</sup> Int. Conference on Natural Hazards and Infrastructure, 5-7 July 2022, Athens, Greece.
- Member, International Scientific Board, *TRANSCOLD2019 Transportation Soil Engineering in Cold Regions*. 20 –23 May, 2019, Saint-Petersburg, Russia.
- Member, Steering Committee, 2<sup>nd</sup> Int. Conference on Natural Hazards and Infrastructure, 23-26 June 2019, Chania, Greece.
- Member, Scientific Committee, 8<sup>th</sup> International Congress on Environmental Geotechnics, 28 October – 1 November 2018, Hangzhou, China.
- Member of Conference Organizing Committee, *Geotechnical Earthquake Engineering and Soil Dynamics Conference, June 10-13 2018, Austin, TX, ASCE Geo-Institute*.
- Member, Scientific Committee, 4<sup>th</sup> GeoShanghai International Conference, May 27-30 2018.
- Member, Scientific Committee, 16<sup>th</sup> World Conference on Earthquake Engineering, January 9-12, 2017, Santiago, Chile.
- Member, Scientific Committee, TGG-2017 «Transportation Geotechnics and Geoecology», St. Petersburg, Russia, 17-19 May, 2017
- Member, Steering Committee, 1<sup>st</sup> Int. Conference on Natural Hazards and Infrastructure, 28-30 June 2016, Chania, Greece.
- Technical Program Chair and Proceedings Lead Editor, *Geo-Chicago 2016: Sustainability, Energy and the Geoenvironment Conference*, ASCE Geo-Institute, Chicago, IL, August 14-18 2016.
- Conference Chair, *Geocongress 2012: State of the Art and Practice in Geoenvironment Conference*, ASCE Geo-Institute, San Francisco, CA, March 25-28, 2012.
- Member, Organizing Committee, 7<sup>th</sup> Conference on Geotechnical Engineering Case Histories, organized by Missouri S&T, Chicago, IL, September 16-21, 2013.
- Member, Organizing Committee, *Annual Michigan Solid Waste Conference*, Engineering Society of Detroit, Detroit, MI, 2011-2018.

- Member, International Scientific Committee, *Advances in Civil Engineering*, Ankara, Turkey, October 17-19, 2012.
- Chair, Organizing Committee, *International Symposium on Waste Mechanics*, ASCE Geo-Institute, New Orleans, LA, March 11-13, 2008.
- Member, Organizing Committee, *5<sup>th</sup> International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics and Symposium in honor of Professor I. M. Idriss*, San Diego, CA, May 24-29, 2010.
- Member, International Advising Committee, *12<sup>th</sup> International Conference of the International Association for Computer Methods and Advances in Geomechanics*, October 1-6, 2008.
- Member, Organizing Committee, *6<sup>th</sup> Conference on Geotechnical Engineering Case Histories*, Arlington, VA, August 11-16, 2008.
- Member, Organizing Committee, Workshop “Geotechnical Earthquake Engineering Related to Monuments and Historical Sites,” *4<sup>th</sup> International Conference on Earthquake Geotechnical Engineering*, Thessaloniki, Greece, June 25-28, 2006.
- Chair, Workshop “International Journal of Geoengineering Case Histories: Case Histories in the Information Technology Age,” *ASCE Geo-Institute Geocongress 2006*, Atlanta, GA, February 26-March 1, 2006.
- Conference Chair, *1<sup>st</sup> Hellenic Civil Engineering Students Conference*, Patras, Greece, May 7-8, 2001.

### **Conference Session Organization**

- Session Chair, “MULTI-HAZARD: Assessment and Early Warning Systems”, *2<sup>nd</sup> Int. Conference on Natural Hazards and Infrastructure*, 23-26 June 2019, Chania, Greece.
- Session Chair, “Bio-Stabilization Session 1 & 2”, co-chaired with Jason Dejong and Kenichi Soga, *International Foundation Congress and Expo*, March 5-10 2018, Orlando, FL.
- Plenary Session Chair, *Plenary Forum Session on Promoting Innovation in Geotechnical Engineering, International Conference on Soil Mechanics and Geotechnical Engineering, 18th International Conference on Soil Mechanics and Geotechnical Engineering*, September 2-6, 2013, Paris, France.

### **Journal and Conference Paper Reviews**

#### Journals & Special Publications

- Editor-in-Chief, *International Journal of Geoengineering Case Histories*, International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), 2017-present.
- Editorial Board Member, *AI in Civil Engineering*, Springer-Nature, 2021-present (inaugural journal)
- Associate Editor, *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 2014-2023
- Editorial Board Member, *Environmental Geotechnics Journal*, Institution of Civil Engineers, 2012-2021
- Reviewer, *Smart Infrastructure and Construction Journal*, 2019
- Reviewer, *European Journal for Remote Sensing*, 2019
- Reviewer, *Journal of Aerospace Information Systems*, 2018
- Reviewer, *Applied Geophysics*, 2018
- Reviewer, *Canadian Geotechnical Journal*, 2009, 2017, 2018, 2019.
- Reviewer, *Journal of Aerospace Information Systems*, 2018
- Reviewer, *Computers and Geotechnics*, 2017
- Reviewer, *Soil Dynamics and Geotechnical Earthquake Engineering*, 2017
- Reviewer, *Natural Hazards*, 2017
- Reviewer, *Engineering Mechanics*, ASCE, 2016.
- Reviewer, *Bridge Engineering*, ASCE, 2015
- Reviewer, *Geotextiles and Geomembranes*, Elsevier, 2014, 2015, 2016.
- Reviewer, *Earthquakes and Structures*, Techno-Press, 2014, 2015
- Reviewer, *Geomechanics and Engineering*, 2014
- Reviewer, *Earthquake Spectra*, EERI, 2014
- Reviewer, *Waste Management Journal*, Elsevier, 2008-2018.
- Reviewer, *Waste Management and Research*, SAGE, 2014
- Reviewer, *Journal of Solid Waste Technology and Management*, 2014
- Reviewer, *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, 2006-2014.
- Reviewer, *Journal of Geotechnical and Geological Engineering*, 2011-2013.
- Reviewer, *ASCE Journal of Hazardous, Toxic, and Radioactive Waste Management*, 2012.

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- Reviewer, *Earthquake Engineering Journal*, 2011.
- Reviewer, *Geosynthetics International Journal*, 2006.
- Reviewer, *ASCE Geotechnical Special Publication in Honor of Prof. Robert Holtz*, 2011.

### Conferences

- Reviewer, *20th International Conference on Soil Mechanics and Geotechnical Engineering*, May 1-5 2022, Sydney, Australia.
- Reviewer, *Geocongress 2022*, Charlotte, North Carolina, March 20–23, 2022
- Reviewer, *Geo-Extreme*, Savannah, Georgia, November 7-10 2021.
- Reviewer, *Third International Symposium on Coupled Phenomena in Environmental Geotechnics (CPEG2021)*, Kyoto, Japan, on October 20–22, 2021.
- Reviewer, *8th International Conference on Geotechnical Engineering Case Histories – Geocongress 2019*, Philadelphia, PA, Mar 24-27, 2019.
- Reviewer, *8th International Congress on Environmental Geotechnics*, Hangzhou, China, Oct. 28 – Nov. 1, 2018
- Reviewer, *7th International Conference on Unsaturated Soils*, Hong Kong, 3-5 August 2018.
- Reviewer, *International Foundations Congress and Expo*, Orlando, FL, March 5-10 2018.
- Reviewer, *19<sup>th</sup> International Conference on Soil Mechanics and Geotechnical Engineering*, Seoul, Korea, 17-22 September 2017.
- Reviewer, *3rd International Conference on Performance-based Design in Earthquake Geotechnical Engineering*, July 16-19 2017, Vancouver
- Reviewer, *International Foundations Congress and Equipment Expo 2015*, San Antonio, Texas, March 17-21 2015
- Reviewer, *ASCE Geo-Institute GeoCongress 2014*, Atlanta, GA, February 23-26, 2014.
- Reviewer, *GeoShanghai International Conference*, Shanghai, China, May 26-28, 2014.
- Reviewer, *Transportation Research Board (TRB) 92<sup>nd</sup> Annual Meeting*, Washington, DC, January 13-17, 2013.
- Reviewer, *10th International Conference on Advances in Civil Engineering*, Ankara, Turkey, October 17-19, 2012.
- Reviewer, *ASCE Geo-Institute GeoFrontiers*, 2011, Dallas TX, March 13-16, 2011.
- Reviewer, *ASCE Geo-Institute GeoFlorida*, 2010, West Palm Beach, FL, February 20-24 2010.
- Reviewer, *5<sup>th</sup> International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics and Symposium in Honor of Professor I. M. Idriss*, San Diego, CA, May 24-29, 2010.
- Reviewer, *17<sup>th</sup> International Conference of Soil Mechanics and Geotechnical Engineering (ICSMGE)*, Alexandria, Egypt, October 5-9, 2009.
- Reviewer, *International Foundation Congress & Equipment Expo*, Orlando, FL, March 15-19, 2009.
- Reviewer, *4<sup>th</sup> Decennial Geotechnical Earthquake Engineering and Soil Dynamics Conference (GEESD)*, EESD Committee of ASCE Geo-Institute, Sacramento, CA, May 18-22, 2008.
- Reviewer, *42<sup>nd</sup> U.S. Rock Mechanics Symposium & 2nd U.S.-Canada Rock Mechanics Symposium*, San Francisco, CA, June 29-July 2, 2008.
- Reviewer, *6<sup>th</sup> Conference on Geotechnical Engineering Case Histories*, Arlington, VA, August 11-16, 2008.
- Reviewer, “The Challenge of Sustainability in the Geoenvironment,” *ASCE Geo-Institute GeoCongress 2008*, New Orleans, LA, March 9-12, 2008.

### **Other Major Professional Activities**

- Board Member, International Society for Soil Mechanics and Geotechnical Engineering, May 2022-current.
- Steering Committee member, Geotechnical Engineering Extreme Event Reconnaissance (GEER), April 2021-current.
- Chair (2015-2021), Vice-Chair (2011-2014) & Member (2006-2010, 2022-present), Geoenvironmental Engineering Technical Committee, *ASCE Geo-Institute*, 2006-present.
- Member, International Advisory Council, *ASCE Geo-Institute*, 2013-present.
- Chair, Board-Level Committee on Innovation and Development, *International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)*, 2009-2022.
- Member, Environmental Geotechnics Technical Committee (TC 215), *International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)*, 2011-present.
- Board Member, Hellenic Geosynthetics Society, 6/2016-2019
- Member, Selection committee, Research Projects on Field Experimentation for the “10 year NEES retrospective volume”, 2013.
- Member, Website Development Task Force, *ASCE Geo-Institute*, 2010-2012.
- Member, Student Participation Committee, *ASCE Geo-Institute*, 2008-2009.

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- Chair, Steering Committee, *Berkeley Geoengineering Alumni Association*, 2006-2008.
- Member, Steering Committee, *ASCE San Francisco Section Geotechnical Group*, 2004-2008.

### University Service

UC: University, College or Campus service; CEE: CEE Department service; GeoT: Geotechnical Program

- Vice Chair, (CEE) Civil and Environmental Engineering Department, Strategic Planning and Implementation, 8/2023-present
- Member, Committee on Research (UC), 8/2022- present
- Chair, Strategic Committee (CEE), (member: 8/2020-12/2021), 1/2022- 12/2022
- Faculty Search Committee Member (CEE), Engineering for Sustainability and Resilience Position, 8/2020-4/2021.
- Member, Faculty Ally for Diversity (UC), Rackham Graduate School, 9/2010-12/2020.
- Group Leader, Civil Infrastructure Systems Engineering (CISE) Group, (CEE), 9/2017-12/2020.
- Chair (CEE), Strategic Planning Committee, (CEE), 9/2017-8/2019
- Co-director, University of Michigan Geotechnical Engineering Laboratories (GeoT), 2008-2019
- Director, University of Michigan, Geoenvironmental Engineering Laboratory (GeoT), 2010-2019
- Member, Tenure Committee for Krista Wigginton, (CEE), 8/2018-5/2019
- Faculty Advisor, Geo-Institute Graduate Student Organization (CEE), 8/2018-12/2019
- Faculty Reviewer (UC), Dow Sustainability Fellows Doctoral program, 2019
- Faculty Reviewer (UC), 2017-2018, Rackham Merit Fellowships (RMF) Selection Committee for Rackham School
- Faculty Reviewer (UC), Transformative grants for Rackham Sustainability Institute, 2018
- Member (CEE), Facilities Committee, 9/2017-6/2018
- Member, Safety Committee (CEE), 9/2012-6/2017
- Faculty Reviewer (UC), Dow Sustainability Fellows Doctoral program, 2017
- Chair (CEE), Laboratory Staff Search Committee, 2/2017-8/2017.
- Chair (CEE), Laboratory Staff Strategic Hiring Task Force, 11/2016-2/2017
- Chair, Information Technology Committee (CEE), 9/2014-6/2017.
- Elected Member, Executive Committee (CEE), 9/2014-8/2016.
- Member, President Schlissel's Committee on Landfill Waste Reduction, (UM), 09/2014-06/2015
- Member, Strategic Implementation Committee (CEE), 9/2013-8/2015
- Member, Casebook Committee for Glen Daigger's candidacy as Professor of Practice (CEE), 11/2014-1/2015
- Judge, Richard and Eleanor Towner Prize for Outstanding Ph.D. Research Award (College), Fall 2015.
- Faculty Reviewer (UC), 2015 NextProf Workshop, Summer 2015.
- Faculty Reviewer (UC), 2014 NextProf Workshop, Summer 2014.
- Faculty Search Committee (CEE) on Water-Geo-Energy Systems, 9/2013-4/2014, member.
- Curriculum Committee (CEE) 9/2011-8/2012, member.
- Faculty Search Committee (CEE) on Resilient Infrastructure Systems, 9/2011-6/2012, member.
- Faculty Search Committee (CEE) on Environmental Systems Engineering, 9/2011-6/2012, member.
- ABET Accreditation Committee (CEE), 1/2011-9/2011, member.
- MS Student Admissions (GeoT), 2010-2011.
- Operating Budget Committee (CEE), 9/2009-5/2011, member.
- Information Technology Committee (CEE), 9/2008-8/2014, member.
- Strategic Research Faculty Committee (CEE), 2/2008-3/2008, member.
- Departmental Visitation Committee (CEE), 01/2008-3/2008, member.

### INVITED LECTURES

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#### Invited Presentations at Conferences or Symposia (without paper)

1. Revolutionizing Geotechnical Engineering Practice Through Automation, CalGeo Annual Conference, April 3-5-2024, Hawaii.
2. Unmanned Aerial Vehicles for Surface and Subsurface Characterization Following Natural Disasters, 72<sup>nd</sup> Annual Geotechnical Engineering Conference, February 22-23 2024. University of Minnesota.

3. An Integrated monitoring and computational modeling Framework for community resiliency against landslides, Keynote Lecture #3 in Emerging and Disruptive Technologies to Enhance Disaster Resilience, NATO Advanced Research Workshop, 23-24 October, 2023.
4. Revolutionizing Geotechnical Engineering Practice through Autonomy, International Conference on Advances in Structural and Geotechnical Engineering, March 8 2023, Hurghada, Egypt.
5. Towards Community-Scale Landslide Resiliency: From 3D Mapping & Modeling of past Natural Disasters to Preparing for Future Disasters, 2nd International Conference on ACE Forensic Engineering, Korea University, January 10 2023 (online).
6. Multi-Scale Monitoring of Landslides Using Satellites, UAVs and On-The-Ground Deployment Following Natural Disasters: The example of Lefkada 2015 Earthquake, 54th Annual Geotechnical Engineering Conference, Kansas University, November 10 2022
7. Autonomy is Revolutionizing Geotechnical Engineering, Powerful Informative Talks, 20th International Conference on Soil Mechanics and Geotechnical Engineering, May 1-5 2022, Sydney, Australia.
8. Big Data Frameworks to Enhance Community Resiliency Against Landslides, International Conference on Natural Hazard and Infrastructure, Athens, July 5-7 2022 (keynote).
9. Technology and Automation Revolutionizing Geoprofessional Practice, Geoprofessional Business Association Spring Conference, San Diego, April 9 2022.
10. Application of Multi-scale monitoring of landslides using satellites, UAVs and on-the-ground deployment following natural disasters: The example of Lefkada 2015 earthquake” 1st US-Korea Workshop: Urban geotechnical engineering and geohazard, March 20 2022, Charlotte, NC.
11. "The January 28 2021 Highway CA-1 Embankment Failure at Rat Creek, Big Sur, California", Geo-Extreme, Savannah, Georgia, November 7-10 2021 (keynote Presentation)
12. Moving on From Waste Containment to Energy Harvesting, October 28 2021, GeoWeek, 3<sup>rd</sup> Congresso Internacional de Engenharia Geotecnica (online)
13. Coupled process modeling for energy generation from municipal solid waste degradation: Laboratory-scale and field-scale simulations, 3<sup>rd</sup> International Symposium on Coupled Phenomena in Environmental Geotechnics, 20-21 October 2021, Kyoto, Japan.
14. Emerging Applications of Unmanned Aerial Vehicles in Geotechnical Engineering Practice, Arizona Geo-Institute Southwest Symposium: Advancements in Geotechnics, September 22, 2020
15. Using Big Data to Learn more about Landslides Caused by Natural Disasters, Geo-PIT: Powerful, Informative Talks on Geotechnical Topics ASCE Virtual Conference , Sep. 14-18 2020.
16. Integrated Satellite, UAV and ground-based assessment of landslides following the November 17 2015 Mw 6.5 earthquake in Lefkada, Greece, International Conference on Geotechnical Engineering, ICGE'20, Hammamet, Tunisia, March 8-10 2020.
17. “Applications of Robotics in Geotechnical Engineering”, 8<sup>th</sup> Hellenic Conference in Geotechnical Engineering, 6-8 November 2019, Athens, Greece.
18. “Use of Unmanned Aerial Vehicles for the Characterization of Ground Instability”, Workshop on Urban Geotechnics, Geotechnical Society of Singapore. March 11 2019, Singapore.
19. “Recent Advances on Municipal Solid Waste Properties, Degradation and Implications in Design”, 19<sup>th</sup> Annual Michigan Solid Waste Conference, April 11-12 2018, Lansing, MI.
20. “Applications of Aerial and Land-Based Robotic Platforms in Landfills”, 19<sup>th</sup> Annual Michigan Solid Waste Conference, April 11-12 2018, Lansing, MI.
21. Opportunities for professional networking through GeoWorld, Geotechnical Women Faculty Network Workshop, April 11 2017, Washington DC.
22. ISSMGE Innovations for a cyber-interconnected Geo-profession" Monday February 15 2016, “Geo-Structures 2016: Phoenix, AR.
23. “Ground Improvement Technologies in Landfill Engineering”, 24<sup>th</sup> Annual Solid Waste Technical Conference, Lansing, MI, March 17-18 2014.
24. “Experimental Evidence of Anisotropy in Municipal Solid Waste,” *Proc., Coupled Phenomena in Environmental Geotechnics, Politecnico di Torino*, Torino, Italy, July 1-3, 2013 (invited keynote presentation).
25. “Case Histories of Geological, Rock and Mining Engineering, Underground Structures and Excavations – General Report for Session 5.” *Seventh International Conference on Case Histories in Geotechnical Engineering*, April 29-May 4, 2013, Chicago, IL.
26. “From Waste Containment to Energy Harvesting: Ongoing Research.” *Texas A&M University International Geotechnical Engineering Symposium in Honor of ISSMGE Board Members*, April 26, 2013, College Station TX.
27. “Life after Graduation in Industry and Academia.” *Student Symposium, Network for Earthquake Engineering Simulation (NEES) & Multidisciplinary Center for Earthquake Engineering Research MCEER Annual Meeting: Quake Summit 2011*, Buffalo, NY, June 9, 2011.

28. "Use of Case Histories and Technology in Geotechnical Engineering Education," *6th Hellenic Geotechnical and Geoenvironmental Engineering Conference*, September 27-30, 2010, Volos, Greece.
29. "Engineering Considerations for Post-Closure Development of Landfills." *21st Annual Solid Waste Conference*, Michigan Solid Waste Industries Association and Engineering Society of Detroit April 10-11, 2011, Lansing, MI.
30. "Stability of Municipal Solid Waste Landfills: Fundamentals and Recent Advances." *20th Annual Solid Waste Conference*, Michigan Solid Waste Industries Association and Engineering Society of Detroit, March 23-24, 2010, Lansing, MI.
31. "Engineering Seismology, Ground Motions, & Local Site Effects: General Report on Session 3." *5th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*, May 24-29, 2010, San Diego, CA.
32. "Geological, Rock and Mining Engineering, Including Underground Structures and Excavations, and Subsidence of Deltas – General Report for Sessions 6a and 6b." *6th International Conference on Case Histories in Geotechnical Engineering*, August 11-16, 2007, Arlington, VA.

Seminars or Invited Lectures at Institutions, Organizations & Professional Meetings

1. "Fundamentals of Dynamic Properties of Soils and Testing", 21st Jennings Lecturer, South African Institution of Civil Engineers, Geotechnical Division, Johannesburg, October 15 2024, October 16 2024, Durban, October 17 2024, Cape Town, South Africa.
2. "Seismic Performance of Ports during the 2014 Cephalonia Earthquake: reconnaissance, field testing and numerical modelling", 14th Annual GZA Lecturer, ASCE Metropolitan Section Geo-Institute Chapter, New York, February 15 2024.
3. "Unmanned Aerial Vehicles for Surface and Subsurface Characterization Following Natural Disasters", 2<sup>nd</sup> Joint Workshop, Korean Geotechnical Society and ASCE Geo-Institute. August 9 2024.
4. "Towards Community-Scale Landslide Resiliency: From Integrated Monitoring & Modeling of Past Natural Disasters to Preparing for Future Disasters", Northwestern University, Department of Civil and Environmental Engineering, January 10 2024.
5. "Numerical Assessment of Rammed Aggregate Pier Performance under Dynamic Loading in Liquefiable Soils", Geopier technical workshop, Oakland, CA, November 1st 2023, Los Angeles, CA, November 16th 2023, Los Angeles, CA, October 24th 2024.
6. "UAS-enabled 4D Monitoring & Modeling of a coastline subjected to earthquakes and storms", panel presentation at UAS Applications for Infrastructure Health Monitoring and Geotechnical Asset Management – Geocongress 2023, April 3 2023.
7. "Applications of Autonomy in Geotechnical Engineering", May 20 2023, Aristotle University, Thessaloniki, Greece.
8. "The 2021 Hwy-1 Embankment Failure at Rat Creek, Big Sur, CA & Lessons Learned", Geo-Institute Live Event, Geocongress 2023 Preview Event, February 21, 2023 (online).
9. "Development of Regional Co-seismic Landslide Inventories and Predictive Models: The Example of the 2015 Lefkada, Greece, Earthquake", Association of Environmental & Engineering Geologists, & San Francisco Bay Area Chapter & San Francisco Geo-Institute, October 11 2022.
10. "The 2021 Hwy-1 Embankment Failure at Rat Creek in Big Sur & Lessons Learned", August 18 2022, Caltrans
11. "Waste Settlement Measurements using Unmanned Aerial Vehicles on MSW Landfills", June 9 2022, Fabricated Geomembrane Institute.
12. "The 2021 Hwy-1 Embankment Failure at Rat Creek, Big Sur, CA & Lessons Learned", June 8 2022, Vancouver geotechnical society
13. "Towards Community-level Co-Seismic Landslide Resiliency: The Case of the 2015 Lefkada Earthquake", March 3 2022, UC Davis Geotechnical Seminar Series.
14. "Emerging Opportunities from Autonomous Multi-Scale Monitoring and Assessment of Geo-Infrastructure", National Academies Fall Meeting of the Committee on Geological and Geotechnical Engineering, October 14 2021.
15. "Integrated Satellite, UAV and ground-based assessment of landslides: The 2015 Mw 6.5 Lefkada earthquake in Greece", Berkeley-San Francisco Geo-Institute Distinguished Lecture Series, May 7 2021.
16. "Emerging Applications of Unmanned Aerial Vehicles in Geotechnical Engineering Practice", ASCE Florida Section, West Coast Chapter, May 13 2021.
17. "Integrated Satellite, UAV and ground-based assessment & back-calculation of landslides in Lefkada, Greece, following the November 17 2015 Mw 6.5 earthquake", November 17 2020, UCLA Civil and Environmental Engineering Guest Seminar Speaker.
18. "Emerging Applications of Unmanned Aerial Vehicles in Geotechnical Engineering Practice", San Francisco Geo-Institute Chapter, January 23 2020.

## **Dimitrios Zekkos, Ph.D., P.E.**

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19. "Characterization of large populations of landslides caused by earthquakes: The example of the November 17th 2015 Mw 6.5 earthquake in Lefkada, Greece", January 21 2020 Bentley (virtually).
20. "Multi-Scale Assessment of Landsliding caused by earthquakes", NASA GSFC Disaster Working Group, May 23 2019 (with Marin Clark).
21. "Recent Advances in Infrastructure and Geosystems Resiliency empowered by Autonomy", University of California at Berkeley, April 29 2019.
22. "Applications of Unmanned Aerial Vehicles for Infrastructure and Geosystem Resiliency", Nanyang Technological University, NTU-JTC Industrial Infrastructure Innovation Centre, March 12 2019.
23. "Applications of Aerial and Land-Based Robotic Platforms in Landfills." CTI Associates, Novi, August 29 2018.
24. "Robot-enabled Research Efforts to Promote Resiliency and Sustainability of Geo-Systems." Department of Earth and Environmental Science, University of Michigan, January 27 2017.
25. "Evaluation of the mechanical properties of Municipal Solid Waste." Hellenic Society for Soil Mechanics and Geotechnical Engineering, June 15 2016, Athens.
26. "From Waste Containment to Energy Harvesting: Experimental Assessment of Coupled Physico-Biochemical & Mechanical Processes of Municipal Solid Waste Undergoing Biodegradation." February 19 2016, Department of Civil and Environmental Engineering, University of California at Berkeley.
27. "Seismic Characterization of Municipal Solid Waste Landfills," University of Illinois, Chicago, Civil and Materials Departmental Lecture, April 10, 2014.
28. "Recent Advances on the Dynamic Properties of Municipal Solid Waste," Queen's University and RMC Geoengineering Centre, Kingston, Canada, February 15, 2012.
29. "Stability of Municipal Solid Waste Landfills: Fundamentals and Recent Advances," Waste and Hazardous Materials Division, Michigan Department of Environmental Quality (MDEQ), Lansing, MI, June 17, 2010.
30. "Evaluation of Static and Dynamic Properties of Municipal Solid Waste," Department of Civil and Environmental Engineering, Texas A&M, College Station, TX, April 28, 2008.
31. "Evaluation of Static and Dynamic Properties of Municipal Solid Waste," Department of Civil and Environmental Engineering, University of Michigan, Ann Arbor, MI, April 7, 2008.
32. "Evaluation of Static and Dynamic Properties of Municipal Solid Waste," Department of Civil and Environmental Engineering, University of Washington, Seattle, WA, April 2, 2008.
33. "Evaluation of Static and Dynamic Properties of Municipal Solid Waste," Department of Structural Engineering, University of California, San Diego, CA, February 22, 2008.
34. "Evaluation of Static and Dynamic Properties of Municipal Solid Waste," ASCE-Geo-Institute Chapter of Texas A&M University, College Station, TX, November 14, 2006.
35. "Evaluation of Static and Dynamic Properties of Municipal Solid Waste," webinar presented to all offices of Geosyntec Consultants, June 30, 2006.
36. "Evaluation of Static and Dynamic Properties of Municipal Solid Waste," Berkeley Geoengineering Society, University of California at Berkeley, Berkeley, CA, September 7, 2005.
37. "Evaluation of Static and Dynamic Properties of Municipal Solid Waste," ASCE San Francisco Geotechnical Group, Oakland, CA, August 23, 2005.
38. "Recent Advances in the Properties of Municipal Solid Waste," Fugro West, Oakland, CA, July 11, 2005.

### **PROFESSIONAL REGISTRATIONS**

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- Licensed Civil Professional Engineer, California, USA (#71745) (since 2007)
- Licensed Civil Professional Engineer, Greece (#93932)
- Licensed Remote Pilot of Unmanned Aerial Vehicle, Federal Aviation Authority (# 3930747) (since 2016)

### **PROFESSIONAL MEMBERSHIP & AFFILIATIONS**

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- Geo-Institute of American Society of Civil Engineers, member
- Hellenic Society for Soil Mechanics and Geotechnical Engineering, member
- International Society for Soil Mechanics and Geotechnical Engineering, member
- Earthquake Engineering Research Institute, member
- American Rock Mechanics Association (ARMA), lifetime member
- International Society for Rock Mechanics (ISRM), lifetime member