SARA KHOSHNEVISAN

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EDUCATION

Ph.D. in Civil Engineering December 2015
Clemson University, Clemson, SC
Dissertation: Efficient Robust Geotechnical Design - Methodology and Applications

B.S. in Mining Engineering February 2012
University of Tehran, Tehran, Iran

PROFESSIONAL EXPERIENCE

University of Cincinnati, Assistant Professor 08/2019 - Present
Clarkson University, Assistant Professor 07/2017 - 07/2019
Clemson University, Visiting Assistant Professor 01/2016 - 07/2017

FUNDED RESEARCH

"Optimizing Field Compaction of Granular Materials: Research and Guideline Development," Federal Highway Administration (FHWA). PI. $245,959. 08/2025-08/2027. (allocation: 100%)

"Non-Destructive Roller-Integrated Acoustic Wave Detection Technique for Continuous Subgrade Soil Compaction Evaluation," Federal Highway Administration (FHWA). PI. $260,300. 09/2023-09/2025. (allocation: 50%)

"Enhancing Subgrade Soil Compaction Assessment Through Roller-Integrated Image Processing," University of Cincinnati Internal Collaborative Research Advancement Program. PI. $25,000. 03/2024-04/2026. (allocation: 100%)

"Investigating Innovations in Litter Collection," Ohio Department of Transportation. Co-PI. $226,152. 10/2023-11/2024. (allocation: 30%)

"Use of Machine Learning Methods to Obtain a Reliable Predictive Model for Resilient Modulus of Subgrade Soil," Indiana Department of Transportation (INDOT). PI. $63,841. 10/2022-03/2024. (allocation: 65%)

"Collaborative Research: Connecting Women Faculty in Geotechnical Engineering - Thriving in a Networked World," NSF GTWF Seed Grant (via Syracuse University). PI. $6,000. 2019-2020. (allocation: 100%)

Pending Research

"CAREER: Seeing Through the Ground's Low-Pass Filter- Linking Surface Deformation, Subsurface Identifiability, and Geotechnical Reliability," NSF-CMMI. To be submitted as PI on 07/2026.

"Sensitivity of Liquefaction Triggering Models to Case-History Composition and the Information Value of Future Reconnaissance, " USGS Earthquake Hazard Program-HIR. Submitted as PI on 05/2026 ($79,365).

"Applicability of Measurement While Drilling Within Ohio Geological Strata", Ohio Department of Transportation. Submitted as subaward-PI (UC subaward amount =170,694.00- Total amount = $645,146)

"Updating and Operationalizing the Developed Soil Resilient Modulus (MR) Prediction Models: Implementation Phase to Deploy an Internal, User-Friendly Interface, "Indiana Department of Transportation FHWA/INDOT. Submitted as PI on 04/2026 ($170,382).

TEACHING

University of Cincinnati

- Foundation Engineering (CVE 5181/6081)
- Slope Stability (CVE 5160/6060)

- Reliability (CVE 3003)
- Soil Mechanics for Construction Management (CM 3037)
- Geotechnical Engineering Laboratory (CVE 3002C)
- MS/PhD Research (CVE 7092)

Clarkson University

- Foundations, Stability, and Earth Retaining Structures (CE 415/515)
- Special Topics in Civil Engineering: Numerical Modeling (CE 595)
- Geotechnical Engineering: Soil Mechanics (CE 310)
- Engineering Geology (CE 315)
- Statics (CE 2010)

Clemson University

- Geotechnical Engineering (CE 3210)
- Geotechnical Engineering Design (CE 4210/6210)
- Selected Geotechnical Topics: Reliability and Risk Assessment (CE 8930)
- Geotechnical Engineering Laboratory (CE 3210-L)

PUBLICATIONS

Book Chapter

1. Juang, C.H., **Khoshnevisan, S.**, and Zhang, J., "Maximum Likelihood Principle and Its Application in Soil Liquefaction Assessment," Chapter 4, in *Risk and Reliability in Geotechnical Engineering*, K.K. Phoon and J. Ching, editors, CRC Press, January 2015.

Journal Articles

** denotes student advisee; underlined first author is the primary student contributor*

JCR = Journal Citation Reports (Clarivate, 2024); IF = Impact Factor; Q1–Q4 = Journal Quartile Ranking (Q1 = top 25%)

1. Sadik, L.* and **Khoshnevisan, S.**, 2025. Region-Specific CPT-SPT Correlations for Cohesionless Soils: A Hierarchical Bayesian Approach. *Geotechnical and Geological Engineering*, 43, 430. **[JCR 2024: IF: 2.0, Q1]**
2. Yeh, C.H., Lu, Y.C., **Khoshnevisan, S.**, Juang, C.H., Tien, Y.M., and Dong, J.J., 2024. LiDAR-based 3D Litho-Stratigraphic Models Calibrated with Limited Boreholes. *Engineering Geology*, p.107461. **[JCR 2024: IF: 6.9, Q1]**
3. Hsu, Y.H., Lu, Y.C., **Khoshnevisan, S.**, Juang, C.H., and Hwang, J.H., 2022. Influence of Geological Uncertainty on the Design of OWTF Monopiles. *Engineering Geology*, 303, p.106621. **[JCR 2024: IF: 6.9, Q1]**
4. Lu, Y.C., Liu, L.W., **Khoshnevisan, S.**, Ku, C.S., Juang, C.H., and Xiao, S.H., 2022. A New Approach to Constructing SPT-CPT Correlation for Sandy Soils. *Georisk*, pp.1-17. **[JCR 2024: IF: 4.8, Q1]**
5. Han, X., Gong, W., Juang, C.H., Bowa, V.M., and **Khoshnevisan, S.**, 2022. CPTu-SPT Correlation Analyses Based on Pairwise Data in Southwestern Taiwan. *Georisk*, pp.1-18. **[JCR 2024: IF: 4.8, Q1]**
6. Yeh, C.H., Dong, J.J., **Khoshnevisan, S.**, Juang, C.H., Huang, W.C., and Lu, Y.C., 2021. The Role of the Geological Uncertainty in a Geotechnical Design-A Retrospective View of Freeway No. 3 Landslide in Northern Taiwan. *Engineering Geology*, 291, p.106233. **[JCR 2024: IF: 6.9, Q1]**
7. Hwang, J.H., **Khoshnevisan, S.**, Juang, C.H., and Lu, C.C., 2021. Soil Liquefaction Potential Evaluation-An Update of the HBF Method Focusing on Research and Practice in Taiwan. *Engineering Geology*, 280, p.105926. **[JCR 2024: IF: 6.9, Q1]**
8. Chen, G., Wu, Q., Zhou, Z., Ma, W., Chen, W., **Khoshnevisan, S.**, and Yang, J., 2020. Undrained Anisotropy and Cyclic Resistance of Saturated Silt Subjected to Various Patterns of Principal Stress Rotation. *Géotechnique*, 70(4), pp.317-331. **[JCR 2024: IF: 5.8, Q1]**
9. Chen, G., Ruan, B., Zhao, K., Chen, W., Zhuang, H., Du, X., **Khoshnevisan, S.**, and Juang, C.H., 2020. Nonlinear Response Characteristics of Undersea Shield Tunnel Subjected to Strong Earthquake Motions. *Journal of Earthquake Engineering*, 24(3), pp.351-380. **[JCR 2024: IF: 2.7, Q2]**

10. Guoxing, C., Mengyun, K., **Khoshnevisan, S.**, Weiyun, C., and Xiaojun, L., 2019. Calibration of Vs-Based Empirical Models for Assessing Soil Liquefaction Potential Using Expanded Database. *Bulletin of Engineering Geology and the Environment*, 78(2), pp.945-957. **[JCR 2024: IF: 4.2, Q1]**
11. Chen, G., Zhou, Z., Sun, T., Wu, Q., Xu, L., **Khoshnevisan, S.**, and Ling, D., 2019. Shear Modulus and Damping Ratio of Sand-Gravel Mixtures over a Wide Strain Range. *Journal of Earthquake Engineering*, 23(8), pp.1407-1440. **[JCR 2024: IF: 2.7, Q2]**
12. Shen, M., Juang, C.H., Ku, C.S., and **Khoshnevisan, S.**, 2019. Assessing Effect of Dynamic Compaction on Liquefaction Potential Using Statistical Methods-A Case Study. *Georisk*, 13(4), pp.341-348. **[JCR 2024: IF: 4.8, Q1]**
13. Shen, M., **Khoshnevisan, S.**, Tan, X., Zhang, Y., and Juang, C.H., 2019. Assessing Characteristic Value Selection Methods for Design with LRFD-Design Robustness Perspective. *Canadian Geotechnical Journal*, 56(10), pp.1475-1485. **[JCR 2024: IF: 3.6, Q1]**
14. Peyghaleh, E., Mahmoudabadi, V., Martin, J.R., Shahjouei, A., Chen, Q., Javanbarg, M., and **Khoshnevisan, S.**, 2018. Impact of Local Site Conditions on Portfolio Earthquake Loss Estimation for Different Building Types. *Natural Hazards*, 94(1), pp.121-150. **[JCR 2024: IF: 3.7, Q1]**
15. Tan, X., Wang, X., **Khoshnevisan, S.**, Hou, X., and Zha, F., 2017. Seepage Analysis of Earth Dams Considering Spatial Variability of Hydraulic Parameters. *Engineering Geology*, 228, pp.260-269. **[JCR 2024: IF: 6.9, Q1]**
16. Wang, L., Wang, C., **Khoshnevisan, S.**, Ge, Y., and Sun, Z., 2017. Determination of Two-Dimensional Joint Roughness Coefficient Using Support Vector Regression and Factor Analysis. *Engineering Geology*, 231, pp.238-251. **[JCR 2024: IF: 6.9, Q1]**
17. **Khoshnevisan, S.**, Wang, L., and Juang, C.H., 2017. Response Surface-Based Robust Geotechnical Design of Supported Excavation-Spreadsheet-Based Solution. *Georisk*, 11(1), pp.90-102. **[JCR 2024: IF: 4.8, Q1]**
18. Li, D.Q., Peng, X., **Khoshnevisan, S.**, and Juang, C.H., 2017. Calibration of Resistance Factor for Design of Pile Foundations Considering Feasibility Robustness. *Computers and Geotechnics*, 81, pp.229-238. **[JCR 2024: IF: 5.7, Q1]**
19. **Khoshnevisan, S.**, Wang, L., and Juang, C.H., 2016. Simplified Procedure for Reliability-Based Robust Geotechnical Design of Drilled Shafts in Clay Using Spreadsheet. *Georisk*, 10(2), pp.121-134. **[JCR 2024: IF: 4.8, Q1]**
20. Gong, W., Juang, C.H., **Khoshnevisan, S.**, and Phoon, K.K., 2016. R-LRFD: Load and Resistance Factor Design Considering Robustness. *Computers and Geotechnics*, 74, pp.74-87. **[JCR 2024: IF: 5.7, Q1]**
21. Huang, H., Gong, W., **Khoshnevisan, S.**, Juang, C.H., Zhang, D., and Wang, L., 2015. Simplified Procedure for Finite Element Analysis of the Longitudinal Performance of Shield Tunnels Considering Spatial Soil Variability. *Computers and Geotechnics*, 64, pp.132-145. **[JCR 2024: IF: 5.7, Q1]**
22. **Khoshnevisan, S.**, Gong, W., Juang, C.H., and Atamturktur, S., 2015. Efficient Robust Geotechnical Design of Drilled Shafts in Clay Using a Spreadsheet. *Journal of Geotechnical and Geoenvironmental Engineering*, 141(2), p.04014092. **[JCR 2024: IF: 4.4, Q1]**
23. Gong, W., Wang, L., **Khoshnevisan, S.**, Juang, C.H., Huang, H., and Zhang, J., 2015. Robust Geotechnical Design of Earth Slopes Using Fuzzy Sets. *Journal of Geotechnical and Geoenvironmental Engineering*, 141(1), p.04014084. **[JCR 2024: IF: 4.4, Q1]**
24. **Khoshnevisan, S.**, Gong, W., Wang, L., and Juang, C.H., 2014. Robust Design in Geotechnical Engineering-An Update. *Georisk*, 8(4), pp.217-234. **[JCR 2024: IF: 4.8, Q1]**
25. Gong, W., **Khoshnevisan, S.**, and Juang, C.H., 2014. Gradient-Based Design Robustness Measure for Robust Geotechnical Design. *Canadian Geotechnical Journal*, 51(11), pp.1331-1342. **[JCR 2024: IF: 3.6, Q1]**
26. Wang, L., Juang, C.H., Atamturktur, S., Gong, W., **Khoshnevisan, S.**, and Hsieh, H.S., 2014. Optimization of Design of Supported Excavations in Multi-Layer Strata. *Journal of GeoEngineering*, 9(1), pp.1-10. **[JCR 2024: IF: N/A, Q3]**
27. Juang, C.H., Wang, L., Liu, Z., Ravichandran, N., Huang, H., and Zhang, J., 2013. Robust Geotechnical Design of Drilled Shafts in Sand: New Design Perspective. *Journal of Geotechnical and Geoenvironmental Engineering*, 139(12), pp.2007-2019. **[JCR 2024: IF: 4.4, Q1]**
28. Juang, C.H., Ching, J., Wang, L., **Khoshnevisan, S.**, and Ku, C.S., 2013. Simplified Procedure for Estimation of Liquefaction-Induced Settlement and Site-Specific Probabilistic Settlement Exceedance Curve Using CPT. *Canadian Geotechnical Journal*, 50(10), pp.1055-1066. **[JCR 2024: IF: 3.6, Q1]**

Under Review

. Edjah, K.*, **Khoshnevisan, S.**, and Norouzi, M. Audio-Based Non-Destructive Soil Compaction Monitoring Using Training-Free Wavelet Scattering Features. Submitted to *GeoData and AI* (accepted with major revision)

. Edjah, K.*, Sadik, L.*, **Khoshnevisan, S.**, Norouzi, M., Bastani, K., Wang, L., and Siddiki, N. Practical Intelligent Compaction with Modest Accelerometers: Real-Time Soil Stiffness via Roller Accelerometer Vibration Analysis. Submitted to *Transportation Research Record*. (NOTE: TRB presentation accepted; manuscript forwarded to TRR for consideration.)

. Sadik, L*, **Khoshnevisan, S.**, Edjah, Kwame*. Within-Group Data Leakage and Inflated R2 in Geotechnical ML: A Resilient Modulus Study. Submitted to Journal of Transportation Engineering, Part B: Pavements

Under Preparation

Edjah, K.*, **Khoshnevisan**, **S.**, Mehdi Norouzi, Kaveh Bastani, Laith Sadik*, Nayyar Siddiki, Shoaib Ur Rehman*, Arham Siddiqui*. Wavelet Scattering Features for Classification-Based Intelligent Compaction Under Limited Ground-Truth Data. To be submitted to Journal of Transportation Geotechnics

Peer-Reviewed Conference Papers

1. Sadik, L.* and **Khoshnevisan, S.**, Enhancing 3D Soil Characterization through Machine Learning from CPT Data. In Geo-Congress 2026 (pp. 81-90).
2. Zhang, L., Wang, L., and **Khoshnevisan, S.**, 2025. Comparison of Earthen Levee Reliability in the Face of Flooding Hazards. *Geotechnical Frontiers 2025* (pp. 377-383).
3. Sadik, L.* and **Khoshnevisan, S.**, 2025. Interpretable Soil Liquefaction Prediction with Genetic Programming Derived Closed-Form Models. *Geotechnical Frontiers 2025* (pp. 59-66).
4. Sadik, L.*, **Khoshnevisan, S.**, and Wang, L., 2025. Hybrid Machine Learning for Enhanced CPT Sounding Predictions at Unsampled Locations. *Geotechnical Frontiers 2025* (pp. 38-46).
5. Sadik, L.*, Chang, J., Yeh, Z., Siddiki, N., Norouzi, M., and **Khoshnevisan, S.**, 2024. Harnessing Machine Learning for Resilient Modulus Prediction of Subgrade Soil: Leveraging an Extensive Dataset from Indiana, USA. *TRB 2024*.
6. Zhang, L., **Khoshnevisan, S.**, Adams, D., Mandjoupa, L.K., and Wang, L., 2024. Developing an Experimental Test Bed for Drilling into Lunar Regolith Simulants. *Geo-Congress 2024* (pp. 74-80).
7. Sadik, L.* and **Khoshnevisan, S.**, 2024. Predicting Soil Liquefaction Potential Using XGBoost Algorithm with Bayesian Hyperparameters' Optimization. *Geo-Congress 2024* (pp. 406-414).
8. Sadik, L.*, **Khoshnevisan, S.**, and Wang, L., 2024. Improved Estimation of California Bearing Ratio Value from Dynamic Cone Penetrometer Test Data Using Hierarchical Bayesian Modeling. *Geo-Congress 2024* (pp. 364-373).
9. Sadik, L.* and **Khoshnevisan, S.**, 2024. Simplicity versus Complexity in Machine Learning Models—Focusing on Soil Resilient Modulus Prediction. *Geo-Congress 2024* (pp. 386-395).
10. Sadik, L.* and **Khoshnevisan, S.**, 2023. Developing SPT-CPT Correlation Models Using Hierarchical Bayesian Approach. *Rocscience International Conference (RIC) 2023* (pp. 655-665).
11. Sadik, L.*, **Khoshnevisan, S.**, and Athar, M.F.*, 2023. Reliability-Based Robust Design Framework for Rigid Pavements. *Geo-Congress 2023* (pp. 388-396).
12. Athar, M.F.*, **Khoshnevisan, S.**, and Sadik, L.*, 2023. CPT-Based Soil Classification Through Machine Learning Techniques. *Geo-Congress 2023* (pp. 277-292).
13. Wang, L., Tait, S., **Khoshnevisan, S.**, Barati, F., and Juang, C.H., 2021. Probabilistic Stability Assessment of Earthen Levees Subjected to Earthquake Loads. International Foundations *Congress and Equipment Expo 2021*.
14. Peng, D.*, **Khoshnevisan, S.**, and Wang, L., 2021. Robust Design of Road-Sign Structure Footing in Face of Uncertainties. *IFCEE 2021* (pp. 266-273).
15. Wang, L., Tait, S., Shin, J.S., **Khoshnevisan, S.**, and Gong, W., 2019. Reliability of Geosynthetic Reinforced Soil Structure Design with Probabilistic and Finite Element Methods. *ISGSR 2019*.
16. **Khoshnevisan, S.**, Wang, L., Wang, W., and Juang, C.H., 2019. Influence of Gaps in Capping Clay Layer on Liquefaction. *Geo-Congress 2019* (pp. 473-478).
17. **Khoshnevisan, S.**, Tan, X., Shen, M., Juang, C.H., and Zhang, Y., 2019. A Robust Approach for Selecting LRFD Characteristic Values of Uncertain Soil Parameters. *Geo-Congress 2019* (pp. 256-268).
18. Juang, C.H., Zhang, J., **Khoshnevisan, S.**, and Gong, W., 2017. Probabilistic Methods for Assessing Soil Liquefaction Potential and Effect. *Georisk 2017, GSP No. 282* (keynote lecture).
19. Wang, L., Smith, N., **Khoshnevisan, S.**, Luo, Z., and Juang, C.H., 2017. Reliability-Based Geotechnical Design of Geothermal Foundations. *Geotechnical Frontiers 2017* (pp. 124-132).

20. Gong, W., Juang, C.H., Martin, J.R., Liu, W., and **Khoshnevisan, S.**, 2017. Total Failure Probability of a Slope at a Given Site in a Seismic-Prone Zone. *Geotechnical Frontiers 2017* (pp. 472-481).
21. **Khoshnevisan, S.**, Wang, L., and Juang, C.H., 2017. Practical Robust Geotechnical Design of Supported Excavations-A Case History. *Geotechnical Frontiers 2017* (pp. 181-193).
22. Wang, L., **Khoshnevisan, S.**, Luo, Z., and Juang, C.H., 2016. Extended Kalman Filter for the Inverse Analysis of a Supported Excavation. *Geotechnical and Structural Engineering Congress 2016* (pp. 1380-1391).
23. Wang, L., Gong, W., Luo, Z., **Khoshnevisan, S.**, and Juang, C.H., 2015. Reliability-Based Robust Geotechnical Design of Rock Bolts for Slope Stabilization. *IFCEE 2015* (pp. 1926-1935).
24. **Khoshnevisan, S.**, Wang, L., Gong, W., and Juang, C.H., 2015. Robust Design Optimization Applied to Braced Excavations. *IFCEE 2015* (pp. 1380-1388).
25. Gong, W., **Khoshnevisan, S.**, Huang, H., Juang, C.H., and Zhang, J., 2015. R-LRFD: Robust Load and Resistance Factor Design. *IFCEE 2015* (pp. 299-308).
26. **Khoshnevisan, S.**, Juang, C.H., Zhou, Y.G., Ku, C.S., Wang, L., and Ding, H.J., 2015. Assessing Liquefaction-Induced Lateral Spreads Using CPT Cases from the Christchurch Earthquakes. *IFCEE 2015* (pp. 1189-1196).
27. Huang, H., Gong, W., Juang, C.H., and **Khoshnevisan, S.**, 2014. Robust Geotechnical Design of Shield-Driven Tunnels Using Fuzzy Sets. *Tunneling and Underground Construction* (pp. 184-194).
28. Luo, Z., Wang, L., **Khoshnevisan, S.**, and Juang, C.H., 2014. Effect of Spatial Variability on the Reliability-Based Design of Drilled Shafts. *Geo-Congress 2014* (pp. 3274-3282).
29. Wang, L., Luo, Z., **Khoshnevisan, S.,** and Juang, C.H., 2014. Robust Design of Braced Excavations Using Multi-Objective Optimization. *Geo-Congress 2014* (pp. 3178-3187).

Pending Peer-Reviewed Conference Papers

. Siddiqui, A.*, Rehman, S.*, **Khoshnevisan, S.**, Evaluating Laboratory Compaction Criteria for Dense- and Open-Graded Aggregates in Pavement Systems. ASCE2027 (Abstract accepted)
. Edjah, K.*, **Khoshnevisan, S.**, Rehman, S.*, Siddiqui, A.*, Compaction Monitoring of Dense-Graded Aggregate over Geogrid: A Comparative Field Study Using Acoustic Emission, Roller-Mounted Accelerometer Measurements, and Light Weight Deflectometer. IFCEE2027 (Abstract accepted)
. **Khoshnevisan, S.**, Sadik, L.*, Rehman, S.*, Siddiqui, A.*, Improving Resilient Modulus Prediction without Additional Testing: The Value of Moisture Content Relative to Optimum IFCEE2027 (Abstract accepted)
. Rehman, S.*, **Khoshnevisan, S.**, Siddiqui, A.* Thermal Cycling Effects on Small-Strain Stiffness of Granular Soils: A DEM Study. IFCEE2027 (Abstract accepted)
. **Khoshnevisan, S.**, Wang, H., Zhu, Y., Cheng, K. AI in Geotechnical Engineering: Opportunities, Challenges, and Future Directions. ASCE2027 (Abstract accepted)

Technical Reports

1. **Khoshnevisan, S.**, Norouzi, M., and Sadik, L.*, 2024. Use of Machine Learning Methods to Obtain a Reliable Predictive Model for Resilient Modulus of Subgrade Soil. Purdue University, *Joint Transportation Research Program-FHWA/IN/JTRP-2024/27*.

PROFESSIONAL PRESENTATIONS

Invited Presentations

1. "The Interpretability Dilemma: White Box vs Black Box Models," ASCE Continuing Education, December 2024.
2. Invited Featured Guest, ASCE Geo-Institute Director's Cut (interview series hosted by Geo-Institute Director Brad Keelor) S05E12, March 2024.
3. "Machine Learning for Resilient Subgrade Soil Predictions," Purdue Road School, March 2024.
4. "AI and Machine Learning in Geotechnical Engineering," TRB AKG20 Committee Meeting, Washington, D.C., January 2024.
5. "Revolutionizing Geotechnical Engineering: The Role of Machine Learning," GeoRisk 2023, Bright Spark Lecture (invited), Arlington, VA, July 2023.
6. "Machine Learning in Geotechnical Engineering," ISSMGE IITT, TC309 Session (invited by ISSMGE President), July 2023.

Conference Presentations

1. "Practical Intelligent Compaction with Modest Accelerometers," TRB Annual Meeting, Washington, D.C., January 2026.
2. "From Sound to Soil: Classifying Compaction Levels Using Audio-Based ML," CEPDS, Purdue University, November 2025.
3. "Harnessing Machine Learning for Resilient Modulus Prediction of Subgrade Soil," TRB 2024, Washington, D.C., January 2024.
4. "Using Roller Sound to Assess Site Compaction Uniformity," Purdue Road School, West Lafayette, IN, March 2025.
5. "Practical Robust Geotechnical Design," DFI-ADSC Seminar, Saddle Brook, NJ, September 2015.
6. "Robust Design Optimization Applied to Braced Excavations," GeoCongress/IFCEE 2015, San Antonio, TX, March 2015.
7. "Robust Design of Braced Excavations Using Multi-Objective Optimization," Geo-Congress 2014, Atlanta, GA, March 2014.

HONORS AND AWARDS

- **Bright Spark Lecture Award**, awarded by the ISSMGE President at GeoRisk 2023, Arlington, VA.
- **Clemson University Distinguished Graduate Fellowship Award**, April 2015.
- **Aniket Shirkhande Memorial Annual Graduate Fellowship in Geotechnical Engineering**, Clemson University, March 2015.
- **USUCGER Student Travel Grant Awardee**, one of three national recipients; sponsored to attend GeoCongress/IFCEE 2015.
- **Nominee for Middlebrooks Award (Best Paper), ASCE**, "Efficient robust geotechnical design of drilled shafts in clay using a spreadsheet," JGGE, 2015.
- **Nominee for Best Paper Award, Georisk**, "Robust design in geotechnical engineering - An update," 2014.
- **Excellent Paper Award**, Journal of GeoEngineering, Taiwan Geotechnical Society, March 2015.
- **Best Paper Award**, ASCE GeoShanghai International Conference, Shanghai, China, 2014.
- **Fellowship**, 2nd USUCGER Workshop for Early Career Geotechnical Faculty, Case Western Reserve University, 2018.

PROFESSIONAL SERVICE

Leadership & Editorial

- Vice Chair, ASCE Geo-Institute Technical Subcommittee on Risk Assessment and Management (2024-present)
- Member, Editorial Board, Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards (2024-present)
- Secretary, ASCE Geo-Institute Technical Subcommittee on Risk Assessment and Management (2019-2024)
- Awards Secretary, ASCE Geo-Institute Technical Subcommittee on Earth Retaining Structures (2016-2019)
- Reviewer: Canadian Geotechnical Journal, Engineering Geology, JGGE, Georisk, Transportation Research Record, Journal of GeoEngineering

Conference Service

- Conference Advisor, Geotechnical Frontiers 2025
- Technical Organizer and Session Chair, Geo-Risk 2023
- Session Chair, GeoCongress 2022
- Session Moderator, Geotechnical and Structural Engineering Congress 2016

University Service

- Member, COACHE Survey Committee, University of Cincinnati (2025-present)
- Member, Ad-Hoc Committee on RPT Criteria, CAECM (Spring 2025)
- Member, Committee for Department Chair Search, CAECM (Fall 2024-Spring 2025)
- Member, Graduate Committee, CAECM, University of Cincinnati (2019-present)

Graduate Student Advising

- Ph.D. advising: 1 completed (Laith Sadik, primary advisor); 2 in progress (Kwame Edjah, co-chair; Shoaib Rehman, primary advisor)
- M.S. advising: 1 completed (Mohammad Faraz Athar); 1 in progress (Arham Siddiqui)
- Committees: 3 doctoral committees; 5 M.S. committees (member); 1 undergraduate capstone

Prior Service (Clarkson University, 2017-2019)

- Faculty Advisor, ASCE Student Chapter and Timber Bridge Competition Team
- Undergraduate Advisor for 22 students in Civil Engineering
- Advisor for 1 M.E. student and 1 M.Sc. student

PROFESSIONAL MEMBERSHIPS

- American Society of Civil Engineers (ASCE), Associate Member
- ASCE Geo-Institute, Technical Committee on Risk Assessment and Management, Vice Chair
- United States Universities Council on Geotechnical Education and Research (USUCGER), Member
- Deep Foundation Institute (DFI), Member