

# BRETT W. MAURER

## *Curriculum Vitae*

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## EDUCATIONAL HISTORY

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Virginia Tech, Blacksburg, Virginia USA

PhD, Civil Engineering

September, 2016

Dissertation Title: Moving Towards an Improved Liquefaction Hazard Framework: Lessons Resulting From the 2010-2011 Canterbury, New Zealand, Earthquake Sequence

Syracuse University, Syracuse, New York USA

MS, Civil Engineering

May, 2011

Thesis Title: Flocculation and Filtration in the Geotextile Tube Environment

Syracuse University, Syracuse, New York USA

BS, Civil Engineering, *summa cum laude*

May, 2009

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## ACADEMIC APPOINTMENTS

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University of Washington

Seattle, Washington USA

Department of Civil and Environmental Engineering

Associate Professor, September 2024 – Present

University of Washington

Seattle, Washington USA

Department of Civil and Environmental Engineering

Assistant Professor, January 2017 – August 2023

Virginia Tech

Blacksburg, Virginia USA

Department of Civil and Environmental Engineering

Instructor and Research/Teaching Assistant, August 2011 – December 2016

Syracuse University

Syracuse, New York USA

Department of Civil and Environmental Engineering

Research Assistant and Teaching Assistant, August 2007 – July 2011

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## AWARDS AND HONORS

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- **Earthquake Spectra Outstanding Paper of the Year Award**, *EERI*, 2023
- **Outstanding Teaching Award**, *UW Civil & Environmental Eng.*, 2022
- **Arthur Casagrande Award**, *ASCE Geo-Institute*, 2022
- **Outstanding Dataset Award**, *NSF DesignSafe Cyber Infrastructure*, 2021
- **Early Career Researcher Award**, *US Council on Geotech. Education and Research*, 2020
- **Outstanding Young Alumnus Award**, *Virginia Tech Civil & Environmental Eng.*, 2020
- **FACET Award** (Appreciation for Career Education & Training), *UW College of Eng.*, 2020
- **Outstanding Teaching Award**, *UW Civil & Environmental Eng.*, 2018
- **CAREER Award**, *National Science Foundation*, 2018
- **U.S. Delegate**, 6<sup>th</sup> Intl Young Geotechnical Engineers Conference, *ASCE Geo-Institute*, 2017
- **Norman Medal**, *ASCE*, 2016
- **Graduate Fellow in Earthquake Hazard Reduction**, *EERI & FEMA NEHRP*, 2015
- **Best Graduate Student Presentation**, *SSA Eastern Section*, 2015
- **Best Graduate Student Presentation**, *SSA Eastern Section*, 2014
- **1<sup>st</sup> Place**, Graduate Student Paper Competition, *EERI*, 2014
- **1<sup>st</sup> Place**, GeoCongress Student Poster Competition, *ASCE Geo-Institute*, 2014
- **1<sup>st</sup> Place**, GeoCongress Student Poster Competition, *ASCE Geo-Institute*, 2013
- **EAPSI Fellow**, *National Science Foundation*, 2012
- **Via Fellow**, *Virginia Tech*, 2011-2016
- **Outstanding Teaching Assistant Award**, *Syracuse University*, 2011
- **Outstanding Achievement Award in Graduate Study**, *Syracuse University*, 2011
- **1<sup>st</sup> Place**, Nunan Graduate Research Symposium, *Syracuse University*, 2011
- **Industry Advancement Scholar**, *Intl Association of Foundation Drilling (ADSC)*, 2009
- **Golden Transit Award**, *Syracuse University*, 2006
- **Chancellors Scholar**, *Syracuse University*, 2005-2009

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## PUBLICATIONS

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<sup>1</sup> Graduate student or post-doc advised or co-advised by Maurer

IF: Impact factor reported by journal, as of August 2022

Citation statistics based on Google Scholar, as of April 2023

**Summary Statistics: Total Citations 1,545; i10-Index 35; H-index 20**

### Journal Papers – Submitted

1. Rasanen<sup>1</sup>, R.A., Grant, A., Makdisi, A.J., Maurer, B.W., and Wirth, E. (*Submitted*). “Implications of physics-based M9 ground motions on liquefaction-induced damage in the Cascadia Subduction Zone: looking forward and backward.” *Engineering Geology*, Elsevier Publishing. [IF: 6.902]

### Journal Papers – In Print or In Press:

2. Maurer, B.W. and Sanger<sup>1</sup>, M.D. (2023). “Why ‘AI’ Models for Predicting Liquefaction have been Ignored, plus some that Shouldn’t Be.” *Earthquake Spectra*, In Press, Sage. **(2023 Earthquake Spectra Outstanding Paper of the Year Award)** [IF: 4.330]
3. Rasanen<sup>1</sup>, R.A., Geyin, M., and Maurer, B.W. (2023). “Select Liquefaction Case Histories from the 2001 Nisqually, Washington Earthquake: A Digital Dataset and Assessment of Model Performance.” *Earthquake Spectra*, In Press [IF: 4.330]
4. Geyin<sup>1</sup>, M., and Maurer, B.W. (2023). “U.S. National  $V_{S30}$  Models and Maps Informed by Remote Sensing and Machine Learning.” *Seismological Research Letters*, Seismological Society of America. doi: 10.1785/0220220181 [IF: 4.288]
5. Rasanen<sup>1</sup>, R.A. and Maurer, B.W. (2022). “Probabilistic Seismic Source Inversion of the 1886 Charleston, South Carolina, Earthquake from Macroseismic Evidence: A Major Updating.” *Engineering Geology*, 312: 106958, Elsevier. [IF: 6.902]
6. Upadhyaya<sup>1</sup>, S., Green, R.A., Rodriguez-Marek, A., and Maurer, B.M. (2022). “True Liquefaction Triggering Curve.” *Journal of Geotechnical and Geoenvironmental Engineering*, 149(3), 04023005, American Society of Civil Engineers. [IF: 4.012]
7. Geyin<sup>1</sup>, M., Maurer, B.W., and Christofferson, K. (2022). “An AI driven, mechanistically-grounded geospatial liquefaction model for rapid response and scenario planning.” *Soil Dynamics and Earthquake Engineering*, 159: 107348, Elsevier. [IF: 4.250; 4 Citations]
8. Upadhyaya<sup>1</sup>, S., Maurer, B.M., Green, R.A., Rodriguez-Marek, A., and van Ballegooy, S. (2022). “Surficial liquefaction manifestation severity thresholds for profiles having high fines-content, high plasticity soils.” *Canadian Geotechnical Journal*, In Press [IF: 4.167; 1 Citations]
9. Rateria<sup>1</sup>, G. and Maurer, B.W. (2022). “Evaluation and updating of Ishihara’s (1985) model for liquefaction surface expression, with insights from machine and deep learning.” *Soils and Foundations*, 62: 101131, Elsevier. [IF: 3.098; 1 Citations]
10. Rasanen<sup>1</sup>, R., and Maurer, B.W. (2022). “Probabilistic seismic source location and magnitude via inverse analysis of liquefaction evidence.” *Earthquake Spectra*, 38(2): 1499-1528, Sage. [IF: 4.330; 3 Citations]
11. Bullock, Z., Dashti, S., Liel, A.B., Porter, K.A., and Maurer, B.W. (2022). “Probabilistic liquefaction triggering and manifestation models based on cumulative absolute velocity.” *Journal of Geotechnical and Geoenvironmental Engineering*, 148(3): 04021196, American Society of Civil Engineers. [IF: 4.012; 3 Citations]
12. Upadhyaya<sup>1</sup>, S., Green, R.A., Maurer, B.M., Rodriguez-Marek, A., and van Ballegooy, S. (2022). “Limitations of surface liquefaction manifestation severity index models used in conjunction with simplified stress-based triggering models.” *Journal of Geotechnical and Geoenvironmental Engineering*, 148(3): 04021194, American Society of Civil Engineers. [IF: 4.012; 5 Citations]
13. Rasanen<sup>1</sup>, R.A. and Maurer, B.W. (2021). “Probabilistic seismic source inversion from regional landslide evidence.” *Landslides*, 19: 407-409, Springer. [IF: 6.578; 1 Citation]
14. Geyin<sup>1</sup>, M. and Maurer, B.W. (2021). “Evaluation of a cone penetration test thin-layer correction procedure in the context of liquefaction model performance.” *Engineering Geology*, 291: 10622, Elsevier Publishing. [IF: 6.902; 2 Citations]

15. Rasanen<sup>1</sup>, R., Marafi<sup>1</sup>, N., and Maurer, B.W. (2021). "Compilation and forecasting of paleoliquefaction evidence for the strength of ground motions in the U.S. Pacific Northwest." *Engineering Geology*, 292: 106253, Elsevier Publishing. [IF: 6.902; 1 Citation]
16. Yost, K.M., Green, R.A., Upadhyaya<sup>1</sup>, S., Maurer, B.W., Yerro-Colom, A., Martin, E.R., and Cooper, J. (2021). "Assessment of the efficacies of correction procedures for multiple thin layer effects on cone penetration tests." *Soil Dynamics and Earthquake Engineering*, 144: 106677, Elsevier Publishing. [IF: 4.250; 10 Citations]
17. Geyin<sup>1</sup>, M., Maurer, B.W., Bradley, B.A., Green, R.A., and van Ballegooy, S. (2021). "CPT-based liquefaction case histories compiled from three earthquakes in Canterbury, New Zealand." *Earthquake Spectra*, 37(4): 2920-2945, Earthquake Engineering Research Institute. [IF: 4.330; 12 Citations]
18. Marafi<sup>1</sup>, N., Grant, A., Maurer, B.W., Rateria<sup>1</sup>, G., Eberhard, M., and Berman, J. (2021). "A generic soil velocity model that accounts for near-surface conditions and deeper geologic structure." *Soil Dynamics and Earthquake Engineering*, 140: 106461, Elsevier Publishing. [IF: 4.250; 3 Citations]
19. Upadhyaya<sup>1</sup>, S., Maurer, B.W., Green, R.A., and Rodriguez-Marek, A. (2021). "Selecting optimal factor of safety and probability of liquefaction triggering thresholds for engineering projects based on misprediction costs." *Journal of Geotechnical and Geoenvironmental Engineering*, 147(6): 04021026, American Society of Civil Engineers. [IF: 4.012; 5 Citations]
20. Geyin<sup>1</sup>, M. and Maurer, B.W. (2020). "Fragility functions for liquefaction-induced ground failure." *Journal of Geotechnical and Geoenvironmental Engineering*, 146(12): 04020142, American Society of Civil Engineers. [IF: 4.012; 17 Citations]
21. Geyin<sup>1</sup>, M., Baird<sup>1</sup>, A.J., and Maurer, B.W. (2020). "Field assessment of liquefaction prediction models based on geotechnical vs. geospatial data, with lessons for each." *Earthquake Spectra*, 36(3): 1386–1411, Earthquake Engineering Research Institute. [IF: 4.330; 19 Citations]
22. Green, R.A., Bommer, J.J., Stafford, P.J., Maurer, B.W., Kruiver, P.P., Edwards, B., Rodriguez-Marek, A., de Lange, G., Oates, S.J., Storck, T., Omid, P., Bourne, S.J., and van Elk, J.F. (2020). "Liquefaction hazard of the Groningen region of the Netherlands due to induced seismicity." *Journal of Geotechnical and Geoenvironmental Engineering*, 146(8): 04020068, American Society of Civil Engineers. [IF: 4.012; 10 Citations]
23. Maurer, B.W., Green, R.A., Wotherspoon, L., and Bastin, S. (2019). "The stratigraphy of compound sand blows at sites of recurrent liquefaction during the 2010-2011 Canterbury, New Zealand, earthquake sequence: implications for paleoseismicity studies." *Earthquake Spectra*, 35(3), 1421-1440, Earthquake Engineering Research Institute. [IF: 4.330; 5 Citations]
24. Maurer, B.W., Green, R.A., van Ballegooy, S., and Wotherspoon, L. (2019). "Development of region-specific soil behavior type index correlations for evaluating liquefaction hazard in Christchurch, New Zealand." *Soil Dynamics and Earthquake Engineering*, 117: 96-105, Elsevier Publishing. [IF: 4.250; 45 Citations]
25. Green, R.A., Bommer, J.J., Rodriguez-Marek, A., Maurer, B.W., Stafford, P.J., Edwards, B., Kruiver, P.P., de Lange, G., and van Elk, J. (2019). "Addressing limitations in existing 'simplified' liquefaction triggering evaluation procedures: application to induced seismicity in the Groningen gas field." *Bulletin of Earthquake Engineering*, 17: 4539–4557, Springer. [IF: 4.556; 44 Citations]

26. Bastin, S., Bassett, K., Quigley, M.C., Maurer, B.W., Green, R.A., Bradley, B.A., and Jacobson, D. (2016). "Late Holocene liquefaction at sites of contemporary liquefaction during the 2010-2011 Canterbury Earthquake Sequence." *Bulletin of the Seismological Society of America* 106(3): 881-903, Seismological Society of America. [IF: 3.140; 18 Citations]
27. Maurer, B.W., Green, R.A., Cubrinovski, M., and Bradley, B. (2015). "Assessment of CPT-based methods for liquefaction evaluation in a liquefaction potential index framework." *Géotechnique* 65(5): 328-336, Institution of Civil Engineers. [IF: 5.554; 63 Citations]
28. Maurer, B.W., Green, R.A., Quigley, M.C., and Bastin, S. (2015). "Development of magnitude-bound relations for paleoliquefaction analyses: New Zealand case study." *Engineering Geology* 197: 253-266, Elsevier Publishing. [IF: 6.902; 22 Citations]
29. Maurer, B.W., Green, R.A., Cubrinovski, M., and Bradley, B. A. (2015). "Fines-content effects on liquefaction hazard evaluation for infrastructure during the 2010-2011 Canterbury, New Zealand earthquake sequence." *Soil Dynamics and Earthquake Engineering* 76: 58-68, Elsevier Publishing. [IF: 4.250; 64 Citations]
30. Maurer, B.W., Green, R.A., and Taylor, O.S. (2015). "Moving towards an improved index for assessing liquefaction hazard: lessons from historical data." *Soils and Foundations* 55(4): 778-787, Elsevier Publishing. [IF: 3.098; 85 Citations]
31. Van Ballegooy, S., Green, R.A., Lees, J., Wentz, F., and Maurer, B.W. (2015). "Assessment of various CPT based liquefaction severity index frameworks relative to the Ishihara (1985) H<sub>1</sub>-H<sub>2</sub> boundary curves." *Soil Dynamics and Earthquake Engineering* 79: 347-364, Elsevier Publishing. [IF: 4.250; 38 Citations]
32. Green, R.A., Lasley, S., Carter, M.W., Munsey, J.W., Maurer, B.W., and Tuttle, M.P. (2014). "Geotechnical aspects in the epicentral region of the 2011 M<sub>w</sub>5.8 Mineral, Virginia, earthquake." *The 2011 Mineral, Virginia, Earthquake and Its Significance for Seismic Hazards in Eastern North America (J.W. Horton, M.C. Chapman, and R.A. Green, eds.)*, GSA Special Paper 509: 151-172, Geological Society of America. [7 Citations]
33. Maurer, B.W., Green, R.A., Cubrinovski, M., and Bradley, B.A. (2014). "Evaluation of the liquefaction potential index for assessing liquefaction hazard in Christchurch, New Zealand." *Journal of Geotechnical and Geoenvironmental Engineering* 140(7), 04014032, American Society of Civil Engineers. **(2016 ASCE Norman Medal)** [IF: 4.012; 155 Citations]
34. Green, R.A., Cubrinovski, M., Cox, B., Wood, C., Wotherspoon, L., Bradley, B., and Maurer, B.W. (2014). "Select liquefaction case histories from the 2010-2011 Canterbury earthquake sequence." *Earthquake Spectra* 30(1): 131-153, Earthquake Engineering Research Institute. [IF: 4.330; 121 Citations]
35. Maurer, B.W., Gustafson, A.C., Bhatia, S.K., and Palomino, A.M. (2012). "Geotextile dewatering of flocculated, fiber reinforced fly-ash slurry." *Fuel* 97: 411-417, Elsevier Publishing. [IF: 8.035; 36 Citations]
36. Khachan, M., Bhatia, S.K., Maurer, B.W., and Gustafson, A.C. (2012). "Dewatering and utilization of fly ash slurries using geotextile tubes." *Indian Geotechnical Journal* 42(3): 194-205, Springer. [IF: 1.490; 15 Citations]

#### **Conference and Other Non-Journal Papers – Fully Refereed**

\*Bold font denotes conference speaker, where applicable

1. Sanger, M.D. and Maurer, B.W. (2023). “Meet Geo P. Tech, AI Chatbot Geotechnical Engineer: How AI Language Models Like “ChatGPT” Could Change the Profession” *Geostrata* 27(3): 54-61, ASCE Geo-Institute. (Refereed Trade Publication Article)
2. Geyin,<sup>1</sup> M., Yu<sup>1</sup>, Q., and **Maurer, B.W.** (2022). “A Preliminary US national  $V_{S30}$  model and map informed by remote sensing and artificial intelligence.” *Proceedings of the 12th National Conference on Earthquake Engineering*, Earthquake Engineering Research Institute, Salt Lake City, UT. 2022. (Short Conference Paper) [0 Citations]
3. Cary, J.R., **Stuedlein, A.W.**, McGann, C.R., Bradley, B.A., and Maurer, B.W. (2022). “Effect of Refinements to Liquefaction Triggering Procedures on CPT-based Liquefaction Severity Indices at the Avondale Playground Site, Christchurch, NZ.” *4th International Conference on Performance-based Design in Earthquake Geotechnical Engineering (PBD-IV)*; Beijing China. (Full Conference Paper) [1 Citations]
4. **Rasanen<sup>1</sup>, R.A.** and M., Maurer, B.W. (2022). “Seismic Source Parameters from Regional Paleoseismic Evidence.” *Geocongress 2022: Geophysical and Earthquake Engineering and Soil Dynamics (A Lemnitzer and A.W. Stuedlein, eds.)*, *Geotechnical Special Publication 334*: 411-420. American Society of Civil Engineers. (Full Conference Paper) [0 Citations]
5. **Geyin<sup>1</sup>, M.**, and Maurer, B.W. (2022). “An AI-Driven, Mechanistically Grounded Framework for Geospatial Modelling of Soil Liquefaction.” *Geocongress 2022: Geophysical and Earthquake Engineering and Soil Dynamics (A Lemnitzer and A.W. Stuedlein, eds.)*, *Geotechnical Special Publication 334*: 455-494. American Society of Civil Engineers. (Full Conference Paper) [0 Citations]
6. **Geyin<sup>1</sup>, M.**, Maurer, B.W., and van Ballegooy, S. (2020). “Lifecycle liquefaction hazard assessment and mitigation.” *Geocongress 2020: BioGeotechnics (E. Kavazanjian, J.P. Hambleton, R. Makhnenko, and A.S. Budge, eds.)*, *Geotechnical Special Publication 320*: 312-320. American Society of Civil Engineers. (Full Conference Paper) [1 Citation]
7. Upadhyaya<sup>1</sup>, S., **Green, R.A.**, Maurer, B.W., Rodriguez-Marek, A. (2019). “Selecting factor of safety against liquefaction for design based on cost considerations.” *7<sup>th</sup> International Conference on Earthquake Geotechnical Engineering*, 17-20 June, Rome, Italy. International Society of Soil Mechanics and Geotechnical Engineering. (Full Conference Paper) [4 Citations]
8. Upadhyaya<sup>1</sup>, S., **Green, R.A.**, Rodriguez-Marek, A., Maurer, B.W., Wotherspoon, L., Bradley, B.A., and Cubrinovski, M. (2019). “Influence of corrections to recorded peak ground accelerations due to liquefaction on predicted liquefaction response during the  $M_w$ 6.2, February 2011 Christchurch earthquake.” *13<sup>th</sup> Australia New Zealand Conference on Geomechanics*, 1-3 April, Perth, Australia. (Full Conference Paper) [8 Citations]
9. **Geyin<sup>1</sup>, M.**, and Maurer, B.W. (2019). “An analysis of liquefaction-induced free-field ground settlement using 1,000+ case-histories: observations vs. state-of-practice predictions.” *Geocongress 2019: Earthquake Engineering and Soil Dynamics (C.L. Meehan, S. Kumar, M.A. Pando, and J.T. Coe, eds.)*, *Geotechnical Special Publication 308*: 489-498. American Society of Civil Engineers. (Full Conference Paper) [11 Citations]
10. **Green, R.A.**, Bommer, J.J., Stafford, P.J., Maurer, B.W., Edwards, B., Kruiver, P.P., Rodriguez-Marek, A., de Lange, G., Oates, S.J., Storck, T., Omid, P., Bourne, S.J., and van Elk, J. (2018). “Liquefaction hazard due to induced seismicity: pilot study for the Groningen region of the Netherlands.” *30<sup>th</sup> Central Pennsylvania ASCE Geotechnical Conference*, 31 Oct – 2 Nov, Hershey, Pennsylvania. (Full Conference Paper) [0 Citations]

11. **Maurer, B.W.**, Bradley, B.A., and van Ballegooy, S. (2018). “Liquefaction hazard assessment: satellites vs. in-situ tests.” *Geotechnical Earthquake Engineering and Soil Dynamics V: Liquefaction Triggering, Consequences, and Mitigation* (S.J. Brandenberg and M.T. Manzari, eds.), *Geotechnical Special Publication 290*: 348-356. American Society of Civil Engineers. (Full Conference Paper) [4 Citations]
12. **Green, R.A.**, Maurer, B.W., and van Ballegooy, S. (2018). “The influence of the non-liquefied crust on the severity of surficial liquefaction manifestations: case history from the 2016 Valentine’s Day earthquake in New Zealand.” *Geotechnical Earthquake Engineering and Soil Dynamics V: Liquefaction Triggering, Consequences, and Mitigation* (S.J. Brandenberg and M.T. Manzari, eds.), *Geotechnical Special Publication 290*: 21-32. American Society of Civil Engineers. (Full Conference Paper) [13 Citations]
13. **Upadhyaya, S.**, Maurer, B.W., Green, R.A., and Rodriguez-Marek, A. (2018). “Effect of non-liquefiable soils on liquefaction potential index (LPI) performance.” *Geotechnical Earthquake Engineering and Soil Dynamics V: Liquefaction Triggering, Consequences, and Mitigation* (S.J. Brandenberg and M.T. Manzari, eds.), *Geotechnical Special Publication 290*: 191-198. American Society of Civil Engineers. (Full Conference Paper) [9 Citations]
14. **Bradley, B.A.**, Razafindrakoto, H. Maurer, B.W., Motha, J., Tarbali, L., and Lee, R. (2018). “Simulation-based ground motion prediction of historical and future New Zealand earthquakes and consequent geohazard impacts.” *Geotechnical Earthquake Engineering and Soil Dynamics V: Seismic Hazard Analysis, Earthquake Ground Motions, and Regional-Scale Assessment* (S.J. Brandenberg and M.T. Manzari, eds.), *Geotechnical Special Publication 291*: 29-42. American Society of Civil Engineers. (Full Conference Paper) [4 Citations]
15. **Maurer, B.W.** (2017). “Field testing liquefaction models based on geospatial vs. geotechnical data.” *6<sup>th</sup> International Young Geotechnical Engineers Conference: Unearth the Future, Connect Beyond*, Sept 16-17; Seoul, Korea. International Society of Soil Mechanics and Geotechnical Engineering. (Brief Conference Paper) [7 Citations]
16. **Green, R.A.**, Upadhyaya, S., Wood, C., Maurer, B.W., Cox, B.R., Wotherspoon, L., Bradley, B.A., and Cubrinovski, M. (2017). “Relative efficacy of CPT- versus Vs – based simplified liquefaction evaluation procedures.” *19<sup>th</sup> International Conference on Soil Mechanics and Geotechnical Engineering*, Sept 17-22; Seoul, Korea. (Full Conference Paper) [16 Citations]
17. **Maurer, B.W.**, van Ballegooy, S., and Bradley, B.A. (2017). “Fragility functions for performance-based damage assessment of soil liquefaction.” *Proceedings of the 3rd International Conference on Performance-based Design in Earthquake Geotechnical Engineering (PBD-III)*, July 16-19; Vancouver, Canada. (Full Conference Paper) [2 Citations]
18. Maurer, B.W., **Green, R.A.**, van Ballegooy, S., and Wotherspoon, L. (2017). “Assessing liquefaction susceptibility using the CPT soil behavior type index.” *Proceedings of the 3rd International Conference on Performance-based Design in Earthquake Geotechnical Engineering (PBD-III)*, July 16-19; Vancouver, Canada. (Full Conference Paper) [16 Citations]
19. **Maurer, B.W.**, Green, R.A., van Ballegooy, S., Bradley, B.A., and Upadhyaya, S. (2017). “Performance comparison of probabilistic and deterministic liquefaction triggering models for hazard assessment in 23 global earthquakes.” *Geo-Risk 2017: Reliability-based design and code developments* (J. Huang, G.A. Fenton, L. Zhang, and D.V. Griffiths, eds.), *Geotechnical Special Publication 283*: 31-42. American Society of Civil Engineers. (Full Conference Paper) [13 Citations]

20. **Green, R.A.** and Maurer, B.W. (2016). "Evaluating risk due to liquefaction: lessons learned from recent earthquakes and new developments." *First International Symposium on Soil Dynamics and Geotechnical Sustainability*, Aug 7-9; Hong Kong; Chinese Civil Engineering Society. (Brief Conference Paper) [0 Citations]
21. **Maurer, B.W.**, Green, R.A., Cubrinovski, M., and Bradley, B.A. (2015). "Calibrating the liquefaction severity number (LSN) for varying misprediction economies: a case study in Christchurch, New Zealand." *6<sup>th</sup> International Conference on Earthquake Geotechnical Engineering*, Nov 2-4; Christchurch, New Zealand; Paper No. 491. International Society of Soil Mechanics and Geotechnical Engineering. (Full Conference Paper) [16 Citations]
22. **Maurer, B.W.**, Green, R.A., Cubrinovski, M., and Bradley, B.A. (2015). "Investigating the influence of post-liquefaction strain potential on the accuracy of Liquefaction Severity Number (LSN) hazard assessments." *10<sup>th</sup> Pacific Conference on Earthquake Engineering*, Nov 6-8; Sydney, Australia; Paper No. 796. Australian Earthquake Engineering Society. (Full Conference Paper) [3 Citations]
23. **Green, R.A.**, Maurer, B.W., Cubrinovski, M., and Bradley, B.A. (2015). "Assessment of the relative predictive capabilities of CPT-based liquefaction evaluation procedures: Lessons learned from the 2010-2011 Canterbury earthquake sequence." *6<sup>th</sup> International Conference on Earthquake Geotechnical Engineering*, Nov 2-4; Christchurch, New Zealand; Paper No. 796. International Society of Soil Mechanics and Geotechnical Engineering. (Extended Keynote Conference Paper) [8 Citations]
24. **Maurer, B.W.**, Green, R.A., Cubrinovski, M., and Bradley, B.A. (2014). "Assessment of aging correction factors for liquefaction resistance at sites of recurrent liquefaction." *10<sup>th</sup> U.S. National Conference on Earthquake Engineering*, July 20-26, Anchorage, USA. Network for Earthquake Engineering Simulation (distributor). (Full Conference Paper) [19 Citations]
25. **Bhatia, S.K.**, Maurer, B.W., Khachan, M., Grzelak, M.D, and Pullen, T.S. (2013). "Performance indices for unidirectional flow conditions considering woven geotextiles and sediment slurries." *Sound Geotechnical Research to Practice: Honoring Robert D. Holtz II (A.W. Stuedlein and B.R. Christopher, eds.)*, *Geotechnical Special Publication 230*: 319-333. American Society of Civil Engineers. (Full Conference Paper) [12 Citations]
26. Maurer, B.W. and Bhatia, S.K. (2012). "Do flocc characteristics influence geotextile tube dewatering performance?" *Geosynthetics* 30(3): 46-49, Industrial Fabrics Association Int. (Refereed Trade Publication Article) [1 Citation]
27. **Grzelak, M.D.**, Maurer, B.W., Pullen, T.S., Bhatia, S.K., and Ramarao, B.V. (2011). "A comparison of test methods adopted for assessing geotextile tube dewatering performance." *Advances in Geotechnical Engineering (J. Han and D.A. Alzamora, eds.)*, *Geotechnical Special Publication 211*: 2141-2151. American Society of Civil Engineers. (Full Conference Paper) [21 Citations]
28. **Khachan, M.M.**, Bader, R.A., Bhatia, S.K., and Maurer, B.W. (2011). "Comparative dewatering performance of slurries conditioned with synthetic polymers vs. eco-friendly polymers." *Advances in Geotechnical Engineering (J. Han and D.A. Alzamora, eds.)*, *Geotechnical Special Publication 211*: 3050-3058. American Society of Civil Engineers. (Full Conference Paper) [17 Citations]
29. **Bhatia, S.K.** and Maurer, B.W. (2010). "Geotextile tube dewatering: a sustainable solution for sediment and waste dewatering." *6<sup>th</sup> International Conference on Environmental Geotechnics: Environmental Geotechnics for Sustainable Development*: 954-960; Nov 8-12; New Delhi,



India. International Society of Soil Mechanics and Geotechnical Engineering. (Full Conference Paper) [0 Citations]

### Conference and Other Non-Journal Publications – Refereed by Abstract Only

\*Bold font denotes conference speaker, where applicable

1. **Sanger, MD**, Geyin, M, and Maurer, B.W. (2024). “Geospatial Liquefaction: Using mechanics-informed AI and geospatial data for liquefaction hazard planning and response.” ASCE Geo-Congress, 25-28 Feb, Vancouver Canada, American Society of Civil Engineers. (National Poster Competition) **(3<sup>rd</sup> Place Poster Award)**
2. **Sanger, M.D.**, Geyin, M., and Maurer, B.M. (2023). “Navigating geohazards: AI-driven, near-real-time liquefaction predictions and insights for transportation networks.” U.S. National Highway Geology Symposium, 14-17 Aug, Tacoma, USA. (National Conference Poster Competition) **(1<sup>st</sup> Place Poster Award)**
3. **Maurer, B.W.** (2022). “CPT-based probabilistic prediction of liquefaction susceptibility.” *PEER Workshop on Liquefaction Susceptibility*, 8-9 Sept, Corvallis, USA. (Workshop Paper)
4. **Rasanen<sup>1</sup>, R.A.** and Maurer, B.W. (2022). “Probabilistic seismic source inversion via inverse-analysis of co-seismic landslide evidence.” *ASCE Geo-Congress*, 20-23 March, Charlotte, USA. American Society of Civil Engineers. (National Conference Poster Competition) **(2<sup>nd</sup> Place Poster Award)**
5. **Geyin<sup>1</sup>, M.**, Maurer, B.W., and van Ballegooy, S. (2020). “A pragmatic framework for cost-benefit analysis of liquefaction mitigation.” *ASCE Geo-Congress*, 25-28 March, Minneapolis, USA. American Society of Civil Engineers. (National Conference Poster Competition) **(1<sup>st</sup> Place Poster Award)**
6. **Rasanen<sup>1</sup>, R.A.** and Maurer, B.W. (2020). “Probabilistic earthquake source location and magnitude via inverse-analysis of liquefaction evidence.” *ASCE Geo-Congress*, 25-28 March, Minneapolis, USA. American Society of Civil Engineers. (National Conference Poster Competition) **(2<sup>nd</sup> Place Poster Award)**
7. **Geyin<sup>1</sup>, M.**, Baird<sup>1</sup>, A., and Maurer, B.W. (2019). “A performance-comparison of relatively simple and complex models for predicting soil liquefaction using 15,000+ case histories from 24 earthquakes.” *ASCE Geo-Congress*, 24-27 March, Philadelphia, USA, American Society of Civil Engineers. (National Conference Poster Competition) **(2<sup>nd</sup> Place Poster Award)**
8. **Geyin<sup>1</sup>, M.**, Maurer, B.W., and Baird<sup>1</sup>, A. (2019). “Liquefaction occurrence and consequence: select lessons and products recently emerging from the Canterbury, NZ, earthquakes.” *Annual Meeting of the Pacific Earthquake Engineering Research (PEER) Center*, Jan 17-18; Los Angeles, California. (Conference Poster)
9. Baird<sup>1</sup>, A., Geyin<sup>1</sup>, M., and **Maurer, B.W.** (2018). “On the relationship between geospatial liquefaction-model performance and quality of geospatial data: a case study of the 2010-2016 Canterbury earthquakes.” *New Zealand Centre for Earthquake Resilience (QuakeCoRE) Annual Meeting*, Sept 4-6; Taupo, New Zealand. (Conference Poster)
10. **Maurer, B.W.**, Bradley, B.A., and van Ballegooy, S. (2017). “Predicting liquefaction in near-real-time (NRT): an assessment of geospatial vs. geotechnical models during the Canterbury earthquakes.” *New Zealand Centre for Earthquake Resilience (QuakeCoRE) Annual Meeting*, Sept 3-6; Taupo, New Zealand. (Conference Poster)

11. Bradley, B.A., **Motha, J.**, Polak, V., Thompson, E., Wald, D., Maurer, B.W., and van Ballegooy, S. (2017). “Coupling ground motion simulation with regional modelling for rapid impact assessment.” *New Zealand Centre for Earthquake Resilience (QuakeCoRE) Annual Meeting*, Sept 3-6; Taupo, New Zealand. (Conference Poster)
12. **Maurer, B.W.**, van Ballegooy, S., and Bradley, B.A. (2017). “Probabilistic prediction of severity of liquefaction surface manifestation using geotechnical and geospatial models.” *Earthquake Engineering Research Institute 69<sup>th</sup> Annual Conference: The really big one, road to resilience.* March 7-10; Portland, Oregon. (Conference Poster)
13. Maurer, B.W. and Green, R.A. (2016). “Standardized, objective, and economy-focused performance assessment of liquefaction damage indices.” *United States - New Zealand – Japan Int. Workshop on Liquefaction-Induced Ground Movements Effects*, 2-4 Nov, Berkeley, USA. (Workshop Paper)
14. **Green, R.A.** and Maurer, B.W. (2016). “Use of volumetric strain in liquefaction damage index frameworks.” *United States - New Zealand – Japan Int. Workshop on Liquefaction-Induced Ground Movements Effects*, 2-4 Nov, Berkeley, USA. (Workshop Paper)
15. **Maurer, B.W.**, Green, R.A., Bradley, B., and Cubrinovski, M. (2014). “What new liquefaction can teach us about old earthquakes: evaluating the efficacy of paleoliquefaction analytics using modern analogs.” *ASCE Geo-Congress*, 23-26 Feb, Atlanta, USA, American Society of Civil Engineers. (National Poster Competition) **(1<sup>st</sup> Place Poster Award)**
16. **Maurer, B.W.**, Green, R.A., Cubrinovski, M., and Bradley, B. (2013). “Evaluation of the liquefaction potential index (LPI) for assessing liquefaction hazard: a case study in Christchurch, New Zealand.” *ASCE Geo-Congress*, 3-6 March, San Diego, USA, American Society of Civil Engineers. (National Poster Competition) **(1<sup>st</sup> Place Poster Award)**
17. **Maurer, B.W.** and Bhatia, S.K. (2011). “Flocculation and filtration in the geotextile tube environment.” *Annual Nunan Research Day and Poster Symposium*, 8 April 2011, Syracuse University. (University Poster Competition) **(1<sup>st</sup> Place Poster Award)**
18. **Maurer, B.W.** and Bhatia, S.K. (2010). “A comparison of test methods adopted for assessing geotextile tube dewatering performance.” *Annual Nunan Research Day and Poster Symposium*, 8 April, Syracuse University. (University Poster Competition)

### Software

1. Geyin<sup>1</sup>, M. and Maurer, B.W. (2021). “RapidLiq: Software for Near-Real-Time Prediction of Soil Liquefaction.” DesignSafe-CI. <https://doi.org/10.17603/ds2-4bka-y039>. (Software)
2. Geyin<sup>1</sup>, M. and Maurer, B.W. (2020). “Horizon: CPT-based liquefaction risk assessment and decision software (ver1).” DesignSafe-CI. <https://doi.org/10.17603/ds2-2fky-tm46>. (Software)

### Curated Datasets

1. Geyin<sup>1</sup>, M. and Maurer, B.W. (2022). “U.S. National  $V_{S30}$  Maps Informed by Remote Sensing and Machine Learning.” DesignSafe-CI. doi: 10.17603/ds2-80d8-9m83. (Curated Dataset)
2. Geyin<sup>1</sup>, M. and Maurer, B.W. (2021). “CPT-Based Liquefaction Case Histories from Global Earthquakes: A Digital Dataset (Version 1).” DesignSafe-CI. doi: 10.17603/ds2-wfft-mv37. (Curated Dataset)

- Geyin<sup>1</sup>, M., Maurer, B.W., Bradley, B.A., Green, R.A., and van Ballegooy, S. (2020) “CPT-Based Liquefaction Case Histories Resulting from the 2010-2016 Canterbury, New Zealand, Earthquakes: A Digital Dataset (Version 2).” DesignSafe-CI, doi: 10.17603/ds2-tygh-ht91. (Curated Dataset) **(NHRI DesignSafe Outstanding Dataset Award)**
- Rasanen<sup>1</sup>, R.A., Marafi, N., and Maurer, B.W. (2020). “Compilation and Forecasting of Paleoliquefaction Evidence for the Strength of Ground Motions in the U.S. Pacific Northwest: A Digital Dataset.” DesignSafe-CI, doi: 10.17603/ds2-jm19-2w09. (Curated Dataset)

#### **Abstracts (Conference Presentations without Accompanying Paper or Poster)**

\*Bold font denotes conference speaker

- Engler, D.T.**, Thompson, E.M., Geyin<sup>1</sup>, M., Maurer, B.W., Burgi, P.M., Jaiswal, K.S., and Allstadt, K.E. (2023). “Integrating regionalized geotechnical information into the U.S. geological survey’s liquefaction product within a Bayesian framework.” Seismological Society of America Annual Meeting, April 2023; San Juan, Puerto Rico. (Abstract)
- Geyin<sup>1</sup>, M. and **Maurer, B.W.** (2022). “A US national  $V_{S30}$  model and map driven by remote sensing and machine learning.” *Seismological Research Letters*, 93(2B): 1221, Seismological Society of America, SSA Annual Meeting April 2022; Bellevue, Washington. (Abstract)
- Engler, D.T.**, Thompson, E.M., Geyin<sup>1</sup>, M., Maurer, B.W., Jaiswal, K.S., Allstadt, K.E., Burgi, P.M. (2022). “Updating liquefaction probability given liquefaction potential index in a bayesian framework.” *Seismological Research Letters*, 93(2B): 1307, Seismological Society of America, SSA Annual Meeting April 2022; Bellevue, Washington. (Abstract)
- Maurer, B.W.** (2021). “Informing Predictions from Above with Data and Below: AI-Driven Seismic Ground-Failure Model for Rapid Response and Scenario Planning.” *Pacific Northwest Transportation Consortium (PacTrans) 2021 Annual Conference*, Oct 15-18. (Abstract)
- Motter, C.**, Phillips, A., Eberhard, M. Berman, J., and Maurer, B.W. (2021). “Data-Driven Assessment of Post-Earthquake Bridge Functionality and Regional Mobility.” *Pacific Northwest Transportation Consortium 2021 Annual Conference*, Oct 15-18. (Abstract)
- Eberhard, M.**, Berman, J., Marafi, N.A., Cervantes, G.D.Z., and Maurer, B.W. (2019). “Effects of Cascadia subduction zone M9 earthquakes on bridges.” *3<sup>rd</sup> International Bridge Seismic Workshop*, October 1-4; Seattle, Washington. (Abstract)
- Maurer, B.W.**, Geyin<sup>1</sup>, M., and Baird<sup>1</sup>, A. (2019). “Liquefaction hazard assessment: lessons old and new From the Canterbury Earthquake Sequence.” *Annual Meeting of the Pacific Earthquake Engineering Research (PEER) Center*, Jan 17-18; Los Angeles, California. (Abstract)
- Green, R.A.**, Stafford, P.J., Maurer, B.W., Rodriguez-Marek, A., Bommer, J.J., Edwards, B., Oates, S.J., Kruiver, P., de Lange, G., Bourne, S.J., and van Elk, J. (2018). “Liquefaction hazard due to induced seismicity: overview of the pilot study being performed for the Groningen Region of the Netherlands.” *11<sup>th</sup> U.S. National Conference on Earthquake Engineering*, 25-29 June, Los Angeles, USA (Extended Abstract; 5p)
- Maurer, B.W.** (2017). “A primer on paleoliquefaction inverse-analysis and its research potential in Cascadia.” *Geological Society of America Abstracts with Programs*, 49(6): 58-8; GSA Annual Meeting, Oct 22-25, Seattle WA, USA. (Abstract)

10. **Maurer, B.W.**, Green, R.A., and Haskell, A.C. (2016). "Reassessing the magnitudes of the 1811-1812 New Madrid earthquakes: development of a probabilistic framework for interpreting paleoliquefaction evidence." *Seismological Research Letters*, 87(1): 249, Seismological Society of America. (Abstract) **(Best Student Presentation Award)**
11. **Maurer, B.W.** and Green, R.A. (2015). "Magnitude estimation of the 1886 Charleston, SC earthquake: a systems approach integrating regional paleoliquefaction data." *Seismological Research Letters*, 86(2A): 519, Seismological Society of America. (Abstract) **(Best Student Presentation Award)**
12. **Maurer, B.W.**, Green, R.A., Bradley, B.A., and Cubrinovski, M. (2014). "Evaluating the efficacy of paleoliquefaction analysis techniques using modern analogs." *Geological Society of America Abstracts with Programs* 46(3): 23; GSA Southeastern Section 63<sup>rd</sup> Annual Meeting, 10-11 April, Blacksburg, USA. (Abstract)
13. **Maurer, B.W.** and Green, R.A. (2013). "An Ishihara-inspired liquefaction potential index (LPI) for assessing liquefaction hazard." *5<sup>th</sup> International Conference on Earthquake Geotechnical Engineering: From Case History to Practice, in Honour of Prof. Kenji Ishihara*, 17-19 Jun; Istanbul, Turkey. International Society of Soil Mechanics and Geotechnical Engineering. (Extended Abstract; 2p)
14. **Green, R.A.**, Lasley, S., and Maurer, B.W. (2013). "Liquefaction and resulting implications from the 2011 Central Virginia earthquake." *5<sup>th</sup> International Conference on Earthquake Geotechnical Engineering: From Case History to Practice, in Honour of Prof. Kenji Ishihara*, Jun 17-19; Istanbul, Turkey. International Society of Soil Mechanics and Geotechnical Engineering. (Extended Abstract; 2p)
15. **Green, R.A.**, Maurer, B.W., Wotherspoon, L., Cubrinovski, M., Quigley, M., Bastin, S. (2013). "Use of liquefaction observations in New Zealand for interpreting paleoliquefaction features in the NMSZ." *Seismological Research Letters* 84(1): 153, Seismological Society of America. (Abstract)
16. **Green, R.A.**, Lasley, S., and Maurer, B.W. (2012). "Implications of observed liquefaction during the 2011 Central Virginia earthquake on regional paleoliquefaction studies." *Geological Society of America Abstracts with Programs*, 44 (7): 382; GSA Annual Meeting, Nov 4-7, Charlotte NC, USA. (Abstract)

### Technical Reports

1. Maurer, B.W., and Geyin, M. (2021). "Impacts of Cascadia subduction zone M9 earthquakes on bridges in Washington state: development and application of a regional scale model for predicting liquefaction-induced ground failure." *Washington State Transportation Center (TRAC) Final Report, T1461-74-01*, Seattle, Washington, 196pp. (Technical Report)
2. Marafi, N.A., Eberhard, M.O., Maurer, B.W., and Berman, J. (2021). "Implications of Simulated Motions for M9 Cascadia Subduction Zone Earthquake." *U.S. Geological Survey Final Technical Report G19AP00049*, 74pp. (Technical Report)
3. Maurer, B.W., Geyin, M., and Baird, A.J. (2020). "Towards multi-tier modeling of liquefaction impacts on transportation infrastructure." *Pacific Earthquake Engineering Research (PEER) Center Report 2021/04*, 106pp. (Technical Report) [1 Citation]

4. Maurer, B.W., Baird<sup>1</sup>, A.J., and Geyin<sup>1</sup>, M. (2019). "Rapid prediction of infrastructure damage and loss due to earthquake-induced soil liquefaction." *U.S. Geological Society Technical Report G18AP00006*, 85pp. (Technical Report)
5. Green, R.A., Bommer, J.J., Stafford, P.J., Maurer, B.W., Edwards, B., Kruiver, P.P., Rodriguez-Marek, A., de Lange, G., Oates, S.J., Storck, T., Omid, P., Bourne, S.J., and van Elk, J. (2018). "Liquefaction hazard pilot study for the Groningen Region of the Netherlands due to induced seismicity." *Nederlandse Aardolie Maatschappij*, 175pp. (Technical Report)
6. Green, R.A., Maurer, B.W., and Haskell, A. (2017). "Development of probabilistic magnitude-bound curves for the New Madrid Seismic Zone (NMSZ) for paleoliquefaction studies." *U.S. Geological Society Technical Report G14AP00046*, 102pp. (Technical Report)
7. Green, R.A., Maurer, B.W., Bradley, B.A., Wotherspoon, L., and Cubrinovski, M. (2014). "Implications from liquefaction observations in New Zealand for interpreting paleoliquefaction data in the central eastern United States." *U.S. Geological Society Technical Report G12AP20002*, 97pp. (Technical Report) [14 Citations]

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## OTHER SCHOLARLY ACTIVITY

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### **Invited Talks, Research Seminars, Guest Lectures, Etc.**

1. United States Society on Dams Annual Conference, Invited Lecture, Seattle, WA, April 2004
2. EERI Earthquake Spectra Award Winning Papers Webinar, Jan 2024
3. PEER Workshop on Simulated Ground Motions, Berkeley, CA, Jan 2024
4. NSF Cascadia Coastlines and People Hazards Research Hub, Seattle, WA, Nov 2023
5. Next-Generation Liquefaction (NGL) Project Webinar on AI Modelling, March 2023
6. PEER Workshop on Liquefaction Susceptibility, Oregon State University, Sept 2022
7. U.S. Geological Survey/University of Washington Seismolunch Seminar, March 2022
8. NSF DesignSafe Learning-Center Webinar, July 2021
9. United States Geological Survey Cascadia Subduction Zone Shaking Proxy Panel, May 2021
10. USUCGER Annual Meeting, Research Spotlight, March 2021
11. Next-Generation Liquefaction (NGL) Project Database Meeting, February 2021
12. United States Geological Survey Cascadia Recurrence Project, Oct 2020
13. Syracuse University, Civil & Environmental Eng. Seminar; Syracuse, NY, March 2019
14. University of Washington ESS 202 (Earthquakes) Lecture; Seattle, WA, March 2019
15. USGS/Pacific Northwest Seismic Network, Seismology Seminar; Seattle, WA, May 2018
16. University of Washington, M9 All Hands Seminar; Seattle, WA, May 2018
17. University of Canterbury, QuakeCoRE Seminar; Christchurch, New Zealand, July 2016
18. Geosyntec Consultants, From Research to Practice Seminar; Kennesaw, GA, April 2016
19. Syracuse University, CIE 600: Soil Dynamics Guest Lecture; Syracuse, NY, April 2016
20. University of Washington, Civil & Environmental Eng. Seminar; Seattle, WA, April 2016
21. Roger Williams University, Civil Engineering Seminar; Bristol, RI, Feb 2016
22. Georgia Institute of Technology, Civil & Environmental Eng Seminar; Atlanta, GA, Jan 2016
23. Northwestern University, Civil & Environmental Eng. Seminar; Evanston, IL, Jan 2016
24. University of Cincinnati, Civil & Environmental Eng. Seminar; Cincinnati OH, July 2015

## Conference Presentations

See preceding sections for presented conference papers, posters, and abstracts (speaker in bold)

## Editorial and Editorial Board Service

Associate Editor, *Earthquake Spectra*, 2020-present

Associate Editor, *Journal of Geotechnical and Geoenvironmental Engineering*, 2024-present

## Professional Reviews

### *Reviewing Recognition*

*Outstanding Reviewer*, Engineering Geology, 2018

*Outstanding Reviewer*, Soil Dynamics and Earthquake Engineering, 2017

### *Journals* (number of reviews)

Journal of Soil Dynamics and Earthquake Engineering; *Elsevier* (23) (~~22~~)

Journal of Geotechnical and Geoenvironmental Engineering; *ASCE* (16) (~~15~~)

Engineering Geology; *Elsevier* (18) (~~15~~)

Earthquake Spectra; *EERI* (14) (~~13~~)

Journal of Seismology; *Springer* (3)

Computers and Geotechnics (2)

Geotechnical Testing Journal; *ASTM* (1)

Bulletin of the New Zealand Society for Earthquake Engineering; *NZSEE* (1)

Canadian Geotechnical Journal, *NRC Press* (1)

Journal of Geotechnical Engineering; *ICE* (1)

Journal of Earthquake Engineering; *Taylor & Francis* (1)

Heliyon; *Elsevier* (1)

Geosciences; *MDPI* (1)

Journal of Hazardous Materials; *Elsevier* (1)

Marine Georesources and Geotechnology; *Taylor & Francis* (1)

Entropy; *MDPI* (1)

Environmental Technology; *Taylor & Francis* (1)

Intl. Journal of Water Resources and Environmental Engineering; *Academic Journals* (1)

Desalination and Water Treatment; *Taylor & Francis* (1)

Journal of Textile Science and Engineering; *OMICs* (1)

Materials Research Innovations; *Springer* (1)

### *Conferences* (number of reviews)

ASCE GeoCongress, 2023 (2)

ASCE GeoCongress, 2022 (1)

12<sup>th</sup> US National Conference on Earthquake Engineering, 2022 (7)

ASCE GeoCongress, 2020 (1)

ASCE GeoCongress, 2019 (4)

ASCE GeoCongress, 2018 (4)

ASCE Geotechnical Earthquake Engineering and Soil Dynamics (GEESD) V, 2018 (13)

11<sup>th</sup> US National Conference on Earthquake Engineering, 2018 (6)

3<sup>rd</sup> Int. Conf. on Performance-Based Design in Earthquake Geotechnical Eng, 2017 (2)

ASCE GeoRisk, 2017 (3)  
ASCE GeoCongress, 2017 (2)  
6<sup>th</sup> International Conference on Earthquake Geotechnical Engineering, 2015 (3)  
10<sup>th</sup> Pacific Conference on Earthquake Engineering, 2015 (2)

***Proposals*** (number of reviews)

National Science Foundation – 2023 (2)  
Canada Foundation for Innovation – 2022 (1)  
National Science Foundation – 2022 (5)  
US Geological Survey – 2020 (50)  
Pacific Earthquake Engineering Research Center – 2019 (5)  
US Geological Survey – 2018 (35)  
US Geological Survey – 2017 (33)

**Invited Participation in Research Working Groups and Workshops**

PEER Workshop on Liquefaction Susceptibility, Pacific Earthquake Eng. Research Center, 2022  
Next Generation Liquefaction Modeling Group (funders PEER, CalTrans, NRC), 2020-present  
Cascadia Subduction Zone Shaking Proxy Workshop, United States Geological Survey, 2021  
USGS Cascadia Recurrence Project Workshop, United States Geological Survey, 2020  
USGS Ground-Failure Product Working Group, United States Geological Survey, 2018-2019  
Natural Hazards Eng. Research Infrastructure Community Workshop (NSF); Seattle, WA, 2017  
US-NZ-Japan Workshop on Liquefaction-Induced Ground Movements (NSF); Berkeley, CA, 2016  
Charleston Earthquake Hazards Project (USGS); Technical Working Group; Charleston, SC, 2015

**Invited Participation on Advisory Boards**

Advisory Board, New Zealand National Liquefaction Loss Model, 2023-present  
NSF Geotechnical Extreme Events and Recon. (GEER) Advisory Board, 2021-present  
NHRI Summit 2022 Planning Group, Data Enabled Discoveries, 2022  
Technical Advisory Board, New Zealand QuakeCoRE SeisFinder Application, 2017-2019

**Contributions to Post-Disaster Data Collection & Dissemination**

2015 Gorkha Nepal Earthquake, (EERI) Data Curator & Virtual Team Leader, Geotech. Impacts  
2011 Mineral Virginia Earthquake, (NSF GEER) Data Curator

**GRADUATE STUDENTS**

**Chaired Doctoral Degrees**

<b>Student</b>	<b>Level of Supervision</b>	<b>Dissertation Title</b>	<b>Graduation</b>	<b>Current Employer</b>
Ryan Rasanen	Chair	Decoding Seismic Hazard Enigmas via Next-Generation Paleoseismic Analytics	Spring 2024	WSDOT
Mertcan Geyin	Chair	Evaluation and Development of Liquefaction Occurrence and Consequence Analytics Driven by Emerging Data and Technologies	Summer 2021	Norwegian Geotechnical Institute
Sneha Upadhyaya (Virginia Tech)	Co-Chair (co-chairs A. Rodriguez - Marek; R. Green)	Development of an Improved and Internally Consistent Framework for Evaluating Liquefaction Damage Potential	Fall 2019	Geosyntec Consultants

**Current Doctoral Students**

<b>Student</b>	<b>Level of Supervision</b>	<b>Dissertation Title</b>	<b>Status</b>
Gunjan Rateria	Chair	Empirical, Numerical, and AI Advancements in Liquefaction Hazard Modeling	Passed General Exam Defense Planned Summer 2024
Morgan Sanger	Chair	AI Driven and Near-Real-Time Modeling of Natural Hazards	Passed Qualifying Exam Defense Planned Spring 2026

**Chaired Masters Degrees**

<b>Student</b>	<b>Level of Supervision</b>	<b>Dissertation Title</b>	<b>Graduation</b>	<b>Current Employer</b>
Abdulqader Alshahrani	Chair	Next-Generation Shaking Table for Soil Dynamics Education and Research	Summer 2023	King Abdulaziz University
Qinlin Yu	Chair	Soil Velocity Models Informed by Remote Sensing and Artificial Intelligence	Summer 2021	PhD Student at CU Boulder
Alex Baird	Chair	Rapid Prediction of Infrastructure Damage and Loss from Earthquake Induced Soil Liquefaction	Winter 2019	Shannon & Wilson Inc



### Advisee Honors and Awards

#### Mertcan Geyin (PhD, 2021)

- 1<sup>st</sup> Place, ASCE Geo-Congress Poster Competition, Minneapolis; 2020
- \$600 Travel Grant, ASCE Geo-Congress, Minneapolis, MN; 2020
- 2<sup>nd</sup> Place, ASCE Geo-Congress Poster Competition, Philadelphia; 2019
- \$600 Travel Grant, ASCE Geo-Congress, Philadelphia, PA; 2019

#### Ryan Rasanen (PhD, 2023)

- National Science Foundation Graduate Research Fellowship (~\$150,000); 2019
- 2<sup>nd</sup> Place, ASCE Geo-Congress International Poster Competition, Charlotte; 2022
- \$600 Travel Grant, ASCE Geo-Congress, Charlotte, NC; 2022
- New Zealand Advanced-Studies-Institute Fellow (~\$3,000); NSF; 2020
- 2<sup>nd</sup> Place, ASCE Geo-Congress International Poster Competition, Minneapolis; 2020
- \$900 Travel Grant, ASCE Geo-Congress, Minneapolis, MN; 2020

#### Morgan Sanger (PhD, In Progress)

- 3<sup>rd</sup> Place, ASCE Geo-Congress International Poster Competition, Vancouver, BC; 2024
- Travel Grant (\$600), ASCE Geo-Congress, Vancouver, BC; 2024
- Herbold Data Science Fellowship (\$10,000); University of Washington; 2023
- 1st Place Poster, US National Highway Geology Symposium; 2023
- Thomas Wysockey Scholarship (\$5,000); Deep Foundations Institute; 2023
- Industry Advancement Scholarship (\$3,000); Intl. Association of Foundation Drilling; 2023

### Doctoral Degrees – Other Committee Service

Student	Level of Supervision	Dissertation Title	Graduation
Erich Herzig (University of Washington Earth & Space Science)	Committee Member	A New Look at the History and Future of Deep-Seated Coseismic Landsliding on the West Coast, USA	In Progress
Minyong Lee	Committee Member	Bio-cementation for Liquefaction Mitigation: Examining Response, Development, and Deployment	October 2022
Kevin Foster (University of Canterbury Civil Engineering)	Committee Member	Modelling $V_{S30}$ in New Zealand Using Field Measurements, Proxy Variables, and Geophysical Methods	August 2022
Long Chen	Committee Member	Implementation, Verification, and Validation of Two Bounding Surface Constitutive Models for Site Response Analyses	June 2020

Samuel Sideras	Committee Member	Evolutionary Intensity Measures for More Accurate and Informative Evaluation of Liquefaction Triggering	August 2019
Sarah Harbert (University of Washington Earth & Space Science)	Committee Member	Landscape Response to Oblique Convergence: Insights from Numerical Modeling and from the Marlborough Fault System, New Zealand	August 2019
Michael Greenfield	Committee Member	Effects of Long-Duration Ground Motions on Liquefaction Hazards	August 2017
Alex Grant	Committee Member	Regional-Scale Coseismic Landslide Hazard Modeling and Consequence Analysis	December 2017

### Masters Degrees – Other Committee Service

Student	Level of Supervision	Thesis Title	Graduation
Kan-Jen Liu (UW Structural Eng)	Committee Member	Impacts of M9 Earthquakes on Typical Bridges in Washington State	June 2022
Zachary Kortum (UW Structural Eng)	Committee Member	Impacts of Cascadia Subduction Zone M9 Earthquakes on Bridges in Washington State	June 2021
Samantha Muchongwe	Committee Member	Controlling Colloidal Silica Grouts Using Microbial Fermentation Activity	June 2021
Robert Burdalski	Committee Member	Investing the Effect of Biological and Chemical Factors on the Reaction Kinetics and Mineralogy of Ureolytic Bio-Cementation	June 2020
Kaylee Kostka	Committee Member	Contractors' Perspectives on Airfield and Highway Hot Mix Asphalt Pavement Project	March 2020
Ryan Rasanen	Committee Member	Liquefaction-Targeted Ground Motions and Lateral Spreading Driving Stresses	June 2019
Shane Markus	Committee Member	Morphological Evolution of Rock-Slopes and Assessing the Rockfall Activity Index (RAI) Methodology	March 2018

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**RESEARCH ACTIVITIES**

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**Funded Research**

Total Funding: \$1,672,652 (excluding equipment: \$1,489,803)

Total My Amount: \$1,160,737 (excluding equipment: \$1,069,312)

<b>Funding Agency</b>	<b>Title</b>	<b>Total Amount</b>	<b>My Amount</b>	<b>My Role (PIs/co-PIs)</b>	<b>Dates</b>
NSF <i>via</i> Cascadia Hazards Research Hub	Predicting Liquefaction-Induced Damage in Cascadia During M9 CSZ Earthquakes	\$32,664	\$10,888	PI (co-PIs Eberhard and Berman)	Aug 2023 – Aug 2024
PEER	Informing Predictions from Above with Community Data from Below: A Hierarchical AI Ground Failure Model for Rapid Response and Simulation	\$73,245	\$73,245	PI	Aug 2023 – Aug 2025
USGS	Informing Predictions from Above with Data from Below: A Hierarchical Geospatial Liquefaction Model for Rapid Response and Simulation	\$78,966	\$78,966	PI	Jan 2023 – Jan 2024
PEER	Identification of Critical Ground-Motion and Bridge Features for Performance Assessment of Regional Transportation Networks	\$98,799	\$32,933	Co-PI (PI Eberhard; co-PI Berman)	Jan 2022 – Jan 2023
PacTrans	Software for Real-Time Prediction of Earthquake-Induced Ground Failure	\$6,026	\$6,026	PI	Jan 2022 – April 2022
USGS	Development of Real-Time Earthquake Response Software: Intergovernmental Personnel Agreement	\$20,308	\$20,308	PI	May 2021 – April 2022
WSDOT	Quick Response: Effects of Cascadia Subduction Zone M9 Liquefaction on Bridges in Washington State	\$30,000	\$10,000	Co-PI (PI Eberhard; co-PI Berman)	Marc 2021 – June 2021

STF UW Student Technology Fund	Resonant Column Device for Education and Research in Biogeotechnics and Earthquake Engineering	\$108,553	\$54,277	Co-PI (PI Gomez)	Mar 2021 – June 2021
PacTrans	Informing Predictions from Above with Data from Below: AI-Driven Seismic Ground-Failure Model for Rapid Response and Planning	\$25,000	\$25,000	PI	Aug 2020 – Aug 2022
PacTrans	Data-Driven Assessment of Post- Earthquake Bridge Functionality and Regional Mobility	\$180,000	\$36,000	Co-PI (PI Motter; co- PIs Phillips, Eberhard, Berman)	Jun 2020 – May 2022
RRF UW Royalty Research Fund	Paleoliquefaction Evidence for the Strength of Ground Motions in Cascadia: A Proof-of-Concept for Inverse-Analyzing Ancient Earthquake Relics	\$39,769	\$39,769	PI	Jan 2020 – Dec 2020
STF UW Student Technology Fund	Earthquake Ground-Motion Prediction via Field and Laboratory Measurement Systems	\$74,296	\$37,148	PI (Co-PI Gomez)	June 2019 – April 2020
WSDOT	Effects of Cascadia Subduction Zone M9 Earthquakes on Bridges in Washington State	\$180,000	\$60,000	Co-PI (PI Eberhard; co-PI Berman)	Jan 2020 – June 2021
USGS	Implications of Simulated Motions for M9 Cascadia Subduction Zone Earthquakes: Collaborative Research with University of Washington and USGS	\$73,273	\$24,424	Co-PI (PI Eberhard; co-PI Berman)	May 2019 – April 2020
NSF	CAREER: Decoding the Enigmas of U.S. Seismic Hazard Via Multi- Scale, Multi-Physics Approaches to Paleoliquefaction Analysis	\$540,724	\$540,724	PI	Aug 2018 – Aug 2024

USGS	Rapid Prediction of Infrastructure Damage and Loss Due to Earthquake-Induced Soil Liquefaction	\$51,134	\$51,134	PI	Jan 2018 – Dec 2018
PEER	Towards Multi-Tier Modeling of Liquefaction Impacts on Transportation Infrastructure	\$48,795	\$48,795	PI	Dec 2017 – Dec 2018
NSF	A Multi-Scale and Multi-Physics Collaborative Network in Geotechnical Earthquake Engineering	\$5,000	\$5,000	PI	Nov 2017 – Mar 2018
NSF	EAPSI: An Analysis of Liquefaction Potential Index and Observed Liquefaction Severity in Christchurch, NZ	\$6,100	\$6,100	PI	June 2012 – May 2013

### Other Research Support: Scholarships, Travel Grants, & Monetary Awards

#### Brett Maurer (\$35,450 Total)

- Workshop Travel Award, \$1000  
*PEER Workshop on Liquefaction Susceptibility*; Corvallis, OR, 2022
- Workshop Travel Award, \$500  
*USUCGER Teaching Strategies and Resources Workshop*; Minneapolis, MN, 2020
- International Travel Award, \$3,000  
*New Zealand Centre for Earthquake Resilience Annual Meeting*; Taupo, NZ, 2018
- US Delegate to iYGEC, \$2,500  
*ASCE Geo-Institute, 6th Intl. Young Geotechnical Engineers Conference*; Seoul KOR, 2017
- Graduate Fellowship in Earthquake Hazard Reduction, \$20,000  
*EERI/FEMA NEHRP*, Awarded San Francisco CA, 2016
- Conference Travel Grant, \$600  
*SSA, Eastern Section Annual Meeting*; Memphis TN, 2015
- Conference Travel Grant, \$625  
*ISSMGE, 6<sup>th</sup> Intl. Conference on Earthquake Geotech. Eng.*; Christchurch, New Zealand, 2015
- Conference Travel Grant, \$500  
*ASCE Geo-Institute, National Geo-Congress Poster Competition*; Atlanta GA, 2014
- Conference Travel Grant, \$1,875  
*EERI, 10<sup>th</sup> National Conference on Earthquake Engineering*; Anchorage AK, 2014
- Conference Travel Grant, \$350  
*SSA, Eastern Section Annual Meeting*, Charleston SC; 2014
- Conference Travel Grant, \$500  
*Virginia Tech Grad School, 5<sup>th</sup> Intl. Conf. on Earthquake Geotech. Eng.*; Istanbul Turkey, 2013
- Conference Travel Grant, \$500

*ASCE Geo-Institute, National Geo-Congress Poster Competition; San Diego CA, 2013*

- Industry Advancement Scholarship, \$4,000  
ADSC, Awarded Tucson AZ, 2010

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**DOCUMENTATION OF TEACHING EFFECTIVENESS**

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**UNIVERSITY OF WASHINGTON**

**Courses Taught & Student Evaluations (0.0 to 5.0 scale)**

Item 1: Course as a whole; Item 2: Course content; Item 3: Instructor’s contribution; Item 4: Instructor’s teaching effectiveness. On a 0.0 to 5.0 scale: 5 is excellent, 4 is very good, 3 is good, 2 is fair, 1 is poor, 0 is very poor.

**Raw Scores (i.e., as directly reported by student evaluators)**

Course	Title	Quarter	Credits	Enrollment	Evaluations	Item 1	Item 3	Item 4	Average, Items 1-4
CESG 568	Geotech EQ Eng	Spring 2023	3	17	8	4.9	5.0	4.9	4.9
CESG 565	Soil Dynamics	Winter 2023	3	15	10	4.9	4.9	5.0	4.9
CEE 436	Foundation Design	Autumn 2022	3	62	14	4.8	4.9	4.9	4.8
CESG 568	Geotech EQ Eng	Spring 2022	3	14	8	4.5	4.7	4.7	4.6
CESG 565	Soil Dynamics	Winter 2022	3	15	9	4.9	4.9	4.8	4.8
CEE 436	Foundation Design	Autumn 2021	3	80	20	4.8	4.9	4.8	4.8
CESG 568	Geotech EQ Eng	Spring 2021	3	14	13	4.8	4.9	4.8	4.8
CESG 565	Soil Dynamics	Winter 2021	3	12	9	4.9	5.0	5.0	5.0
CEE 436	Foundation Design	Autumn 2020	3	100	36	4.8	4.9	4.9	4.8
CESG 570	Geosystems Engineering	Spring 2020	3	16	11	5.0	5.0	5.0	5.0
CESG 565	Soil Dynamics	Winter 2020	3	17	13	4.8	5.0	5.0	4.9
CEE 436	Foundation Design	Autumn 2019	3	107	82	4.8	4.9	4.9	4.8
CESG 570	Geosystems Engineering	Spring 2019	3	12	12	4.5	5.0	5.0	4.8

CESG 565	Soil Dynamics	Winter 2019	3	18	14	4.8	5.0	5.0	4.8
CEE 436	Foundation Design	Autumn 2018	3	98	81	4.7	4.9	4.8	4.8
CESG 565	Soil Dynamics	Winter 2018	3	14	12	5.0	5.0	5.0	5.0
CEE 436	Foundation Design	Autumn 2017	3	67	44	4.9	4.9	4.9	4.9
CEE 436	Foundation Design	Spring 2017	3	27	18	4.8	4.8	4.9	4.8

**Adjusted Scores (i.e., following unknown adjustments for bias by the Office of Educational Assessment)**

Course	Title	Quarter	Credits	Enrollment	Evaluations	Item 1	Item 3	Item 4	Average, Items 1-4
CESG 568	Geotech EQ Eng	Spring 2023	3	17	8	4.6	4.7	4.6	4.6
CESG 565	Soil Dynamics	Winter 2023	3	15	10	4.7	4.7	4.8	4.7
CEE 436	Foundation Design	Autumn 2022	3	62	14	4.8	5.0	4.9	4.8
CESG568	Geotech EQ Eng	Spring 2022	3	14	8	4.3	4.5	4.5	4.4
CESG 565	Soil Dynamics	Winter 2022	3	15	9	4.6	4.6	4.5	4.6
CEE 436	Foundation Design	Autumn 2021	3	80	20	4.4	4.6	4.5	4.5
CESG568	Geotech EQ Eng	Spring 2021	3	14	13	4.4	4.6	4.4	4.4
CESG 565	Soil Dynamics	Winter 2021	3	12	9	4.4	4.6	4.5	4.5
CEE 436	Foundation Design	Autumn 2020	3	100	36	4.7	4.8	4.8	4.7
CESG 570	Geosystems Engineering	Spring 2020	3	16	11	4.4	4.5	4.5	4.5
CESG 565	Soil Dynamics	Winter 2020	3	17	13	4.7	4.9	4.9	4.8
CEE 436	Foundation Design	Autumn 2019	3	107	82	4.8	4.9	4.9	4.8
CESG 570	Geosystems Engineering	Spring 2019	3	12	12	4.4	4.9	4.8	4.7

CESG 565	Soil Dynamics	Winter 2019	3	18	14	4.7	4.8	4.8	4.8
CEE 436	Foundation Design	Autumn 2018	3	98	81	4.7	4.9	4.9	4.8
CESG 565	Soil Dynamics	Winter 2018	3	14	12	4.6	4.7	4.7	4.7
CEE 436	Foundation Design	Autumn 2017	3	67	44	4.8	4.8	4.8	4.8
CEE 436	Foundation Design	Spring 2017	3	27	18	4.5	4.6	4.7	4.6

### Peer Teaching Evaluations

Course No.	Course Title	Quarter	Reviewer
CESG 568	Geotechnical Earthquake Engineering	Spring 2022	Paolo Calvi
CESG 568	Geotechnical Earthquake Engineering	Spring 2021	Jeffrey Berman
CESG 565	Soil Dynamics	Winter 2020	Joseph Wartman
CESG 570	Geosystems Engineering	Spring 2019	Pedro Arduino
CEE 436	Foundation Design	Fall 2017	Steven Kramer

### Supervision of Independent Study

Course	Student	Topic	Quarter	Credit Hours
CEE 600	Kenneth Morrow	Review of AI in Geohazard Engineering	Spring 2022	3
CEE 600	Andi Gaga	AI Driven Modelling of Coseismic Landslides	Winter 2022	3
CEE 600	Colton Shaff	Washington Subsurface Test Database	Spring 2021	1
CEE 600	Andrew Barrett	Washington Subsurface Test Database	Spring 2021	1
CEE 499	Andi Gaga	Washington Subsurface Test Database	Spring 2021	1
CEE 600	Alexandra Garland	Geospatial Ground Failure Models	Spring 2020	2
CEE 600	Kayla Campbell	Washington Subsurface Test Database	Winter 2020	2
CEE 600	Alexandra Garland	Geospatial Proxies for Subsurface Traits	Winter 2020	2
CEE 499	Jacopo Spano	Nisqually Liquefaction Case Histories	Winter 2019	3
CEE 499	Mita Nguyen	Innovative Dewatering of Dredged Sediments	Winter 2019	2
CEE 600	Ethan Gusek	CPT Thin Layer Correction	Spring 2018	3
CEE 600	Alessandra Hossley	Cascadia Paleoliquefaction	Spring 2018	3
CEE 600	Dustin Taylor	South Carolina Paleoliquefaction	Spring 2018	3



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## SERVICE

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### **Service to the Department and University**

- Valle Fellowship Committee, UW CEE (1 Year): 2023-Present
- Graduate Education Committee, UW CEE (5 Years): 2019-24
- Geotechnical Graduate Admissions Chair, UW CEE (5 Years): 2018-2022; 2023-
- Administrative Search Committee, UW CEE (1 member): 2024
- Undergraduate Scholarship Committee, UW CEE (1 Year): 2020
- Faculty Search Committees, UW CEE (1 Faculty): 2020
- Geotechnical Graduate Program Advisor and Admissions Lead (4 Years): 2018-22
- Faculty Mentor Committee Member, UW CEE (3 Years): 2019-22
- Undergraduate Education Committee, UW CEE (1 Year): 2018-19
- Undergraduate Admissions Committee, UW CEE (2 Years): 2017, 19
- Department Affairs Committee, UW CEE (1 Year): 2017-18
- Civil Engineering Search Committee, Student Member; Syracuse University (2 Years)

### **Service to the Profession**

- Associate Editor, *Earthquake Spectra*, 2020-
- Associate Editor, *Journal of Geotechnical and Geoenvironmental Engineering*, 2024-
- Conference Chair, Earthquake Engineering Research Institute (EERI) Annual Meeting, 2024
- Session Chair, Earthquake Engineering and Soil Dynamics, ASCE GeoCongress, 2024
- Member, Building Seismic Safety Council NEHRP Provisions Update Committee, 2022-
- Member, ASCE Soil Dynamics and Earthquake Engineering Technical Committee, 2020-
- United States Society on Dams (USSD) Awards Committee, 2024
- Earthquake Engineering Research Institute (EERI) Student Awards Committee, 2020-2024
- Reviewing: 73 journal papers, 48 conference papers, and 130 research proposals
- Recommendation Letters (graduate school, employment, etc.): 41 submitted as of 2023
- Session Chair, Earthquake Engineering and Soil Dynamics, ASCE GeoCongress, 2023
- NHERI Summit Planning Group, Data Enabled Discoveries, 2022
- Session Chair, Earthquake Engineering and Soil Dynamics, ASCE GeoCongress, 2022
- Judge, ASCE GeoCongress Graduate Student Poster Competition, 2020, 2021
- Session Chair, ASCE Geotechnical Earthquake Engineering and Soil Dynamics V, 2018
- Earthquake Engineering Research Institute (EERI) Board of Directors Election Teller, 2017

### **Justice, Equity, Diversity, and Inclusion (JEDI)**

- Added JEDI content to CESG 568 lectures/assignments focusing on natural-hazard inequities
- Participated in voluntary training/education: CEE department training (3 sessions), Feb 2021; Inclusive teaching workshop (1 session), April 2021; CEE Town Halls (4 Town Halls)
- Recruited and mentored underrepresented CEE UG students to research assistantships

### **Professional Society Membership**

- American Society of Civil Engineers (ASCE)

- Earthquake Engineering Research Institute (EERI)
- Tau Beta Pi Engineering Honor Society
- Chi Epsilon Civil Eng. Honor Society (President, Syracuse University Chapter, 2008-2009)

### **Community Service & Outreach**

- Engineering Discovery Days, University of Washington (2 Years)
- Kids Tech University, Instructor; Virginia Tech, 2014
- Geotechnical Outreach; Melrose Elementary School, Princeton WV, 2014
- Bristol-Meyers-Squibb Science Horizons Program, Instructor; Syracuse NY, 2009 & 2010