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EDUCATION

Iowa State University	Civil, Construction and Environmental Engineering Department	
Ph.D.	Geotechnical Engineering	2003
Jordan University of Science and Technology		
M.S.	Civil Engineering	1999
B.S.	Civil Engineering (<i>Ranked First</i>)	1997

EMPLOYMENT HISTORY

Professor		
<i>Lehigh University</i>		2021-
Associate Professor		
<i>Lehigh University</i>		2015-2021
P.C. Rossin Assistant Professor		
<i>Lehigh University</i>		2012-2015
Assistant Professor		
<i>Lehigh University</i>		2010-2015
Assistant Professor		
<i>Lafayette College</i>		2008-2010
Visiting Assistant Professor		
<i>Iowa State University</i>	Summers	2008-2010
Research Assistant Professor/Lecturer		
<i>Iowa State University</i>		2004-2007
Post Doctorate Research Associate		
<i>Iowa State University</i>		2003
Research and Teaching Assistant		
<i>Iowa State University</i>		1999-2002
Civil Engineer		
<i>Consolidated Consultants, Amman, Jordan</i>		1999
Research and Teaching Assistant		
<i>Jordan University of Science and Technology</i>		1997-1999

PUBLICATIONS

Summary

1.	Total number of books/conference proceeding editorship – published and accepted	7
2.	Total number of peer-reviewed journal papers – published and accepted	49
3.	Total number of peer-reviewed conference papers – published and accepted	41
4.	Total number of closures and discussions – published and accepted	4
5.	Total number of conference papers, presentations and research reports	75

*Notations: (D) for Doctoral Student, (M) for MS Student, (U) for Undergraduate Student, * Identify Advised/Co-advised Student/Post-doctorate, (DA) for Doctoral Advisor, (PA) for Postdoctoral Advisor identified only for work conducted during post-doctorate position, (I) for industry partner*

Conference Proceedings Editorship

- B1.** *IFCEE 2018: Proceedings of the International Foundation Congress and Equipment Expo 2018*, Editors: Suleiman, M. T., Lemnitzer, A., and Stuedlein, A. W. *Installation, Testing, and Analysis of Deep Foundations*. Geotechnical Special Publication No. 294. Orlando, FL, Published by ASCE. ISBN: 9780784481578.
- B2.** *IFCEE 2018: Proceedings of the International Foundation Congress and Equipment Expo 2018*, Editors: Suleiman, M. T., Lemnitzer, A., and Stuedlein, A. W. *Case Histories and Lessons Learned*. Geotechnical Special Publication No. 298. Orlando, FL, Published by ASCE. ISBN: 9780784481615.
- B3.** *IFCEE 2018: Proceedings of the International Foundation Congress and Equipment Expo 2018*, Editors: Lemnitzer, A., Stuedlein, A. W., and Suleiman, M. T. *Recent Development in Geotechnical Engineering Practice*. Geotechnical Practical Publication No. 11. Orlando, FL, Published by ASCE. ISBN: 9780784481622.
- B4.** *IFCEE 2018: Proceedings of the International Foundation Congress and Equipment Expo 2018*, Editors: Lemnitzer, A., Stuedlein, A. W., and Suleiman, M. T. *Developments in Earth Retention, Support Systems, and Tunneling*. Geotechnical Special Publication No. 297. Orlando, FL, Published by ASCE. ISBN: 9780784481608.
- B5.** *IFCEE 2018: Proceedings of the International Foundation Congress and Equipment Expo 2018*, Editors: Stuedlein, A. W., Lemnitzer, A., and Suleiman, M. T. *Innovations in Ground Improvement for Soils, Pavements, and Subgrades*. Geotechnical Special Publication No. 296. Orlando, FL, Published by ASCE. ISBN: 9780784481592.
- B6.** *IFCEE 2018: Proceedings of the International Foundation Congress and Equipment Expo 2018*, Editors: Stuedlein, A. W., Lemnitzer, A., and Suleiman, M. T. *Advances in Geomaterial Modeling and Site Characterization*. Geotechnical Special Publication No. 295. Orlando, FL, Published by ASCE. ISBN: 9780784481585.
- B7.** *IFCEE 2015: Proceedings of the International Foundation Congress and Equipment Expo 2015*, Editors: Iskander, M., Suleiman, M., Anderson, B., and Laefer, D. Geotechnical Special Publication No. 256, 2845 pages. San Antonio, Texas. Published by ASCE. ISBN: 9780784479087.
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Peer Reviewed Journal Publications – published and accepted

- J1.** Elzeiny, R.^(D*), and Suleiman, M. T. (2021). “Pull-out Response of a Laboratory-Scale Energy Pile Subjected to Cooling Cycles.” *Journal of Geotechnical and Geoenvironmental Engineering-ASCE*. DOI: 10.1061/(ASCE)GT.1943-5606.0002534.
- J2.** Lin, H.^(D*), O’Donnell, S. T., Suleiman, M. T., Kavazanjian, E., Brown, D. (2021). “Effects of Enzyme and Microbially-Induced Carbonate Precipitation (EICP and MICP) Treatment on the Response of Axially Loaded Pervious Concrete Piles.” *Journal of Geotechnical and Geoenvironmental Engineering-ASCE-Accepted*
- J3.** Lin, H.^(D*), Suleiman, M. T., Brown, D. (2020). “Investigation of Pore-Scale CaCO₃ Distribution and Their Effects on Stiffness and Permeability of Sands Treated by Microbially Induced Carbonate Precipitation (MICP).” *Soils and Foundations*. Vol 60, No.4, pp 944-961.
- J4.** Elzeiny, R.^(D*), Suleiman, M. T., Xiao, S.^(D*), Abu Qamar, M.^(D*), Al-Khawaja, M. (2020). “Laboratory-scale Pull-out Tests on a Geothermal Energy Pile in Dry Sand Subjected to Heating Cycles.” *Canadian Geotechnical Journal*. 10.1139/cgj-2019-0143 <https://www.nrcresearchpress.com/doi/abs/10.1139/cgj-2019-0143?journalCode=cgj>
- J5.** Oualha, M.^(M), Bibi, S.^(M), Suleiman, M. T., and Zouari, N. (2020). “Microbially-induced Calcite Precipitation in Calcareous Soil by Endogenous Bacillus Cereus at High pH and Harsh Weather.” *Journal of Environmental Management*. 275(3), 10.1016/j.jenvman.2019.109965 <https://www.sciencedirect.com/science/article/pii/S0301479719316834>
- J6.** Xiao, S.^(D*), Suleiman, M. T., Al-Khawaja, M. (2019). “Investigation of Effects of Temperature Cycles on Soil-Concrete Interface Behavior Using Direct Shear Tests.” *Soils and Foundations*, 59(5), pp 1213-1227, 10.1016/j.sandf.2019.04.009. <https://www.sciencedirect.com/science/article/abs/pii/S003808061930143X>
- J7.** Xiao, S.^(D*), Neti, S., Suleiman, M. T., and Naito, C. (2019). “A New Modeling Approach of Heat Transfer of Bridges Considering Vehicle-induced Thermal Effects.” *Journal of Applied Meteorology and Climatology*, 10.1175/JAMC-D-17-0315.1.
- J8.** Xiao, S.^(D*), Suleiman, M. T., Elzeiny, R.^(D*), Naito, C., Neti, S., and Al-Khawaja, M. (2018). “Effects of Temperature and Radial Displacement Cycles on Soil-concrete Interface Properties Using Modified Thermal Borehole Shear Test.” *Journal of Geotechnical and Geoenvironmental Engineering*, Vol 144, No. 7, 10.1061/(ASCE)GT.1943-5606.0001892.
- J9.** Bibi, S.^(M), Oualha, M.^(M), Ashfaq, M.^(M), Suleiman, M. T., and Zouari, N. (2018). “Isolation, Differentiation and Biodiversity of Ureolytic Bacteria of Qatari Soil and their Potentials in Microbially Induced Calcite Precipitation (MICP) for Soil Stabilization.” *RSC Advances*, 8, 5854-5863, 10.1039/C7RA12758H
- J10.** Lin, H.^(D*), Suleiman, M. T., Jabbour, H.^(M*), Brown, D. (2018). “Bio-Grouting to Enhance Axial Pull-out Response of Pervious Concrete Ground Improvement Piles.” *Canadian Geotechnical Journal*, 55(1): 119-130, 10.1139/cgj-2016-0438.
- J11.** Xiao, S.^(D*), Suleiman, M. T., Naito, C., Al-Khawaja, M. (2017). “Modified-Thermal Borehole Shear Test Device and Testing Procedure to Investigate the Soil-Structure Interaction of Energy Piles.” *Geotechnical Testing Journal*, Vol. 40, no. 6, pp. 1043-1056. 10.1520/GTJ20160257. ISSN 0149-6115
- J12.** Lin, H.^(D*), Suleiman, M. T., Jabbour, H.^(M*), Brown, D., and Kavazanjian, E. (2016). “Enhancing the Axial Compression Response of Pervious Concrete Ground Improvement Piles Using Bio-Grouting.” *Journal of Geotechnical and Geoenvironmental Engineering*, 10.1061/(ASCE)GT.1943-5606.0001515
- J13.** Suleiman, M. T., Ni, L.^(D*), Davis, C. M.^(U*), Lin, H.^(D*), Xiao, S.^(D*) (2016). “Installation Effects of Controlled Modulus Column Ground Improvement Piles.” *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 142, No. 1, 10.1061/(ASCE)GT.1943-5606.0001384
- J14.** Ni, L.^(D*), Suleiman, M. T., and Raich, A. (2016). “Behavior and Soil-Structure Interaction of Pervious Concrete Ground Improvement Piles under Lateral Loading.” *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 142, No. 2, 10.1061/(ASCE)GT.1943-5606.0001393
- J15.** Lin, H.^(D*), Suleiman, M. T., Brown, D., and Kavazanjian, E. (2016). “Mechanical Behavior of Sands Treated by Microbially Induced CaCO₃ Precipitation.” *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 142, No. 2, 10.1061/(ASCE)GT.1943-5606.0001383, 04015066.

- J16.** Sritharan, S., Cox, A. ^(M*), Huang, J. ^(M), Suleiman, M. T., Arulmoli, K. ^(I) (2016). “Minimum Confinement Reinforcement for Prestressed Concrete Piles and a Rational Seismic Design Framework.” *PCI Journal*, January-February 2016
- J17.** Kharseh, M. ^(P*), Al-Khawaja, M., and Suleiman, M. T. (2015). “Potential of Ground Source Heat Pump Systems in Cooling-Dominated Environments: Residential Buildings.” *Geothermics Journal*, 57, 104-110. [10.1016/j.geothermics.2015.06.009](https://doi.org/10.1016/j.geothermics.2015.06.009)
- J18.** Suleiman, M. T., Ni, L. ^(D*), Raich, A., Helm, J., and Ghazanfari, E. ^(D) (2015). “Measured Soil-Pile Interaction for Concrete Pile Subjected to Lateral Loading.” *Canadian Geotechnical Journal*, Vol. 52, No. 8, 1168-1179. [10.1139/cgj-2014-0197](https://doi.org/10.1139/cgj-2014-0197)
- J19.** Abu-Hejleh, N. ^(I), Abu-Farsakh, M., Suleiman, M. T., Tsai, C. (2015). “Development of High-Quality Databases of Deep Foundation Load Tests” *Transportation Research Record*, TRB. No. 2511, pp 27-36.
- J20.** Lin, H. ^(D*), Ni, L. ^(D*), Suleiman, M. T., and Raich, A. (2015). “Interaction Between Laterally Loaded Pile and Surrounding Soil.” *Journal of Geotechnical and Geoenvironmental Engineering*. Vol. 141, No. 4, [10.1061/\(ASCE\)GT.1943-5606.0001259](https://doi.org/10.1061/(ASCE)GT.1943-5606.0001259)
- J21.** Suleiman, M. T., Ni, L. ^(D*), Raich, A. (2014). “Development of Pervious Concrete Pile Ground-Improvement Alternative and Behavior under Vertical Loading.” *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 140, No. 7, [10.1061/\(ASCE\)GT.1943-5606.0001135](https://doi.org/10.1061/(ASCE)GT.1943-5606.0001135)
- J22.** AbdelSalam, S. S. ^(D*), Suleiman, M. T., and Sritharan, S. (2014). "Modeling Load-Transfer Behavior of H-Piles Using Direct Shear and Penetration Tests Results." *Geotechnical Testing Journal*, Vol. 37, No. 4, pp 663-677. [10.1520/GTJ20130074](https://doi.org/10.1520/GTJ20130074)
- J23.** Yoon, S. ^(D), Cheng, L., Ghazanfari, E. ^(D), Pamukcu, S., and Suleiman, M. T. (2014). “A Theoretical and Empirical Analysis of Underground-to-Underground Communication for Wireless Sensor Networks.” *Ad Hoc and Sensor Wireless Networks*, Vol. 24, No. 3-4, pp 333-348.
- J24.** Suleiman, M. T., Ni, L. ^(D*), Helm, J. D., and Raich, A. (2014). “Soil-Pile Interaction of Passive Piles Embedded in Granular Soil.” *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 140, No. 5, [10.1061/\(ASCE\)GT.1943-5606.0001081](https://doi.org/10.1061/(ASCE)GT.1943-5606.0001081)
- J25.** Ng, K. W. ^(D*), Roling, M. ^(M*), AbdelSalam, S. S. ^(D*), Suleiman, M. T., Sritharan, S. (2013). “Pile Setup in Cohesive Soil: An Experimental Investigation.” *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 139, No. 2, pp. 199-209. [10.1061/\(ASCE\)GT.1943-5606.0000751](https://doi.org/10.1061/(ASCE)GT.1943-5606.0000751)
- J26.** Ng, K. W. ^(D*), Suleiman, M. T., Sritharan, S. (2013). “Pile Setup in Cohesive Soil: Analytical Quantifications and Design Recommendations.” *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 139, No. 2, pp. 210-222. [10.1061/\(ASCE\)GT.1943-5606.0000753](https://doi.org/10.1061/(ASCE)GT.1943-5606.0000753)
- J27.** Xiao, S. ^(D*), Suleiman, M. T., Naito, C., Neti, S. (2013). “Use of Geothermal Deep Foundations for Bridge Deicing.” *Transportation Research Record*, *Journal of Transportation Research Board (TRB)*, No. 2363, pp. 56-65.
- J28.** AbdelSalam, S. S. ^(D*), Suleiman, M. T., and Sritharan, S. (2012). "A Load Transfer Analysis for Axially Loaded Piles Using a Modified Borehole Shear Test." *Geotechnical Testing Journal*, Vol. 35, No. 6, [10.1520/GTJ20120071](https://doi.org/10.1520/GTJ20120071)
- J29.** Ghazanfari E. ^(D), Pamukcu S., Yoon S. ^(D), Suleiman M. T., Cheng L. (2012). "Geotechnical Sensing Using Electromagnetic Attenuation Between Radio Transceivers". *Journal of Smart Materials and Structures*, Vol. 21, No. 12, [10.1088/0964-1726/21/12/125017](https://doi.org/10.1088/0964-1726/21/12/125017).
- J30.** Yoon, S. ^(D), Ghazanfari, E. ^(D), Cheng, L., Pamukcu, S., and Suleiman, M. T. (2012). “Subsurface Event Detection and Classification using Wireless Signal Networks.” *Journal of Sensors; Special Issue: Ubiquitous Sensing*, Vol. 12, No. 11, pp. 14862-14886. [10.3390/s121114862](https://doi.org/10.3390/s121114862)
- J31.** Suleiman, M. T., Gopalakrishnan, K. ^(P), and Kevern, J. ^(D) (2011). “Structural Behavior of Pervious Pavement Systems.” *Journal of Transportation Engineering*, Vol. 137, No. 12, pp. 907-917. [10.1061/\(ASCE\)TE.1943-5436.0000295](https://doi.org/10.1061/(ASCE)TE.1943-5436.0000295)
- J32.** Roling, M. ^(M*), Sritharan, S., and Suleiman, M. T. (2011). “Introduction to PILOT Database and Establishment of LRFD Resistance Factors for the Construction Control of Driven Steel H-Piles.” *Journal of Bridge Engineering*, Vol. 16, No. 6, pp. 728-738. [10.1061/\(ASCE\)BE.1943-5592.0000247](https://doi.org/10.1061/(ASCE)BE.1943-5592.0000247)
- J33.** AbdelSalam, S. S. ^(D*), Sritharan, S., Suleiman, M. T. (2011). "LRFD Resistance Factors for Design of

Driven H-Piles in Layered Soils." *Journal of Bridge Engineering*, Vol. 16, No. 6, pp. 739-748. 10.1061/(ASCE)BE.1943-5592.0000253

- J34.** Mekkawy, M. M.^(D), White, D. J., Suleiman, M. T., and Jahren, C. T. (2011). "Mechanically Reinforced Granular Shoulders on Soft Subgrade: Laboratory and Full Scale Studies." *Geotextiles and Geomembranes*, Vol. 29, No. 2, pp. 149-160. 10.1016/j.geotexmem.2010.10.006
- J35.** Roling, M.^(M*), AbdelSalam, S. S.^(D*), Sritharan, S., and Suleiman, M. T. (2011). "An Investigation of Design and Construction Practices for Bridge Pile Foundations in Iowa County Jurisdictions for LRFD Calibration." *Transportation Research Record* 2204, Vol. 2, pp. 233-241.
- J36.** Suleiman, M. T., Vande Voort, T.^(M*), and Sritharan, S. (2010). "Behavior of UHPC Driven Piles Subjected to Vertical and Lateral Loads." *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 136, No. 10, pp. 1403-1413. 10.1061/(ASCE)GT.1943-5606.0000350
- J37.** Mekkawy, M. M.^(D), White, D. J., Jahren, C. T. and Suleiman, M. T. (2010). "Performance Problems and Stabilization Techniques for Granular Shoulders." *Journal of Performance of Constructed Facilities*, Vol. 24, No. 2, pp. 159-169. 10.1061/(ASCE)CF.1943-5509.0000072
- J38.** Abdel-Salam, S. S.^(D*), Sritharan, S., and Suleiman, M. T. (2010). "Current Design and Construction Practices of Bridge Pile Foundations with Emphasis on Implementation of LRFD." *Journal of Bridge Engineering*, Vol. 15, No. 6, pp. 749-758. 10.1061/(ASCE)BE.1943-5592.0000118
- J39.** White, D. J., Thompson, M. J.^(M*), Suleiman, M. T., and Schaefer, V. R. (2008). "Behavior of Slender Piles Subjected to Free Field Lateral Soil Movement." *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 134, No. 4, pp. 428-436. 10.1061/(ASCE)1090-0241(2008)134:4(428)
- J40.** Keavern, J.^(M*), Schaefer, V. R., Wang, K., and Suleiman, M. T. (2008). "Pervious Concrete Mixture Proportions for Improved Freeze-Thaw Durability." *Journal of ASTM International*, Vol. 5, No. 2, 10.1520/JAI101320.
- J41.** Sritharan, S., Suleiman, M. T., and White, D. J. (2007). "Effects of Seasonal Freezing on Bridge Column-Foundation-Soil Interaction and Seismic Design Implications." *Earthquake Spectra*, Vol. 23, No. 1, pp. 199-222. 10.1193/1.2423071
- J42.** White, D. J., Mekkawy, M. M.^(M*), Suleiman, M. T., and Sritharan, S. (2007). "Performance of Collapse Bridge Approach Backfill with Geosynthetic Drainage and Reinforcement." *Geosynthetics International*, Vol. 14, No. 2, pp. 76-88. 10.1680/gein.2007.14.2.76
- J43.** White, D. J., Vennapusa, P.^(M), Suleiman, M. T., and Jahren, C. T. (2007). "An in-situ Device for Rapid Determination of Permeability for Granular Bases." *Geotechnical Testing Journal*, Vol. 30, No. 4, pp. 282-291. 10.1520/GTJ100648
- J44.** White, D. J., Mekkawy, M. M.^(M*), Sritharan, S., and Suleiman, M. T. (2007). "'Underlying' Causes for Settlement of Bridge Approach Pavement Systems." *Journal of Performance of Constructed Facilities*, Vol. 21, No. 4, pp. 273-282. 10.1061/(ASCE)0887-3828
- J45.** Suleiman, M. T., and White, D. J. (2006). "Load Transfer in Short Aggregate Piers." *International Journal of Geomechanics*, Vol. 6, No. 6, pp. 389-398. 10.1061/(ASCE)1532-3641
- J46.** Suleiman, M. T., Sritharan, S. and White, D. J. (2006). "Cyclic Lateral Load Response of Bridge Column-Foundation Systems in Freezing Conditions." *Journal of Structural Engineering*, Vol. 132, No. 11, pp. 1745-1754. 10.1061/(ASCE)0733-9445
- J47.** Suleiman, M. T., and Coree, B. (2004). "Constitutive Model for High Density Polyethylene Material: A Systematic Approach." *Journal of Materials in Civil Engineering*, Vol. 16, No. 6, pp. 511-515. 10.1061/(ASCE)0899-1561
- J48.** White, D. J.^(PA), and Suleiman, M. T. (2004). "Design of Short Aggregate Piers to Support Highway Embankments." *Transportation Research Record* 1868, pp. 124-134.
- J49.** Suleiman, M. T., Lohnes, R.^(DA), Wipf, T., and Klaiber, W. (2003) "Analysis of Deeply Buried Flexible Pipes." *Transportation Research Record* 1849, pp. 103-112.
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Peer Reviewed Closures and Discussions – published and accepted

- D1.** Lin, H. ^(D*), Ni, L. ^(D*), Suleiman, M. T., and Raich, A. (2016). "Closure to Interaction Between Laterally Loaded Pile and Surrounding Soil." *Journal of Geotechnical and Geoenvironmental Engineering*, 10.1061/(ASCE)GT.1943-5606.0001513, 07016012.
- D2.** Suleiman, M. T., Ni, L. ^(D*), Raich, A. (2015). "Closure to Development of Pervious Pile ground Improvement Alternative and Behavior under Vertical Loading." *Journal of Geotechnical and Geoenvironmental Engineering-ASCE*, 10.1061/(ASCE)GT.1943-5606.0001322
- D3.** Ng, K. W. ^(D*), Roling, M. ^(M*), AbdelSalam, S. S. ^(D*), Suleiman, M. T., Sritharan, S. (2014). "Closure to Pile Setup in Cohesive Soil: An Experimental Investigation." *Journal of Geotechnical and Geoenvironmental Engineering-ASCE*, Vol. 8, No. 2.
- D4.** Suleiman, M. T., and White, D. J. (2008). "Closure to Load Transfer in Short Aggregate Piers." *International Journal of Geomechanics-ASCE*, Vol. 8, No. 5, pp. 324.
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Peer Reviewed Conference Papers – published (* I presented, #presented by student, papers reviewed by two reviewers)

- C1.** El Zeiny, R. ^(D*), Malkawi, D. H. ^(D*), Suleiman, M. T. (2021). "Investigation of Thermal Loading Effects on Behavior of Energy Piles Subjected to Lateral Loading." *IFCEE 2021*.
- C2.** Malkawi, D. H. ^(D*), El Zeiny, R. ^(D*), Suleiman, M. T., and Luo, Z. (2021). "Investigation of Soil-Structure Interface Properties under Temperature Cycles and Different Operation Times of Ground Source Heat Pumps." *IFCEE 2021*.
- C3.** Abu Qamar, M. ^(D*), Suleiman, M. T. (2021). "Evaluating Effects of Cyclic Axial Loading on Soil-Pile Interface Properties Utilizing a Newly Developed Cyclic Interface Shear Test (CIST) Device." *IFCEE 2021*.
- C4.** Wang, S. ^(D*), Abdulrida, A. ^(D), Quiel, S., Naito, C., Suleiman, M. T., Casper, J. ^(D), Bravo, J. ^(D), Neti, S., Romero, C., Yao, Z., Oztekin, A. (2020). "Mechanical Performance of Concrete Thermal Energy Storage Subject to Operating Thermal Demand." *Proceedings of the ASME 2020 Heat Transfer Summer Conference (SHTC 2020), Orlando, Florida, July 12 – 16. The American Society of Mechanical Engineers*
- C5.** Casper, J. ^(D), Bravo, J. ^(D), Wang, S. ^(D*), Abdulrida, A. ^(D), Neti, S., Romero, C., Naito, C., Suleiman, M. T., Quiel, S., Yao, Z., Oztekin, A. (2020). "Thermal Performance of Sensible Energy Storage Module Consisting of A Cementitious Matrix – the Effect of Operating Conditions." *Proceedings of the ASME 2020 Heat Transfer Summer Conference (SHTC 2020), Orlando, Florida, July 12 – 16. The American Society of Mechanical Engineers*
- C6.** #Bick, P. ^(M*), Bastola, H. ^(D), Suleiman, M. T., Gu, J. ^(M*), Diplas, P., Brown, D., Zouari, N. (2019). "Minimizing Wind Erosion using Microbial Induced Carbonate Precipitation." *Geo-Congress 2019: Eight International Conference on Case Studies in Geotechnical Engineering, Soil Improvement, 223-230. Philadelphia, PA. Editors: C. Meehan, S. Kumar, M. Pando, J. Coe. Geo-Institute, ASCE. Geo-Institute ASCE*
- C7.** #El Zeiny, R. ^(D*), Suleiman, M. T., Abu Qamar, M. ^(D*), Xiao, S. ^(D*), and Al-Khawaja, M. (2018). "Axial Pull-out Response of a Small Scale Concrete Pile Subjected to Cyclic Thermal Loading in Sand." *International Foundation Congress and Equipment Expo 18, 706-714, Orlando, Florida. Editors: Suleiman, M. T., Lemnitzer, A., and Stuedlein, A. W. Geo-Institute, ASCE*
- C8.** #Lin, H. ^(D*), Suleiman, M. T., Brown, D. (2018). "Behavior of Biofilm-Cemented Sands." *International Foundation Congress and Equipment Expo 18, 1-11, Orlando, Florida. Editors: Stuedlein, A. W., Lemnitzer, A., and Suleiman, M. T. Geo-Institute, ASCE*
- C9.** #Gu, J. ^(D*), Suleiman, M. T., Bastola, H. ^(D), Brown, D., Diplas, D. (2018). "Treatment of Sand using Microbial-Induced Calcite Precipitation (MICP) for Wind Erosion Application." *International Foundation Congress and Equipment Expo 18, 1545-164, Orlando, Florida. Editors: Stuedlein, A. W., Lemnitzer, A., and Suleiman, M. T. Geo-Institute, ASCE*

- C10.** #Xiao, S.^(D*), Suleiman, M. T., El Zeiny, R.^(D*), Xie, H.^(U*), and Al-Khawaja, M. (2017). "Soil-concrete Interface Properties Subjected to Temperature Change and Cycles using Direct Shear Test." *ASCE Geotechnical Frontiers 2017, Orlando, Florida. Geo-Institute, ASCE*
- C11.** Ahmed, K.^(P*), Al-Khawaja, M., and Suleiman, M. T. (2017). "Uniform Fractional Factorial Design Tables for energy Piles with Maximum Thermal Conduction." *Energy and Sustainability VII, Edited by Brebbia, C. A., 7th International Conference on Energy and Sustainability, Seville, Spain, Sep. 20-22.*
- C12.** #Xiao, S.^(D*), Suleiman, M. T., Elzeiny, R.^(D*), and Al-Khawaja, M. J. (2016). "Cyclic Loading Effects on Soil-Energy Pile Interaction." *1st International Conference on Energy Geotechnics (ICEGT), August 29-31, Kiel, Germany. Springer*
- C13.** #Lin, H.^(D*), Suleiman, M. T., Jabbour, H. M.^(M*), and Brown, D. G. (2015). "Enhancement of Permeable Pile Foundation Using Microbial Induced Calcite Precipitation." *International Foundation Congress and Equipment Expo 2015, 775-783, San Antonio, Texas. Editors: M. Iskander, M. Suleiman, B. Anderson, D Laefer. Geo-Institute, ASCE.*
- C14.** #Xiao, S.^(D*), and Suleiman, M. T. (2015). "Investigation of Thermo-mechanical Behavior of Soil-Energy Pile Interface Using Modified Borehole Shear Tests." *International Foundation Congress and Equipment Expo 2015, 1658-1667, San Antonio, Texas. Editors: M. Iskander, M. Suleiman, B. Anderson, D Laefer. Geo-Institute, ASCE.*
- C15.** *Ni, L.^(D*), Suleiman, M. T., and Raich, A. (2015). "The Effects of Single Pile Installation in Sand." *International Foundation Congress and Equipment Expo 2015, 809-816, San Antonio, Texas. Editors: M. Iskander, M. Suleiman, B. Anderson, D Laefer. Geo-Institute, ASCE.*
- C16.** #Xiao, S.^(D*), Suleiman, M. T., McCartney, J. (2014). "Shear Behavior of Silty Soil and Soil-Structure Interface under Thermal Loading." *2014 GeoCongress, Geo-Characterization and Modeling for Sustainability. 4105-4114. Atlanta, Georgia, February 23-26, 2014. Geo-Institute, ASCE*
- C17.** #Lin, H.^(D*), Suleiman, M. T., Helm, J., Brown, D. (2014). "Experimental Measurement of Bonding Strength between Two Glass Beads Treated by Microbial-Induced Calcite Precipitation (MICP)." *2014 GeoCongress, Geo-Characterization and Modeling for Sustainability. 1625-1634. Atlanta, Georgia, February 23-26, 2014. Geo-Institute, ASCE*
- C18.** Abu-Hejleh, N., Abu-Farsakh, M., Suleiman, M. T. (2014). "Foundation Load Test Databases: Applications, Contents, and Development." *Transportation Research Board, 93rd Annual meeting, Washington, D.C. TRB.*
- C19.** #Ni, L.^(D*), Suleiman, M. T., Raich, A. (2013). "Pervious Concrete Pile: An Innovative Ground Improvement Alternative." *Proceedings of Geo-Congress 2013, Stability and Performance of Slopes and Embankments, 2051-2058, March 3-6, 2013, San Diego, California, USA. Geo-Institute, ASCE*
- C20.** #Bildik, S., Laman, M., and Suleiman, M. T. (2013). "Uplift Behavior of Anchor Plates in Slope." *Proceedings of Geo-Congress 2013, Stability and Performance of Slopes and Embankments, 1795-1803, March 3-6, 2013, San Diego, California, USA. Geo-Institute, ASCE*
- C21.** *Suleiman, M. T., Raich, A., Ni, L.^(D*), Kingston, W.^(U*), Polson, T.^(U*), Helm, J. (2012). "Measured Soil-Pile Interaction for Piles Embedded in Granular Soil Subjected to Lateral Soil Movement." *Proceedings of GeoCongress 2012, State of the Art and Practice in Geotechnical Engineering, 135-144, Oakland, CA, March, 25-29. Geo-Institute, ASCE*
- C22.** Helm, J. and Suleiman, M. T. (2012). "Measuring Soil-Structure Interaction on Laterally Loaded Piles with Digital Image Correlation." *Proc. of the Symposium on Full Field Measurements and Identification in Solid Mechanics, Vol 4, 66-72, International Union of Theoretical and Applied Mechanics, Cachan, France. Elsevier*
- C23.** #Ghazanfari E.^(D), Yoon S.^(D), Pamukcu S., Suleiman M. T., Cheng L. (2012). "Real Time Global Subsurface Monitoring using New Application of Wireless Signal Networks, Proof of Concept". *Proceedings of GeoCongress 2012, State of the Art and Practice in Geotechnical Engineering, 3089-3098, Oakland, CA, March, 25-29. Geo-Institute, ASCE*
- C24.** #Yoon, S.^(D), Cheng, L., Ghazanfari, E.^(D), Wang, Z., Pamukcu, S., and Suleiman, M. T. (2012). "Subsurface Monitoring using Low Frequency Wireless Signal Networks" *Proceedings of 2012 IEEE International Conference on Pervasive Computing and Communications Workshops, 443-446, March. 19. IEEE*

- C25.** #Bildik, S., Laman, M., and Suleiman, M. T. (2012). "Parametric Studies of Buried Pipes Using Finite Element Analysis." *Third International Conference on New Developments in Soil Mechanics and Geotechnical Engineering, 28-30 June 2012, Nicosia, Cyprus.*
- C26.** #Yoon, S.^(D), Cheng, L., Ghazanfari, E., Pamukcu, P., and Suleiman, M. T. (2011). "A Radio Propagation Model for Wireless Underground Sensor Networks" *Proceedings of 2011 IEEE Global Telecommunications Conference-GLOBECOM 2011, 1-5, Houston, TX. December 5, IEEE*
- C27.** *Suleiman, M. T., AbdelSalam, S. S.^(D*), and Sritharan, S. (2011). "Improving Prediction of the Load Displacement Response of Axially Loaded Friction Piles." *Proceedings of Geo-Frontiers 2011, Advances in Geotechnical Engineering, 36-45, Dallas, TX. Geo-Institute, ASCE*
- C28.** *AbdelSalam, S. S.^(D*), Sritharan, S., and Suleiman, M. T. (2011). "Investigation of LRFD Resistance Factors with Consideration of Soil Variability along the Pile Length." *Proceedings of Geo-Frontiers 2011, Advances in Geotechnical Engineering, 46-55, Dallas, TX. Geo-Institute, ASCE*
- C29.** *Suleiman, M. T., Raich, A., Polson, T.^(U*), Kingston, W. II^(U*), and Roth, M. (2010). "Measured Soil-Pile Interaction Pressures for Small-Diameter Laterally Loaded Pile in Loose Sand." *Proceedings of GeoFlorida 2010 – Advances in Analysis, Modeling and Design, 1498-1506, West Palm Beach, Florida, Feb. 20-24, 2010. Geo-Institute, ASCE*
- C30.** #Ng, K. W.^(D*), Suleiman, M. T., and Sritharan, S. (2010). "LRFD Resistance Factors including the Influence of Setup for Design of Steel Piles Using WEAP." *Proceedings of GeoFlorida 2010 – Advances in Analysis, Modeling and Design, 2153-2162, West Palm Beach, Florida, Feb. 20-24, 2010. Geo-Institute, ASCE*
- C31.** *Thompson, M. J., and Suleiman, M. T. (2010). "Effect of Aggregate Pier Installation on Vertical Load-Displacement Relationship." *Proceedings of GeoFlorida 2010 – Advances in Analysis, Modeling and Design, 1460-1469, West Palm Beach, Florida, Feb. 20-24, 2010. Geo-Institute, ASCE*
- C32.** Sritharan, S., Vande Voort, T.^(M*), and Suleiman, M.T. (2009). "Effective Use of UHPC for Deep Foundation Piles." *Designing and Building with UHPFRC: State of the Art and Development, UHPFRC 2009 – November 17-18, Marseille, France. John Wiley and Sons.*
- C33.** *Suleiman, M. T., and Sritharan, S. (2009). "Lateral Load Response of Column-Foundation Systems in Warm and Freezing Conditions." *Proceedings of International Foundation Congress and Equipment Expo 09, Contemporary Topics in In Situ Testing, Analysis, and Reliability of Foundations, 568-575, Orlando, Florida. Geo-Institute, ASCE*
- C34.** *Vande Voort, T.^(M*), Suleiman, M. T., and Sritharan, S. (2009). "Design, Construction, and Drivability of UHPC Pile." *Proceedings of International Foundation Congress and Equipment Expo 09, Contemporary Topics in Deep Foundations, 303-310, Orlando, Florida. Geo-Institute, ASCE*
- C35.** #Abdel-Salam, S. S.^(D*), Sritharan, S., and Suleiman, M. T. (2009). "Outcomes of a Survey on Bridge Design and Construction Practices of Deep Foundations." *Proceedings of International Foundation Congress and Equipment Expo 09, Contemporary Topics in In Situ Testing, Analysis, and Reliability of Foundations, 458-465, Orlando, Florida. Geo-Institute, ASCE*
- C36.** Sritharan, S., Fanous, A.^(M*), Suleiman, M. T., and Arulmoli, K. (2008). "Confinement Reinforcement Requirements for Prestressed Concrete Piles in High Seismic Regions." *14th World Conference on Earthquake Engineering, Beijing, China, October 12- 17, 2008.*
- C37.** Vande Voort, T.^(M*), Sritharan, S., and Suleiman, M. T. (2007). "A Precast UHPC Pile for Substructural Applications." *2007 PCI National Concrete Bridge Conference, Phoenix, AZ, Oct. 22-24. PCI*
- C38.** *Suleiman, M. T., and Sritharan, S. (2006). "Lateral Load Response of Two Identical Bridge Column-Foundation Systems in Warm and Cold Conditions." *31st Annual Conference on Deep Foundations, Deep Foundation Institute, Washington, D. C., Oct 4-6, 2006 Deep Foundations Institute (DFI).*
- C39.** Sritharan, S., and Suleiman, M. T. (2006). "Implications of the Effects of Seasonal Freezing on Seismic Design of Bridge Column-Foundation Systems". *Proceeding of 8th National Conference on Earthquake Engineering, San Francisco, April 2006.*
- C40.** #Pham, H.^(D), Suleiman, M. T., and White, D. J. ^(PA) (2004). "Numerical Analysis of Geogrid - Rammed Aggregate Pier Supported Embankments." *Proceeding of Geotechnical Engineering for Transportation Projects, 657-664, Los Angeles, California, Geo-Institute, ASCE*

- C41. Sritharan, S., White, D. J.^(PA), and Suleiman, M. T. (2004). “Bridge Column Foundation-Soil Interaction under Earthquake Loads in Frozen Conditions.” *13th World Conference on Earthquake Engineering, Vancouver, B.C., Canada, 2004.*
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Conference Papers, Presentations and Reports (* I presented, #presented by student)

Notations: CP for Conference Paper; P for Presentation, R for Report, PO for Poster

1. R: Suleiman, M. T., Gao, K.^(D*), Li, X.^(M*), Bick, P, H.^(M*), Zouari, N., Brown, D., Diplas, P. (2020). “Final Report of the Sustainable Bio-modification of Surface Soils to Resist Erosion due to Wind Loading.” *Submitted to Qatar National Research Fund.*
2. R: Suleiman, M. T., Gao, K.^(D*), Li, X.^(M*), Bick, P, H.^(M*), Zouari, N., Brown, D., Diplas, P. (2019). “Progress Report of the Sustainable Bio-modification of Surface Soils to Resist Erosion due to Wind Loading.” *Qatar National Research Fund.*
3. R: Suleiman, M. T., Brown, D. (2019). “Exploratory Investigation of Bio-inspired Flexible Calcite Precipitation for Soil Improvement.” *Final Report, National Science Foundation.*
4. R: Suleiman, M. T., Xiao, S.^(D*), Elzeiny, R.^(D*), Naito, C., Neti, S., Al-Khawaja, Ahmad, K.^(P*) (2019). “Final Report of the Long-term Behavior of Geothermal Deep Foundation Systems in Cooling-Dominated Environments.” *Submitted to Qatar National Research Fund.*
5. P: *Suleiman, M. T., Ricles, J., Sause, R., Jaworski, J., Banerjee, A., Mekkawy, M. (2019). “Offshore Wind Energy.” *Presentation for I-CPIE External Advisory Board. November 2019.*
6. P: *Suleiman, M. T., Ricles, J., Sause, R., Jaworski, J., Banerjee, A., Mekkawy, M. (2019). “Coupled Qero-Hydro-Mechanical Hybrid Simulation Testing of Offshore Wind Turbines.” *Presentation for Orsted. Lehigh University. July 2019.*
7. P: *Suleiman, M. T., Ricles, J., Sause, R., Jaworski, J., Banerjee, A., Vermaak, N., Krick, B. (2019). “Offshore Wind Energy.” *Big Ideas Presentation for I-CPIE Faculty Meeting. May 2019*
8. P: *Suleiman, M. T., Quile, S., Sause, R., Chow, L., Jagota, A., Jaworski, J., Moored, K., Krick, B., Dailey, H., Vermaak, N. (2019). “Bio-inspired Mechanics, Materials and Structures.” *Big Ideas Presentation for I-CPIE Faculty Meeting. February 2019.*
9. R: Suleiman, M. T., Gu, J.^(ME*), Bick, P, H.^(M*), Zouari, N., Derick Brown, Diplas, P. (2018). “Progress Report of the Sustainable Bio-modification of Surface Soils to Resist Erosion due to Wind Loading.” *Qatar National Research Fund.*
10. R: Suleiman, M. T., Xiao, S.^(D*), Elzeiny, R.^(D*), Naito, C., Neti, S., Al-Khawaja, Ahmad, K.^(P*) (2018). “Progress Report of the Long-term Behavior of Geothermal Deep Foundation Systems in Cooling-Dominated Environments.” *Submitted to Qatar National Research Fund.*
11. R: Suleiman, M. T., Xiao, S.^(D*), Elzeiny, R.^(D*), Naito, C., Neti, S., Al-Khawaja, Ahmad, K.^(P*) (2017). “Progress Report of the Long-term Behavior of Geothermal Deep Foundation Systems in Cooling-Dominated Environments. Submitted to Qatar National Research Fund, June 2017.
12. R: Suleiman, M. T., Gu, J.^(ME*), Bastola, H.^(D), Zouari, N., Diplas, P., Derick Brown (2017). “Progress Report of the Sustainable Bio-modification of Surface Soils to Resist Erosion due to Wind Loading. Submitted to Qatar National Research Fund, July 2017.
13. R: Suleiman, M. T., Xiao, S.^(D*), Elzeiny, R.^(D*), Naito, C., Neti, S., Al-Khawaja, Ahmad, K.^(P) (2016). “Progress Report of the Long-term Behavior of Geothermal Deep Foundation Systems in Cooling-Dominated Environments. Submitted to Qatar National Research Fund, December 2016.
14. R: Suleiman, M. T., Bastola, H.^(D), Zouari, N., Diplas, P., Derick Brown (2016). “Progress Report of the Sustainable Bio-modification of Surface Soils to Resist Erosion due to Wind Loading. Submitted to Qatar National Research Fund, August 2016.
15. R: Suleiman, M. T., Xiao, S.^(D*), Elzeiny, R.^(D*), Naito, C., Neti, S., and Al-Khawaja (2016). “Progress Report of the Long-term Behavior of Geothermal Deep Foundation Systems in Cooling-Dominated Environments. Submitted to Qatar National Research Fund, July 2016.

16. P: #Xiao, S.^(D*), Suleiman, M. T., Naito, C., Neti, S., and Al-Khawaja (2016). "Response of Soil-Energy Pile Interface Subjected to Cyclic Loading." Geotechnical and Structural Engineering Congress 2016, Phoenix, Arizona, February 14-17, 2016.
17. R: Suleiman, M. T., Xiao, S.^(D*), Elzeiny, R.^(D*), Naito, C., Neti, S., and Al-Khawaja (2015). "Progress Report of the Long-term Behavior of Geothermal Deep Foundation Systems in Cooling-Dominated Environments. Submitted to Qatar National Research Fund, December 2015.
18. CP: *Suleiman, M. T., AbdelSalam, S.^(D*), Xiao, S.^(D*), and Naser Abu-Hejleh (2015). "Load and Resistance Factor Design (LRFD) of Deep Foundations: Basics, Methodology and State of Practice in the USA." Proceedings of the 28th Central Pennsylvania Geotechnical Conference, Hershey, PA on November 4 – 6, 2015, Sponsored by ASCE. Invited Paper and Speaker.
19. CP: *Suleiman, M. T., and Xiao, S.^(D*) (2014). "Soil-Pile Interaction of Geothermal Deep Foundations." Proceedings of the 27th Central Pennsylvania Geotechnical Conference, Hershey, PA on April 23 – 25, 2014, Sponsored by ASCE. Invited Paper and Speaker.
20. R: Suleiman, M. T., Ni, L.^(D*), Davis, C.^(U*), Lin, H.^(D*), and Xiao, S.^(D*) (2014). "Instrumented Static Load Test of Controlled Modulus Column (CMC)". Final Report submitted to Menard, Lehigh Univ., PA.
21. R: Raich, A., Suleiman, M. T., Kurtz, S., and Roth, M. (2013). "MRI: Acquisition of State-of-the-Art Soil-Structure Interaction Facility." *Final Report, National Science Foundation*.
22. CP: #Bildik, S., Laman, M., and Suleiman, M. T. (2012). "Numerical Investigations of Uplift Behavior of Multiple Plate Anchors." *The 10th International Congress on Advances in Civil Engineering ACE 2012*, 18-19 October 2012, Ankara, Turkey.
23. R: AbdelSalam, S. S.^(D*), Ng, K. W.^(D*), Sritharan, S., Suleiman, M. T., and Roling, M., (2012). "Development of LRFD Design Procedures for Bridge Piles in Iowa – Recommended Resistance Factors with Construction Control and Setup." Final Report Vol. III. *Institute of Transportation*, Iowa State University, Ames, Iowa.
24. CP: #Bildik, S., Laman, M., and Suleiman, M. T. (2012). "Gömülü Boruların Davranışının Deneysel Olarak İncelenmesi (Experimental Investigation of Behavior of Buried Pipes)." *Geoteknik Sempozyumu*, 1-2 Aralık 2011, Çukurova Üniversitesi, Adana, Turkey. (In Turkish).
25. CP: #Bildik, S., Laman, M., and Suleiman, M. T. (2012). "Donatı İle Güçlendirilmiş Ankraj Plakalarının Çekme Kapasitesinin Sayısal Olarak İncelenmesi (Numerical Investigation of Uplift Capacity of Anchor Plates with Reinforced Geogrids)." *Beşinci Ulusal Geosentetikler Konferansı*, 24-25 Mayıs 2012, Boğaziçi Üniversitesi, İstanbul, Turkey. (In Turkish).
26. CP: #Bildik, S., Laman, M., and Suleiman, M. T. (2012). "Gömülü Boruların Donatı İle Güçlendirilmiş Zemine Oturtulması İle İlgili İnceleme (Investigation of Buried Pipes Embedded in Reinforced Soil)" *Beşinci Ulusal Geosentetikler Konferansı*, 24-25 Mayıs 2012, Boğaziçi Üniversitesi, İstanbul, Turkey. (In Turkish)
27. CP: #Bildik, S., Laman, M., and Suleiman, M. T. (2012). "Yüzeysel Temellerin Sayısal Modellenmesinde Zemin Parametrelerinin Etkisi (Soil Parameters Effect on Numerical Modeling of Shallow Foundations)" *Zemin Mekaniği ve Temel Mühendisliği Ondördüncü Ulusal Kongresi*, 4-5 Ekim 2012, Süleyman Demirel Üniversitesi, Isparta, Turkey. (In Turkish)
28. PO: #Yoon, S.^(D), Ghazanfari, E.^(D), Cheng L., Suleiman, M. T., Pamukcu, S. (2011). "Subsurface Geo-applications of Wireless Signal Networks". *Proceedings of SPIE Smart Structure Conference, San Diego CA, 2011 – Conference Paper Presented as a Poster*
29. R: Ng, K. W.^(D*), Suleiman, M. T., Roling, M. ^(M*), AbdelSalam, S. S.^(D*), and Sritharan, S. (2011). "Development of LRFD Design Procedures for Bridge Piles in Iowa – Field Testing of Steel H-Piles in Clay, Sand, and Mixed Soils and Data Analysis." Final Report Vol. II. *Institute of Transportation*, Iowa State University, Ames, Iowa.
30. PO: *Suleiman, M. T., Raich, A., and O’Loughlin, M.^(U*) (2011). "Pervious Concrete Piles: An Innovative Ground Improvement Alternative." *Proceedings of 2011 NSF Engineering Research and Innovation Conference, Atlanta, Georgia – Conference Paper Presented as a Poster*
31. PO: *Suleiman, M. T., Kurtz, S., Raich, A., Roth, M., and Helm, J. (2011). "Soil-Structure Interaction Focusing on Single Laterally Loaded Pile." *Proceedings of 2011 NSF Engineering Research and Innovation Conference, Atlanta, Georgia – Conference Paper Presented as a Poster*

32. PO: *Ghazanfari, E.^(D), Yoon, S.^(D), Cheng, L., Suleiman, M. T., Pamukcu, S. (2011). "Wireless Signal Networks for Subsurface Modeling and Geo-Event Characterization." *Proceedings of 2011 NSF Engineering Research and Innovation Conference, Atlanta, Georgia – Conference Paper Presented as a Poster*
33. P: #Ng, K. W.^(D*), Sritharan, S., and Suleiman, M. T. (2011). "A Procedure for Incorporating Pile Setup in Load and Resistance Factor Design of Steel H-Piles in Cohesive Soils." *Transportation Research Board, Washington, D. C. – Conference Paper Presented as a Poster*
34. R: Suleiman, M. T., Stevens, L., Jahren, C., Ceylan, H., and Conway, W.^(M*) (2010). "Identification of Practices, Design, Construction, and Repair Using Trenchless Technology." IHRB Project No. TR-570. *Institute of Transportation*, Final Report, Iowa State University, Ames, Iowa, December 2010.
35. R: Yoon S.^(D*), Cheng L., Ghazanfari E.^(D), Pamukcu S., Suleiman M. T. (2010). "An Underground Radio Propagation Model for Wireless Underground Sensor Networks". LU-CSE-10-004, Lehigh University.
36. R: Suleiman, M. T., Videkovich, K.^(M*), Stevens, L., Schaefer, V., and Ceylan, H. (2010). "Utility Cut Repair Techniques—Investigation of Improved Utility Cut Repair Techniques to Reduce Settlement in Repaired Areas, Phase II." Final Report, IHRB Project No. TR-570. *Institute of Transportation*, Iowa State University, Ames, Iowa, October 2010.
37. R: Roling, M.^(M*), Sritharan, S., and Suleiman, M. T. (2010). "Development of LRFD Design Procedures for Bridge Piles in Iowa – An Electronic Database for Pile Load Tests in Iowa (PILOT-IA)." Final Report Vol. I. IHRB Project No. TR-573. *Institute of Transportation*, Iowa State University, Ames, Iowa.
38. R: Sritharan, S., Fanous, A.^(M*), Suleiman, M. T., Huang, J.^(M), and K. Arulmoli. (2010). "Minimum Spiral Reinforcement Requirements and Lateral Displacement Limits For Prestressed Concrete Piles in high Seismic Regions." ISU-ERI-Ames Report ERI-10321, *Precast/Prestressed Concrete Institute*.
39. PO: #Calkins, J.^(U*), Kney, A., Suleiman, M. T., Weidner, A.^(U*) (2010). "Removal of Heavy Metals using Pervious Concrete Material." *Proceeding of World Environment and Water Resources Congress, Challenges of Change, Environmental and Water Resources Institute, Providence, Rhode Island. – Conference Paper Presented as a Poster*
40. PO: *Suleiman, M. T., Kurtz, S., Raich, A., and Roth, M. (2009). "Soil-Structure Interaction Facility." *Proceedings of 2009 NSF Engineering Research and Innovation Conference, Honolulu, Hawaii – Conference Paper Presented as a Poster*
41. R: Vande Voort, T.^(M*), Suleiman, M. T., and Sritharan, S. (2008). "Design and Performance Verification of Ultra-High Performance Concrete Piles for Deep Foundations." Final Report, *Iowa DOT, IHRB Project TR-558, CTRE Project 06-264*.
42. R: White, D. J., Ceylan, H., Jahren, C., Phan, T. H.^(D), Kim, S.H.^(D), Gopalakrisnan, K., and Suleiman, M. T. (2008). "Performance Evaluation of Concrete Pavement Granular Subbase-Pavement Surface Condition Evaluation." Final Report, *Iowa DOT, IHRB Project TR-554, CTRE Project 06-250*.
43. CP: Sritharan, S., Fanous, A.^(M*), Suleiman, M. T., and K. Arulmoli. (2007). "Design of Spiral Reinforcement for Prestressed Concrete Piles in High Seismic Regions." *14th Annual CalTrans PCMAC Bridge Seminar. November, Sacramento, California*.
44. CP: #Sritharan, S., Fanous, A.^(M*), Suleiman, M. T., and K. Arulmoli. (2007). "Recommendations for the Design of Transverse Reinforcement for Prestressed Concrete Piles in High Seismic Regions." *Technical Session on Prestressed Concrete Piles. PCI Annual Convention & National Bridge Conference. October, Phoenix, Arizona*.
45. CP: Sritharan, S., Fanous, A.^(M*), Suleiman, M. T., and K. Arulmoli. (2007). "Design of Spiral Reinforcement for Prestressed Concrete Piles in High Seismic Regions." *Technical Session on Developing Innovative Solutions Through Research for Design of Precast/Prestressed Concrete Structures, ACI Fall Convention. October, Fajardo, Puerto Rico*.
46. CP: *Suleiman, M. T., Schaefer, V. R., and Ho, I.^(D) (2007). "Behavior of Piles Used for Slope Remediation." *First North American Landslide Conference- Landslides and Society: Integrated Science, Engineering, Management, and Mitigation. Vail, Colorado, June 3-8th, 2007*.
47. P: #Kevern, J.^(D), Schaefer, V. R., Wang, K., and Suleiman, M. T. (2007). "Mix Development to Improve Pervious Concrete Durability." *Transportation Research Board – Presented at Transportation Research Board, Washington D.C. Paper Presented but not included on the Conference CD*.

48. CP: #Fanous, A.^(M*), Sritharan, S., Suleiman, M. T. and Arulmoli, K. (2006). “Progress on the Development of Design Methodology for Spiral Reinforcement in Prestressed Concrete Piles in High Seismic Regions.” *PCI Annual Convention & National Bridge Conference. October, Grapevine, Texas.*
49. R: White, D. J., Mekkawy, M. M.^(D), Jahren, C. T., Smith, D. and Suleiman, M. T. (2007). “Effective Shoulder Design and Maintenance.” *Iowa DOT Report No. IHRB Project TR-531.*
50. R: Suleiman, M. T., Sritharan, S., and White, D. J. (2007). “Experimental and Analytical Investigation on Lateral Load Response of Bridge Columns with Deep Foundations in Frozen Soils.” Final Report, *National Science Foundation.*
51. R: Suleiman, M. T. (2006). “Inspecting and Monitoring the Behavior of HDPE Pipe when Subjected to a Parallel Excavation.” Final Report, *Advanced Drainage Systems, Inc.*
52. CP: Sritharan, S. Suleiman, M. T., and White, D. J. (2006). “Seismic Response of Bridge Columns Supported by Drilled Shafts in Seasonally Frozen Conditions.” *Proceeding of the New Zealand Workshop on Geotechnical Earthquake Engineering, Christchurch, New Zealand, Nov. 2006.*
53. CP: Sritharan, S., Suleiman, M. T., and White, D. J. (2006). “A Summary of Exploratory Research on SFSI and Seismic Bridge Response in Seasonally Frozen Conditions.” *Proceedings of the Fourth International Workshop on Seismic Design and Retrofit of Transportation Facilities, San Francisco, CA, March 2006.*
54. P: #Schaefer, V., Suleiman, M. T, Wang, K., and Kevern J.^(M*) (2006). “Mix Design and Properties of Pervious Concrete Pavement.” *Presented at Transportation Research Board, Washington D.C. Paper Presented but not included on the Conference CD.*
55. R: Schaefer, V. R., Wang, K., Suleiman, M. T., and Kevern, J.^(M*) (2006). “Mix Design Development for Pervious Concrete in Cold Weather Climates.” *Final Report 2006-01, Center of Transportation Research and Education, Iowa State University, Ames, Iowa.*
56. CP: *Suleiman, M. T., Kevern, J.^(M*), Schaefer, V. R., and Wang, K. (2006). “Effect of Compaction Energy on Pervious Concrete Properties.” *Concrete Technology Forum-Focus on Pervious Concrete. National Ready Mix Concrete Association. Nashville, TN.*
57. CP: #Kevern, J.^(M*), Wang, K., Suleiman, M. T., and Schaefer, V. R. (2006). “Pervious Concrete Construction: Methods and Quality Control.” *Concrete Technology Forum-Focus on Pervious Concrete.” National Ready Mix Concrete Association. Nashville, TN.*
58. CP: Schaefer, V. R., Suleiman, M. T., Wang, K., Kevern, J.^(M*), and Wiegand, P. (2006). “An Overview of Pervious Concrete Application in Stormwater Management and Pavement Systems.” *Concrete Technology Forum-Focus on Pervious Concrete. National Ready Mix Concrete Ass. Nashville, TN.*
59. CP: Wang, K., Schaefer, V. R., Kevern, J.^(M*), and Suleiman, M. T. (2006). “Mix Proportioning for Functional and Durable Pervious Concrete.” *Concrete Technology Forum-Focus on Pervious Concrete. National Ready Mix Concrete Association. Nashville, TN.*
60. R: Schaefer, V. R., Suleiman, M. T., White, D. J., Swan, C., and Jensen, K. ^(M*) (2005). “Utility Cut Repair Techniques—Investigation of Improved Cut Repair Techniques to Reduce Settlement in Repaired Areas.” *Final Report IHRB TR-503, Center of Transportation Research and Education, Iowa State University.*
61. P: *Suleiman, M. T. (2005). “Advances in Pervious Concrete Pavements.” Iowa Section, ASCE Annual Transportation Conference, Gateway Conference Center, Ames, Iowa - Invited Speaker.
62. P: #Kevern, J.^(M), Wang, K., Suleiman, M. T., and Schaefer, V. R. (2005). “Mix Design for Pervious Concrete in Cold Weather Climates.” *2005 Mid-Continent Transportation Research Symposium, Ames, Iowa.*
63. CP: #Jensen, K. ^(M*), Schaefer, V. R., Suleiman, M. T., and White, D. J. (2005). “Characterization of Utility Cut Pavement Settlement and Repair Techniques.” *2005 Mid-Continent Transportation Research Symposium, Ames, Iowa.*
64. CP: #Mekkawy, M. M.^(M*), White, D. J.^(PA), Suleiman, M. T., and Sritharan, S. (2005). “Simple Design Alternatives to Improve Drainage and Reduce Erosion at Bridge Abutments.” *2005 Mid-Continent Transportation Research Symposium, Ames, Iowa.*
65. CP: #Thompson, M. ^(M*), White, D. J.^(PA), and Suleiman, M. T. (2005). “Lateral Load Tests on Small-Diameter Piles for Slope Remediation.” *2005 Mid-Continent Transportation Research Symposium, Ames, Iowa.*
66. R: White, D. J.^(PA), and Suleiman, M. T. (2005) “Full Scale Direct Shear Tests for Rammed Aggregate Piers.” *Report No. ISU-ERI-05416, Iowa State University, Ames, Iowa.*

67. R: White, D. J.^(PA), Sritharan, S., Suleiman, M. T., Mekkawy, M. M.^(M*), and Chulter, S. (2005). "Identification of the Best Practices for Design, Construction, and Repair of Bridge Approach Sections." *Final Report, Iowa DOT TR-481, CTRE Report 02-118*.
 68. CP: *Suleiman, M. T., Sritharan, S. and White, D. J. ^(PA) (2005). "Lateral Load Response of Two Identical Bridge Column-Foundation Systems in Warm and Freezing Conditions." *Presented at Transportation Research Board, Washington, D. C. Paper Presented but not included on the Conference CD*.
 69. R: White, D. J.^(PA), Suleiman, M. T., and Pham, H.^(D) (2004) "Field Determination of Shear Modulus for Geopier Foundations." *Report No. ISU-ERI-05268*, Iowa State University, Ames, Iowa.
 70. R: Suleiman, M. T., Pham, H.^(D), and White, D.J.^(PA) (2003) "Numerical Analyses of Geosynthetic-Reinforced Rammed Aggregate Pier-Supported Embankments." *Report No. ISU-ERI-03598*, Iowa State University.
 71. R: White, D. J.^(PA), Suleiman, M. T., Pham, H. ^(D), and Bigelow, J. ^(U) (2003) "Shear Strength Envelopes for Aggregate used in Geopier Foundation Construction." *Final Report*. Iowa State University.
 72. R: Lohnes, R.^(DA), Suleiman, M.T., Klaiber, F., and Wipf, T. (2002) "Evaluation of High Density Polyethylene Pipe Installation." *Final Report*, Iowa State University, Ames, Iowa.
 73. Suleiman, M. T. (2002). "Behavior of Buried Flexible Pipes." Ph.D. Thesis, Iowa State University.
 74. Suleiman, M. T. (1999). "Buckling of Composite Beams Supported on Elastic Foundations." MS Dissertation, Jordan University of Science and Technology, Irbid, Jordan.
 75. R: Suleiman, M. T. and Badwan, I. Z. (1997). "Design of Foundations on Liquefiable Soils." *Final Report*, Jordan University of Science and Technology, Irbid, Jordan.
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HONORS, AWARDS and PATENTS

1. Shamsheer Prakash 2014 Prize for Excellence in Teaching of Geotechnical Engineering, Shamsheer Prakash Foundation
2. Precast/Prestressed Concrete Institute's George D. Nasser Award for 2016, PCI Journal Paper
3. Provisional patent number 61/676,446 to the Patent and Trademark Office (OSPTO), 2012
4. Awarded P. C. Rossin Assistant Professorship, Lehigh University, 2012
5. First runner of the best young professor paper by the Deep Foundation Institute, 2011
6. Graduate College Scholarship Program, Jordan University of Science and Technology– 1997 – 99
7. Graduate Student Scholarship, Iowa State University– 1999 – 2002
8. Ranked *first* among 91 undergraduate students in the Department of Civil Engineering at Jordan University of Science and Technology– 1997

PROPOSALS AND PROJECTS

Summary

1.	Total number of submitted proposals	87
2.	Total number of awarded proposals	50
3.	Total number of under-review proposals	3

1. An Atlantic Marine Energy Center (AMEC) for Advancing the Marine Renewable Energy Industry and Powering the Blue Economy
Funding Agency: **Department of Energy**
PIs/Core Team: [University of New Hampshire: Martin Wosnik (PI of Project), Diane Foster, Rob Swift, Tom Lippmann]; [Lehigh University: Arindam Banerjee (Lehigh PI), Shaline Kishore, Muhannad T. Suleiman, Panos Diplas]; [Stony Brook University: Fotis Sotiropoulos (SBU PI), Ali Khrosronejad, Fang Luo, Peng Zhang]; [Coastal Studies Institute, North Carolina: George Bonner (CSI PI), Lindsay Dubbs, Mike Muglia]
Total Budget: \$10,654,751 [Lehigh: \$2,208,308]
Submission Year: 2020; Project Period: 6/2020 – 6/2023; Type: Competitive
2. Coupled Aero-Hydro-Mechanical Hybrid Simulation Testing of Offshore Wind Turbines Subjected to Operational and Extreme Loading Conditions
Funding Agency: **Department of Energy**
PIs: Muhannad T. Suleiman (PI), James Ricles, Richard Sause, Justin Jaworski, Arindam Banerjee, Mohamed Mekkawy (Fugro)
Total Budget: \$2,077,227
Submission Year: 2019; Project Period: 1/2020 – 9/2023; Type: Competitive
3. Improvement of Coal Power Plant Dry Cooling Technology through Application of Cold Thermal Storage
Funding Agency: **Department of Energy**
PIs: Nenad Sarunac [UNCC], Carlos Romero, Muhannad T. Suleiman (Co-PI), Clay Naito, Sudhakar Neti, Zheng Yao [Lehigh]
Total Budget: \$1,816,663 [Lehigh: \$1,109,316]
Submission Year: 2019; Project Period: 7/2020 – 7/2023; Type: Competitive
4. Energy Storage in 3D Printed Concrete Components for Building and Industrial Applications
Funding Agency: **The Pennsylvania Infrastructure Technology Alliance**
PIs: Clay Naito and Muhannad T. Suleiman (PIs), Carlos Romero, Paolo Bocchini
Total Budget: \$33,000
Submission Year: 2020; Project Period: 6/2021 – 6/2021
5. Bridge Resilience in Rain Events
Funding Agency: **PA Department of Transportation**
PIs: Clay Naito, Muhannad Suleiman (Co-PI), Richard Weisman
Total Budget: \$244,074
Submission Year: 2019; Project Period: 2/2020 – 8/2021; Type: Competitive
6. Flexible Coal Power Plant Operation with Thermal Energy Storage Utilizing Thermosiphons and Cementitious Materials
Funding Agency: **Department of Energy**
PIs: Sudhakar Neti, Carlos Romero, Clay Naito, Muhannad T. Suleiman (Co-PI), Spencer Quiel, Zheng Yao
Total Budget: \$2,508,039
Submission Year: 2019; Project Period: 9/2019 – 9/2022; Type: Competitive

7. REU Site: Collaborative Research: Research Experience for Undergraduates in Underground infrastructure
Funding Agency: **National Science Foundation**
PIs: Clay Naito and Spencer Queil with Muhannad T. Suleiman and Paolo Bocchini as Senior Personnel
Total Budget: \$146,831
Submission Year: 2019; Project Period: 9/2020 – 9/2022; Type: Competitive
8. Optimizing Innovative Bio-inspired Surfaces to Improve the Resilience of Foundations Supporting Offshore wind Energy Infrastructure
Funding Agency: **Faculty Innovation Grant**
PIs: Muhannad T. Suleiman, Natasha Vermaak, Brandon Krick
Total Budget: \$30,000
Submission Year: 2019; Project Period: 6/2019 – 6/2020
9. Thermal Storage of Sensible Heat using Concrete for Solar and Fossil Power Plan Applications
Funding Agency: **Collaborative Research Opportunities (CORE) Grant Proposal**
PIs: Clay Naito, Alparslan Oztekin, Suhakar Neti, Spencer Queil, Muhannad T. Suleiman, Kemal Tuzla, Carlos Romero
Total Budget: \$59,995
Submission Year: 2019; Project Period: 6/2019 – 6/2020
10. Evaluation of Bio-inspired Foundation Systems Supporting Offshore Wind Turbines - *Testing Equipment Development*
Funding Agency: **The Pennsylvania Infrastructure Technology Alliance**
PIs: Muhannad T. Suleiman
Total Budget: \$24,000
Submission Year: 2018; Project Period: 1/2019 – 6/2020
11. Preliminary Investigation of Temperature Effects on Lateral Response of Energy Piles
Funding Agency: **The Pennsylvania Infrastructure Technology Alliance**
PIs: Muhannad T. Suleiman
Total Budget: \$50,000
Submission Year: 2017; Project Period: 1/2018 – 6/2020
12. Undergraduate Laboratory Enhancement for Hydraulic Engineering in Civil and Environmental Eng.
Funding Agency: **Undergraduate Laboratory Enhancement Program at Lehigh**
PIs: Tara J. Troy, Clay Naito, Kristen Jellison, Muhannad T. Suleiman, Panos Diplas, Ethan Yang
Total Budget: \$68,625
Submission Year: 2018; Project Period: 1/2019 – 11/2020
13. Undergraduate Laboratory Enhancement for Geotechnical Engineering in Civil and Environmental Eng.
Funding Agency: **Undergraduate Laboratory Enhancement Program at Lehigh**
PIs: Muhannad T. Suleiman, Clay Naito, Tara Troy, Kristen Jellison
Total Budget: \$45,000
Submission Year: 2018; Project Period: 9/2018 – 9/2019
14. Exploratory Investigation of Bio-inspired Flexible Calcite Precipitation for Soil Improvement
Funding Agency: **National Science Foundation**
PIs: Muhannad T. Suleiman (PI), Bryan Berger, and Derick Brown
Total Budget: \$162,732
Submission Year: 2016; Project Period: 9/2016 – 3/2019; Type: Competitive
15. Investigation of Bio-inspired Soil Improvement
Funding Agency: **The Pennsylvania Infrastructure Technology Alliance**
PIs: Muhannad T. Suleiman (PI), Bryan Berger, and Derick Brown
Total Budget: \$44,990
Submission Year: 2016; Project Period: 8/2016 – 8/2017; Type: Competitive

16. Innovative Bio-inspired Materials for Soil Treatment to Improve the Sustainability and Resilience of Civil Infrastructure
 Funding Agency: **Faculty Innovation Grant – Lehigh University**
 PIs: Muhannad T. Suleiman (PI), Bryan Berger, and Derick Brown
 Total Budget: \$30,000
 Submission Year: 2016; Project Period: 8/2016 – 8/2017; Type: Competitive
17. Sustainable Bio-modification of Surface Soils to Resist Erosion due to Wind Loading
 Funding Agency: **Qatar National Research Fund**
 PIs: Muhannad T. Suleiman (PI), Nabil Zouari (Qatar University), Panos Diplas, Derick Brown
 Total Budget: \$809,278 [LU Budget: \$281,987; Allowed 35% outside Qatar]
 Submission Year: 2015; Project Period: 2/2016 – 2/2019; Type: Competitive
18. A High Magnification SEM for STEPS
 Funding Agency: **Lehigh Critical Research Fund Equipment**
 PIs: Peter Zeitler, Bruce Idleman, Robert Booth, Zicheng Yu, Stephen Peters, Frank Pazzaglia, Ken Kodama, Dork Sahagian, Gray Bebout, Muhannad Suleiman (Co-PI), John Fox
 Total Budget: \$84,490
 Submission Year: 2015; Project Period: 12/2015 – 12/2016; Type: Competitive
19. Long-term Behavior of Geothermal Deep Foundation Systems in Cooling-Dominated Environments
 Funding Agency: **Qatar National Research Fund**
 PIs: Muhannad T. Suleiman (PI), Mohammed Al-Khawaja (Qatar University), Sudhakar Neti, Clay Naito
 Total Budget: \$846,307 [LU Budget: \$256,238; Allowed 35% outside Qatar]
 Submission Year: 2013; Project Period: 1/2015 – 1/2018; Type: Competitive
20. Undergraduate Laboratory Enhancement for Hydraulic Engineering in Civil and Environmental Eng.
 Funding Agency: **Undergraduate Laboratory Enhancement Program at Lehigh**
 PIs: Tara J. Troy, Muhannad T. Suleiman (Co-PI), and Panos Diplas
 Total Budget: \$89,500
 Submission Year: 2013; Project Period: 12/2013 – 12/2014; Type: Competitive
21. Collaborative Research: Enhancement of Vertical Elements for Foundation Support by Ureolytic Carbonate Precipitation
 Funding Agency: **National Science Foundation**
 Lehigh PIs: Muhannad T. Suleiman (PI) Amy Camp (Replaced by D Brown after Amy moved from Lehigh)
 Collaborator: Edward Kavazanjian from Arizona State University
 Total Budget: \$380,197 [Lehigh Budget: \$190,018]
 Submission Year: 2012; Project Period: 9/2012 – 9/2015; Type: Competitive
22. Bridge Deicing Using Geothermal Foundation
 Funding Agency: **The Pennsylvania Infrastructure Technology Alliance**
 PIs: Muhannad T. Suleiman (PI), Clay Naito, Sudhakar Neti, Dan Frangopol
 Total Budget: \$25,048
 Submission Year: 2013; Project Period: 6/2013 – 6/2014; Type: Competitive
23. Undergraduate Laboratory Enhancement for Civil Engineering Materials and Structural Engineering
 Funding Source: **Undergraduate Laboratory Enhancement Program at Lehigh**
 PIs: Clay Naito, Paolo Bocchini, and Muhannad T. Suleiman (Co-PI)
 Total Budget: \$50,000
 Submission Year: 2012; Project Period: 12/2012 – 12/2013; Type: Competitive

24. Proposal for Faculty Grant for International Connection
 Funding Source: **Lehigh International Office**
 PIs: Muhannad T. Suleiman (PI)
 Total Budget: \$4000
 Submission Year: 2012; Project Period: 6/2012 – 6/2013; Type: Competitive
25. Biological Treatment of Soils to Improve Response of Infrastructure
 Funding Agency: **Faculty Innovation Grant – Lehigh University**
 PIs: Muhannad T. Suleiman (PI) and Amy Camp (Biological Sciences)
 Total Budget: \$25,000
 Submission Year: 2011; Project Period: 6/2011 – 6/2012; Type: Competitive
26. Undergraduate Laboratory Enhancement for Geotechnical and Environmental Engineering Courses in Civil and Environmental Engineering
 Funding Source: **Undergraduate Laboratory Enhancement Program at Lehigh**
 PIs: Kristen Jellison, Muhannad T. Suleiman (Co-PI), and Derick Brown
 Total Budget: \$120,000
 Submission Year: 2011; Project Period: 12/2011 – 12/2012; Type: Competitive
27. Pervious Concrete Piles: An Innovative Ground Improvement Alternative
 Funding Agency: **National Science Foundation**
 PIs: Muhannad T. Suleiman (PI) and Anne Raich
 Total Budget: \$279,275
 Submission Year: 2009; Project Period: 8/2009 – 7/2013; Type: Competitive
28. Wireless Signal Networks for Subsurface Modeling and Geo-event Characterization
 Funding Agency: **National Science Foundation**
 PIs: Tae Sup Yun, Liang Cheng, and Muhannad T. Suleiman(Co-PI) [PI switched to Sibel Pamukcu]
 Total Budget: \$226,702
 Submission Year: 2009; Project Period: 8/2009 – 7/2012; Type: Competitive
29. MRI: Acquisition of State-of-the-Art Soil-Structure Interaction Facility
 Funding Agency: **National Science Foundation – Major Research Instrumentation Program**
 PIs: Muhannad T. Suleiman (PI), Stephen Kurtz, Mary Roth and Anne Raich
 Total Budget: \$222,487
 Submission Year: 2008; Project Period: 8/2008 – 7/2012; Type: Competitive
30. Field Testing of Piles and Development of a Wave Equation Method for Pile Design in Iowa
 Funding Agency: **Iowa Highway Research Board**
 PIs: Sri Sritharan and Muhannad Suleiman (Co-PI) [Developed Research Idea and the Proposal]
 Budget: \$380,000
 Submission Year: 2008; Project Period: 3/2008 – 8/2011; Type: Competitive
31. Establishing A Dynamic Formula for Pile Design and Construction Control of Pile Driving
 Funding Agency: **Iowa Highway Research Board**
 PIs: Sri Sritharan and Muhannad Suleiman (Co-PI) [Developed Research Idea and the Proposal]
 Budget: \$70,000
 Submission Year: 2008; Project Period: 3/2008 – 8/2011; Type: Competitive
32. Connection Details and Field Implementation of UHPC Piles
 Funding Agency: **Iowa Highway Research Board**
 PIs: Sri Sritharan and Muhannad Suleiman (Co-PI)
 Budget: \$210,000
 Submission Year: 2009; Project Period: 12/2009 – 5/2012; Type: Competitive

33. Integration of Drilled Shaft Load Test Data into PILOT-IA
 Funding Agency: **Iowa Highway Research Board**
 PIs: Sri Sritharan and Muhannad Suleiman (Co-PI)
 Budget: \$50,000
 Submission Year: 2009; Project Period: 12/2009 – 12/2011; Type: Competitive
34. Development of LRFD Design Procedures for Bridge Piles in Iowa
 Funding Agency: **Iowa Highway Research Board**
 PIs: Sri Sritharan and Muhannad Suleiman (Co-PI) [Developed Research Idea and the Proposal]
 Budget: \$250,000
 Submission Year: 2007; Project Period: 8/2007 – 8/2011; Type: Competitive
35. Analytical Investigation of the Installation Effects on the Response of CMC Test Units
 Funding Agency: **MENARD, Ground Improvement Specialists**
 PIs: Muhannad T. Suleiman (PI)
 Total Budget: \$25,000
 Submission Year: 2013; Project Period: 1/2014 – 12/2014; Type: Non-Competitive
36. Investigating CMC Installation Effects on Surrounding Soil
 Funding Agency: **MENARD, Ground Improvement Specialists**
 PIs: Muhannad T. Suleiman (PI)
 Total Budget: \$24,948
 Submission Year: 2012; Project Period: 6/2012 – 11/2013; Type: Non-Competitive
37. Development of Ultrahigh Performance Concrete Energy Piles
 Funding Agency: **Lafarge, Ductal**
 PIs: Muhannad T. Suleiman (PI) and Clay Naito
 Total Budget: \$15,200
 Submission Year: 2012; Project Period: 1/2013 – 1/2014; Type: Non-Competitive
38. Sustainable and Green Pavement Systems
 Funding Agency: **Charles R and Mary F Lindback Foundation**
 PIs: Muhannad T. Suleiman (PI)
 Total Budget: \$14,998
 Submission Year: 2008; Project Period: 6/2008 – 6/2009; Type: Competitive
39. Identification of Practices, Design, Construction, and Repair of Utilities using Trenchless Technology
 Funding Agency: **Iowa Highway Research Board**
 PIs: Muhannad Suleiman (PI), Larry Stevens, Charles Jahren, and Halil Ceylan
 Budget: \$174,910
 Submission Year: 2006; Project Period: 1/2007 – 10/2010; Type: Competitive
40. Utility Cut Repair Techniques – Investigation of Improved Utility Cut Repair Techniques to Reduce Settlement in Repaired Areas, Phase II
 Funding Agency: **Iowa Highway Research Board**
 PIs: Muhannad Suleiman (PI), Vernon Schaefer, and Larry Stevens
 Budget: \$165,316
 Submission Year: 2006; Project Period: 6/2006 – 12/2010; Type: Competitive
41. Development of Rational Design Methodology for Spiral Reinforcement in Prestressed Concrete Piles in High Seismic Regions
 Funding Agency: **Prestressed/Precast Concrete Institute (PCI)**
 PIs: Sri Sritharan, Muhannad Suleiman (Co-PI), and Arul Arulmoli
 Total Budget: \$35,000
 Submission Year: 2006; Project Period: 6/2006 – 6/2007; Type: Competitive

42. Use of Ultra-High Performance Concrete in Geotechnical and Substructures Applications
Funding Agency: **Seed Funding for Innovative Projects, Iowa Highway Research Board**
PIs: Muhannad Suleiman (PI), Sri Sritharan, and Vernon Schaefer
Budget: \$80,262
Submission Year: 2006; Project Period: 8/2006 – 8/2008; Type: Competitive
 43. Pervious Concrete Mix Design for Wearing Course Application
Funding Agency: **National Ready Mix Concrete Foundation**
PIs: Vernon Schaefer, Kejin Wang, Muhannad Suleiman (Co-PI), and Paul Wiegand
Budget: \$100,000
Submission Year: 2006; Project Period: 8/2006 – 8/2008; Type: Competitive
 44. Design of Underground Pipes for Urban Applications
Funding Agency: **Iowa Statewide Urban Design and Specifications**
PIs: Muhannad Suleiman (PI)
Budget: \$12,000
Submission Year: 2006; Project Period: 6/2006 – 6/2007; Type: Competitive
 45. SGER: Investigation of Soil-Structure Interaction and Structure Ductility in Frozen Environments
Funding Agency: **National Science Foundation**
PIs: Sri Sritharan, David White, and Muhannad Suleiman (Co-PI)
Budget: \$45,000
Submission Year: 2005; Project Period: 8/2005 – 8/2006; Type: Competitive
 46. Demonstration of Integrated Pervious Pavement System for Management of Stormwater
Funding Agency: **Iowa Department of Natural Resources**
PIs: Stephen Jones, Vernon Schaefer, Muhannad Suleiman (Co-PI), and Paul Wiegand
Budget: \$54,000
Submission Year: 2005; Project Period: 8/2005 – 8/2007; Type: Competitive
 47. Performance Evaluation of Concrete Pavement Granular Subbase
Funding Agency: **Iowa Highway Research Board**
PIs: David White, Muhannad Suleiman (Co-PI), Charles Jahren, and Halil Ceylan
Budget: \$149,996
Submission Year: 2006; Project Period: 3/2007 – 7/2008; Type: Competitive
 48. Effective Shoulder Design and Maintenance
Funding Agency: **Iowa Highway Research Board**
PIs: David White, Charles Jahren and Muhannad Suleiman (Co-PI)
Budget: \$99,700
Submission Year: 2004; Project Period: 3/2005 – 6/2007; Type: Competitive
 49. Improvement of Pervious Concrete Mix Design
Funding Agency: **Iowa Highway Research Board**
PIs: Vernon Schaefer, David White, Kejin Wang, and Muhannad Suleiman (Co-PI)
Budget: \$45,000
Submission Year: 2004; Project Period: 1/2005 – 2/2006; Type: Competitive
 50. Utility Cut Repair Techniques – Investigation of Improved Utility Cut Repair Techniques to Reduce Settlement in Repaired Areas, IHRB 03-11
Funding Agency: **Iowa Highway Research Board**
PIs: Vernon Schaefer, Muhannad Suleiman (Co-PI), David White, and Colby Swan
Budget: \$119,299
Submission Year: 2003; Project Period: 12/2003 – 12/2005; Type: Competitive
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Contracts/Consulting Grants

1. Inspection and Monitoring the Behavior of Buried HDPE Pipes Due to Adjacent Excavation
Funding Agency: **Advanced Drainage Systems, Inc.**
PIs: Muhannad Suleiman (PI)
Budget: \$5,000
Submission Year: 2006
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EDITOR/EDITORIAL REVIEW BOARD/LEADERSHIP POSITIONS

1. Chair of the Program Committee for the International Foundation Congress and Equipment Exposition (IFCEE 2021)
2. Member of the Geo-Institute Risk Design Standard Task Force (2018-2019)
3. Member of the Geo-Institute Geo-Congress Organizing Committee
4. Chair of the Deep Foundation Committee, ASCE Geo-Institute (2018-present)
5. Editorial Board Member of the ASCE Journal of Geotechnical and Geoenvironmental Engineering
6. Editorial Board Member of Geotechnical Testing Journal, ASTM
7. Co-Editor of the 2018 Geo-institute Conference and Proceedings, International Foundation Congress and Equipment Exposition (IFCEE 2018)
8. Co-Editor of the 2015 Geo-institute Conference and Proceedings, International Foundation Congress and Equipment Exposition (IFCEE 2015)
9. Vice-Chair of the Deep Foundation Committee, ASCE Geo-Institute (2015-2018)
10. Chair of GI Subcommittee on Energy Foundations (Subcommittee of Deep Foundation Committee)
11. Research Coordinator for the TRB Committee on Foundations of Bridges and Other Structures (AFS30), 2012 – present
12. State Transportation Innovation Council (STIC), 2017-Present
13. President of the Lehigh Valley American Society of Civil Engineers, 2015-2016

SCHOLARLY/PROFESSIONAL INVITED PRESENTATIONS

1. **Suleiman M. T.** and Mohamed Mekkawy (2019). “Practice and Design of Foundations for Offshore Wind Turbines in Europe”. Invited Speaker to Deep Foundations Institute (DFI) and Coasts, Oceans, Ports and Rivers Institute (COPRI) Seminar, New York City Ports and Marine Engineering Seminar, Brooklyn, N.Y. March 18, 2019
2. **Suleiman M. T.** (2018). “Load and Resistance Factor Design (LRFD) of Driven Piles”. Invited Speaker to 19th Annual DICEP Meeting, Baltimore, Maryland, Sep. 2018
3. **Suleiman M. T.** (2018). “Geothermal Foundations: Applications and Challenges”. Invited Speaker to SedHeat Geothermal Workshop at Case Western Reserve University, Cleveland, Ohio, Feb. 2018
4. **Suleiman M. T.** (2017). “Recent Research on soil-Pile Interaction and soil Bio-Modification”. Invited Speaker to Tongji University, China, 2017
5. **Suleiman M. T.** (2017). “Recent Research on soil-Pile Interaction and soil Bio-Modification”. Invited Speaker to Northeastern University, China, 2017
6. Invited to the NHERI 2017 Workshop at University of California San Diego, 2017
7. **Suleiman M. T.** (2017). “Bio-mediated and bio-inspired Soil Improvement”. Invited as one of three presenters of the Transportation Research Board Workshop on Biomediated and Bioinspired Soil Modifications and Applications (TRB 2017)
8. **Suleiman, M. T.** (2015). “Soil-Structure Interaction: Recent Updates on Geothermal Deep Foundations.” Research Seminar at Qatar University. October 12, Doha, Qatar.
9. **Suleiman, M. T.** (2015). “Soil-Pile Interaction of Energy Piles.” Invited Speaker, Research Seminar, North Carolina State University, NC, April 8, 2015
10. **Suleiman, M. T.** (2015). “Mechanical and Biological Ground Improvement.” Presentation at the Geo³T² Conference organized by North Carolina Department of Transportation, NC, April 9-10th. Invited Speaker.
11. **Suleiman, M. T.** (2015). “Load and Resistance Factor Design (LRFD) of Deep Foundations: Basics, Methodology and State of Practice in the USA.” Invited Speaker to the Central Pennsylvania Geotechnical Conference held in Hershey, PA on November 4 – 6, 2015, Sponsored by ASCE.
12. **Suleiman, M. T.** (2014). “Soil-Pile Interaction: Research Update.” Invited Speaker, Research Seminar, University of Californian San Diego, CA, October 22, 2014
13. **Suleiman, M. T.** (2014). “Development and Behavior of Pervious Concrete Foundation Systems.” Invited Speaker to the Pervious in Paradise Conference organized by the National Pervious Concrete Pavement Association, San Diego, California, August 5 – 8 2014
14. **Suleiman, M. T.** (2014). “Soil-Pile Interaction of Geothermal Deep Foundations.” Proceedings of the 27th Central Pennsylvania Geotechnical Conference, Hershey, PA on April 23 – 25, 2014, Sponsored by ASCE.
15. Invited and Participated in the International Workshop on Thermoactive Geotechnical Systems, École Polytechnique Fédérale de Lausanne, in Switzerland held in May 2013

TEACHING AND ADVISING

Teaching at Lehigh University

Teaching Evaluations F10 – S18 (Notations: *graduate class, †new preparation, ^apartial preparation)

Semester	^(a) Course Number	Course Credits	No. of Students	No. of Grades Assigned	⁽²⁾ Mean Question 1 (out of 5)	⁽²⁾ Mean Question 2 (out of 5)	⁽²⁾ Mean Question 14 (out of 5)
S18	CEE341*	3	12	12	4.57	4.43	4.29
F17	CEE 495*	3	6	6	4.00	3.40	4.20
F17	CEE 142 ⁽¹⁾	3	48	48	4.75	4.66	4.71
S17	CEE 445*	3	11	11	5.00	5.00	4.82
S17	CEE242	3	43	43	4.71	4.83	4.63
F16	CEE347*	3	20	20	4.76	4.71	4.71
S16	CEE 242	3	35	35	4.59	4.53	4.41
S16	CEE 341* ^a	3	8	8	4.14	4.29	4.43
F15	CEE 244	3	14	14	5.00	5.00	4.90
S15	CEE 445* [†]	3	5	5	5.00	5.00	5.00
F14	CEE 142 ⁽¹⁾	3	51	5	4.66	4.52	4.51
F14	CEE 344*	3	4	4	5.00	4.50	4.50
S14	CEE 495* ^a	3	7	7	5.00	4.86	4.86
F13	CEE 142 ^{a(1)}	3	43	43	5.69	4.80	4.67
F13	CEE 341* ^a	3	11	11	4.90	4.90	4.80
F12	CEE 344* [†]	3	10	10	4.70	5.00	4.60
S12	CEE242	3	56	56	4.84	4.86	4.67
F11	CEE 244	3	8	8	4.86	4.86	4.29
F11	CEE 495* [†]	3	8	8	4.50	4.63	4.50
S11	CEE 242 ^a	3	39	39	4.64	4.50	4.32
F10	CEE 341* [†]	3	13	13	5.00	4.91	4.73

Notes:

^(a) CEE 142: Fundamentals of Soil Mechanics; CEE 242: Geotechnical Engineering; CEE 244 (number changed to CEE 347): Foundation Engineering; CEE 341: Ground Improvement; CEE 344: Soil Behavior; CEE 445: Advanced Foundations; CEE 495: Soil-Structure Interaction. Research credit classes for undergraduate students (Design Problems and Research Problems classes), and team-taught class (Environmental, Geotechnical and Water Resources Laboratory) Classes are not included. ⁽¹⁾ I taught the lectures and one of the laboratory sections to train TAs to run the other two laboratory sections under my supervision. ⁽²⁾ The course evaluation questions are: (No. 1) **overall, the instructor teaching was effective**, (No. 2) **overall the quality of the course was good**, and (No. 14) **I learned a great deal in this course**. (3) Dr. Suleiman did not teach during Spring 2013 due to a family emergency; (4) Research credit classes for undergraduate students (Design Problems and Research Problems classes), and team-taught class (Environmental, Geotechnical and Water Resources Laboratory) Classes are not included.

Teaching Evaluations F18 – Present⁽¹⁾ (*graduate class; **Note:** evaluation form changed in F18)

Semester	^(a) Course Number	Course Credits	No. of Students	No. of Grades Assigned	⁽¹⁾ Q1	⁽¹⁾ Q2	⁽¹⁾ Q3	⁽¹⁾ Q4	⁽¹⁾ Q5	⁽¹⁾ Q6
F19	CEE 347	3	11	11	4.90	4.90	4.50	4.00	4.40	4.70
F19	CEE 142	3	62	62	4.78	4.71	4.20	3.99	4.54	4.86
S19	CEE 445/340*	3	8	8	4.80	4.40	5.00	4.60	4.40	4.80
F18	CEE344*	3	9	9	5.00	4.75	4.75	4.75	4.88	5.00
F18	CEE 142	3	48	48	4.26	4.26	4.00	3.83	4.24	4.59

Notes:

^(a) CEE 142: Fundamentals of Soil Mechanics; CEE 242: Geotechnical Engineering; CEE 244 (number changed to CEE 347): Foundation Engineering; CEE 341: Ground Improvement; CEE 344: Soil Behavior; CEE 445: Advanced Foundations; CEE 495: Soil-Structure Interaction. Research credit classes for undergraduate students (Design Problems and Research Problems classes), and team-taught class (Environmental, Geotechnical and Water Resources Laboratory) Classes are not included. ⁽¹⁾ The evaluation forms/questions were changed and all moved to online evaluation. This reduced the number of students filling the evaluation forms; ⁽²⁾ The course evaluation questions are: (No. 1) *instructor organization*, (No. 2) *teaching methods*, (No. 3) *instructor responsiveness*, (No. 4) *quality of feedback*, (No. 5) *effectiveness of assignments*, (No. 6) *increased knowledge of subject matter*. Dr. Suleiman did not teach during Spring 2013 due to a family emergency; Research credit classes for undergraduate students (Design Problems and Research Problems classes), and team-taught class (Environmental, Geotechnical and Water Resources Laboratory) Classes are not included.

Teaching at Lafayette College

Teaching Evaluations (Notations: †new preparation)

Semester	Class	No. of Students	^(d) Average Questions 1-4 /5
S10	Foundation Engineering (CE 461)	22	4.1
S10	Design III: Senior Design (CE 473) ^(a)	9	4.9
F09	Geotechnical Engineering (CE 361) [with 3 lab sections]	33	4.1
S09	†Retaining Structures, Slopes and Dams (CE 462)	12	3.9
S09	Design II: Junior Design (CE 372) [with 2 lab sections]	33	NA ^(e)
S09	†Design III: Senior Design (CE 473) ^(b)	8	4.9
F08	†Geotechnical Engineering (CE 361) [with 3 lab sections]	35	3.9
S08	†Foundation Engineering (CE 461)	11	4.0
S08	†Design II: Junior Design (CE 372) [with 2 lab sections] ^(c)	25	3.5
S08	†Design III: Senior Design (CE 473)	8	NA ^(e)

Note:

(a) CE 473 is team-taught; (b) developed a new experimental-based senior design project focusing on soil-structure interaction using an NSF funded facility; (c) CE 372 consists of four 3.5 weeks blocks and team-taught with three other professors; (d) the first four questions are: (1) the course as a whole was, (2) the course content was, (3) the instructor contribution to the course was, and (4) the instructor effectiveness in teaching the subject; (e) evaluations were not conducted for instructors.

Graduate Students Advising

Notation: ¹ for Lehigh Students; **Bold Red** indicate currently holding a faculty position; [*refereed publications in italic below student name*], MSF: Main Sources of Funding with TA for teaching assistant, QNRF for Qatar National Research Fund, and IHRB for Iowa Highway Research Board; Dates included for students advised/co-advised after holding tenure track position

Student Name	Degree	Research	Advisory Format
<i>Started or Active after Joining Lehigh University</i>			
Qasim AbuKassab ¹ (Jan. 2020 – May 2025) MSF: DOE, PITA	MS and Ph.D.	Hybrid Simulation of Offshore Wind Turbines	Advised – Meeting once a week and group meetings
Shuoyu Wang ¹ (Aug. 2019 – May 2023) <i>[C1, C2]</i> ; MSF: DOE	Ph.D.	Thermal Energy Storage in Cementitious Materials	Co-Advised with Naito and Quiel – Meeting once a week and group meetings
Xiwei Li ¹ (Aug. 2018 – May 2020) MSF: self-supported	MS	Bio-modification of Soils	Advised – Meeting once a week and group meetings
*Dima Husein “Malkawi” (May 2018 – August 2019) <i>[J51, J53, C39, C40]</i> MSF: Univ. of Akron	Ph.D. Visiting Student	Effects of Temperature Cycles on Soil-Foundation Interaction of Energy Piles	Co-Advised (unofficial) – Meeting once a week and group meetings. Visiting from Un. Of Akron
Pirre Bick ¹ (Aug. 2017 – May 2019) <i>[J55, C3]</i> ; MSF: QNRF	MS	Bio-modification of Soils	Major Advisor/Co-Advised with Brown – Meeting once a week and group meetings
Mu’ath Abu Qamar ¹⁽³⁾ (Jan. 2017 – Aug. 2021) <i>[J2, J54, C4, C41]</i> ; MSF: His Government	Ph.D.	Evaluation of New Offshore Foundation Concepts	Advised – Meeting once a week and group meetings
Kewei Gao ¹⁽³⁾ (Aug. 2016 – August 2021) <i>[J55]</i> ; MSF: NSF, QNRF, PennDOT, TA	MS and Ph.D.	Evaluation of Soil Bio-Inspired Flexible Calcite Precipitation	Advised – Meeting once a week and group meetings
Jianbo Gu ¹ (Aug. 2016 – May 2018) <i>[C6]</i> ; MSF: QNRF	MEng	Evaluation of Soil Bio-Modification to Resist Wind Loading	Advised – Meeting once a week and group meetings
Rehab Elzeiny ^{1(1,3,4,5)} (Aug. 2015 – May 2020) <i>[J2, J6, J48, J51, J53, J56, C4, C7, C9, C39, C40]</i> ; MSF: QNRF, PITA, TA	MS and Ph.D.	Understanding the Long-term Behavior of Geothermal Foundation Systems	Advised – Meeting at least twice a week and group meetings
*Suguang Xiao (Sean) ^{1(2,3)} (Aug. 2011 – May 2017) <i>[J2, J4, J5, J6, J9, J11, J25, J49, C4, C7, C9, C11, C13]</i> ; MSF: Startup, QNRF, TA	Ph.D.	Understanding the Behavior of Geothermal Foundation Systems	Advised – Meeting at least twice a week and group meetings
*Hai Lin (Thomas) ¹⁽³⁾ (June 2011 – May 2016) <i>[J1, J8, J10, J11, J13, J18, J50, D1, C5, C10, C14]</i> ; MSF: Startup, NSF, FIG, TA	MS and Ph.D.	Evaluation of Bio-Modification of Soil and Improved Soil-Pile Interaction	Major Advisor/Co-Advised with Brown – Meeting at least twice a week and group meetings
Hanna Jabour ¹ (April 2014 - May 2016) <i>[J8, J10, C10]</i> ; MSF: Self-supported	MS	Soil-Pile Interaction for Deep Foundations	Advised – Meeting at least twice a week and group meetings

Lusu Ni ⁴ (Aug. 2010 – July 2014) [J11,J12,J16,J19,J22,D1,D2,C12,C16,C18]; MSF: Startup, NSF	Ph.D.	Development and Investigation of Pervious Concrete Ground Improvement Technique	Advised – Meeting at least twice a week and group meetings
Selcuk Bildik (Sep. 2011- Sep. 2012) [C17,C22]; MSF: His Government	Pre-doc. Research Associate	Understanding the Behavior of Reinforced Buried Pipes	Visiting from Turkey. Advised while at Lehigh. Meeting biweekly
Don Seserko ⁴ (Aug. 2010 - May 2011)	MEng.	Behavior of Energy Piles (<i>CEE 481 – 2 credits</i>)	Advised – Meeting at least once a week
*Kam Ng⁽⁸⁾ (Mar. 2008 – Aug. 2011) [J23,J24,D3,C27]; MSF: IHRB	Ph.D.	Dynamic Pile Characterization and Load Resistance Factor Design (LRFD) of Vertically Loaded Piles	Co-Advised with Sritharan – Meeting twice a week and group meetings
<i>Completed before Joining Lehigh University</i>			
*Sherif Abdel-Salam⁽⁷⁾ (Aug. 2007 – Aug. 2010) [J20,J23,J26,J31,J33,J36,D3,C25,C32]; MSF: IHRB	Ph.D.	Characterization of Axially Loaded Steel Piles and Development of The LRFD Resistance Factors	Co-Advised with Sritharan – Meeting twice a week and group meetings
Matthew Roling ⁽⁷⁾ (Aug. 2007 – Aug. 2009) [J23,J30,J33,D3]; MSF: IHRB	MS	Development of LRFD Design Procedures for Bridge Piles in Iowa Using Dynamic Formulas	Co-Advised with Sritharan – Meeting twice a week and group meetings
William Conway ⁽⁷⁾ (Jan. 2007 – Dec. 2008) MSF: IHRB	MS	Identification of Practices, Design, Construction, and Repair Techniques of Utilities Using Trenchless Technology	Co-advised with Schaefer – Meeting at least twice a week and group meetings
Thomas Vande Voort ^(6,7) (Jan. 2007 – Dec. 2008) [J34,C29,C31,C34]; MSF: IHRB	MS	Use of Ultra-High Performance Concrete in Geotechnical and Substructures Applications	Co-Advised with Sritharan – Meeting at least twice a week and group meetings
Kathlyn Videkovich ⁽⁷⁾ (Aug. 2006 – Aug. 2008); MSF: IHRB	MS	Long-Term Monitoring and Performance of Utility Cut Trenches	Co-Advised with Schaefer – Meeting at least twice a week and group meetings
Mohammed Mekkawy [J32,J35, J40,J42]; MSF: IHRB	M.S./Ph. D.	Identification of the Best Practices for the Design, Construction, and Repair of Bridge Approaches	Helped in Co-Advising With White – Meeting at least once a week
Mark Thompson [J37,C28]; MSF: IHRB	MS	The Use of Micropiles for Slope Stability Remediation: Experimental and Numerical Study	Helped in Co-Advising With White – Meeting at least once a week
Annie Fanous [J33]; MSF: PCI	MS	Development of Rational Design Methodology for Spiral Reinforcement in Prestressed Concrete Piles in High Seismic Regions	Helped in Co-Advising With Sritharan– Meeting at least twice a week and group meetings
John Kevern [J38]; MSF: IHRB	MS	Freeze-Thaw Performance of Pervious Concrete	Helped in Co-Advising With Wang and Schaefer – Meeting at least once a week and group meetings
Kari Jensen MSF: IHRB	MS	Utility Cut Repair Techniques – Investigation of Improved Utility Cut Repair Techniques to Reduce Settlement in Repaired Area	Helped in Co-Advising With Schaefer – Meeting at least once a week and group meetings

Longjie Hong MSF: IHRB	MS	Laterally Loaded Intermediate Cast-In-Drilled-Hole (CIDH) Concrete Piers: Evaluation of Scale and Base Shear Effects	Helped in Co-Advising With White – Meeting at least once a week
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Notes:

* Hai Lin: assistant professor at Louisiana State University (Lehigh student); Suguang Xiao: assistant professor at Clarkson University (Lehigh student); Dima Husein Malkawi: assistant professor at German Jordanian University; Kam Ng: associate professor at University of Wyoming; Sheriff AbdelSalam: associate professor at Nile University

(1) Awarded the ADSC (The International Association of Foundation Drilling) 2017-2018 Civil Engineering Graduate Study Scholarship Award

(2) Awarded the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) Foundation Award; the United States Universities Council on Geotechnical Education and Research (USUCGER) Student Travel Award; and Lehigh University Doctoral Travel Grants for Global Opportunities

(3) Awarded the P.C. Rossin Ph.D. Fellow to prepare for future faculty positions

(4) Selected as one of three best Teaching Assistants at Lehigh University in 2020

(5) Selected to represent the CEE Department for the Stout Dissertation Award.

(6) Winner of the 2008 best student paper of the Deep Foundation Institute and 2008 recipient of the Nevada Medal for distinguished graduate student paper on originality of the research and potential impact of bridge engineering design and construction

(7) Co-advised and participated in all weekly meetings with the students and other advisor. Note: Research assistant professors/Lecturer are not allowed to solely advise graduate students at Iowa State University.

(8) Co-advised and participated in all weekly meetings with the students and other advisor; however, after leaving Iowa State (ISU) in 2007, could not officially co-advise according to ISU rules.

Undergraduate Research Students Advising (Lehigh and Lafayette only, † for Lehigh U.)

Student Name	Research Topic
<i>After Joining Lehigh University</i>	
Michael Gillooley (2020) †	Foundations for Offshore Wind Turbines
Sophia Closter (2019) †	Laboratory Tests of Energy Piles
Kiana Reavas (2019) †	Laboratory Tests of Energy Piles
Mathew Taffet (2019) †	Laboratory Soil Tests and Instrumentation
Albin Rosato (2018, 2019) †	Bio-modification of Soils
Jack Payne (2018, 2019) †	Laboratory Tests of Energy Piles
TongTong Jiao (2019) †	Laboratory Soil Tests and Instrumentation
Angel Matos (2018) †	Laboratory Soil Tests
Thomas Tolaricco (2018) †	Bio-inspired Soil Testing Instrumentation
Ryan Bonshak (2017) †	REU: Laboratory Tests on Energy Piles
Nikki Aganbi (2017)	REU: Effect of Temperature Cycles on Soils and Energy Piles
Henry Espinel (2017) †	Laboratory Tests of Energy Piles
Jay Glucksman (2017) †	Bio-inspired Soil Testing Instrumentation
William Elliot (2017) †	Laboratory Tests of Energy Piles
Briana Papp (2016-2017) †	Effect of Temperature Cycles on Energy Piles
Ashley McKendry (2016-2017) †	Effect of Temperature Cycles on Energy Piles
Kawsar Hooda (2016) †	Laboratory Tests of Energy Piles
Christopher Guilcapi (2016) †	Effect of Temperature Cycles on Energy Piles
Huan Xie (2015-2016) †	Effect of Temperature on Interface Properties
Devon Gallagher (2015) †	Soil-Pile interaction of MICP Treated Foundations
Xi Qi (2015) †	MICP Treatment of Soils
Jordan Greer (2015) †	Design of Foundations Subjected to Cyclic Lateral Loading
Allison Stevens (2014) †	Effect of Temperature of Pore Pressure
Benjamin Cohen (2013-2014) †	Effects of Temperature on Soil-Pile Interface
Juan Tzoc (2013) †	Pervious Concrete Foundation and Bio-Improvement of Soils
Yassira Alaziz (2012-13) †	Bio-improvement of Sandy Soils
Caleb Davis (2013) †	Effects of Installation on Foundation Behavior
Alexa Hendricks (2012) †	Bio-improvement of Soil – Biological Sciences- co-advised with Amy Camp
Pierre Bick (2011) †	Pervious Concrete Foundation and Bio-Improvement of Soils
Jeffrey Bruce (2011) †	Bio-improvement of Sandy Soils
Anthony Giraldo (2011)	Pervious Concrete for Ground Improvement
Austin Weidner (2010-11)	Removal of Heavy Metals using Pervious Pavements
Mathew O'Loughlin (2010-11)	Helping on Experimental Investigation of Laterally Loaded Piles
<i>Before Joining Lehigh University</i>	
Mathew Keehn (2010)	Helping on Experimental Investigation of Laterally Loaded Piles
William Kingston (2009-2010)	Experimental Investigation of Soil-Pile Interaction
Timothy Polson (2009-2010)	Experimental Investigation of Soil-Pile Interaction
Jesse Calkins (2009-2010)	Environmental Benefits of Pervious Concrete Material
Corey Cattano (2008-2009)	Mix Design and Properties of Pervious Concrete Material
Debra Perrone (2008)	Development of Pervious Concrete Mixes using Pennsylvania Aggregates

*Table only include undergraduate advising while holding tenure track position (after January 2008)

SERVICE AND DEVELOPMENT

Service at Lehigh University

1. Member of the Chair Search Committee, Civil and Environmental Engineering Department (2019-2020)
2. Member of Lehigh University Graduate and Research Committee
3. Member of Lehigh University Faculty Committee on Global Affairs
4. Member of Lehigh University Senate Subcommittee on Academic and Student Affairs
5. Led the Bio-inspired Mechanics, Materials and Structures Group Formation and Seminar Activities as Part of the Institute for Cyber Physical Infrastructure and Energy
6. Undergraduate Laboratory Development Committee, Civil and Environmental Engineering Department
7. Chair of the Department Website Committee (2015-2018)
8. Member of the LU ADVANCE Male Advocates and Allies for Gender Equality
9. Member of the Department Future Direction Committee
10. Member of the Department 150 Anniversary Planning Committee
11. Member of the Department Space Committee
12. Member of the Chair Search Committee, Civil and Environmental Engineering Department (2012-2013)
13. Member of the Search Committee for Water Resources Position, Civil and Environmental Engineering Department (2012-2013)
14. Member of the Search Committee for Professor of Practice, Civil and Environmental Engineering Department (2011-2012)
15. Member of the Graduate Committee, Civil and Environmental Engineering Department
16. Member of the Undergraduate Committee, Civil and Environmental Engineering Department
17. Member of the ABET Accreditation Committee, Civil and Environmental Engineering Department
18. Member of the Search Committee for Computation Simulation, Civil and Environmental Engineering Department (2011-2012)
19. Attendance at University-Wide, College-Wide and Departmental Faculty Meetings

Professional Service

1. Reviewer of promotion and tenure cases
2. Reviewer, National Science Foundation Review Panels and Proposals
3. Reviewer, Utility Through Knowledge Fund, Croatian Ministry of Science and Education, 2017
4. Reviewer, Qatar National Research Fund
5. Reviewer UW-Milwaukee's Research Growth Initiative
6. Reviewer, American University of Beirut Research Proposals

7. Co-Chair of the Energy Foundations Track for the 2015 GeoCongress (IFCEE 2015)
8. Chair of the Advances in Foundation Engineering Track for the 2012 GeoCongress
9. Liaison of Deep Foundation Committee on the GI Sustainability Committee, 2011 – present
10. Member of USUCGER representatives on the PDCA/USUCGER Council
11. Member of the Board of the Lehigh Valley Section of the American Society of Civil Engineers, 2012 – 2016
12. Member of TRB Committee on Foundations of Bridges and Other Structures (AFS30), 2011 – present
13. Member of the Soil Improvement Committee, , Geo-Institute, ASCE, 2008 – present
14. Member of the DFI Seismic and Lateral Loads Committee
15. Member of the DFI Marine Foundations Committee
16. Member of the DFI Energy Foundations Committee
17. Member of TRB Committee on Subsurface Soil-Structure Interaction (AFS40), 2005 – 2014
18. Member of Deep Foundation Committee, Geo-Institute, ASCE, 2005 – present
19. Chair/Co-Chair of the Deep Foundations Session III at the Geo Frontiers 2011 – Advances in Geotechnical Engineering Conference, Texas, March 2011
20. Reviewer, ASCE, Journal of Computing in Civil Engineering
21. Reviewer, Marine Georesources and Geotechnology
22. Reviewer, ASCE, Journal of Bridge Engineering
23. Reviewer, ASCE, Journal of Geotechnical and Geoenvironmental Engineering
24. Reviewer, Soil Dynamics and Earthquake Engineering
25. Reviewer, Journal of Structure and Infrastructure Engineering (England)
26. Reviewer, ASTM, Geotechnical Testing Journal
27. Reviewer, ASCE, Journal of Materials in Civil Engineering
28. Reviewer, Experimental Techniques Journal
29. Reviewer, Journal of Soils and Foundations (Japan)
30. Reviewer, Canadian Geotechnical Journal (Canada)
31. Participating in Committee Meetings at the Transportation Research Board
32. Participating in Mid-Year GI – Deep Foundation Committee Meeting
33. Reviewer for the “Role of Full-Scale Testing in Foundation Design”; honoring Professor Bengt H. Fellenius”. Geo institute, ASCE, 2012
34. Reviewer for GeoShanghai 2010 International Conference: GeoShanghai, Shanghai, China
35. Chair of the Deep Foundations Session I and Reviewer for the GeoFlorida 2010 – Advances in Analysis, Modeling and Design, Florida, March 2010
36. Chair of the Shallow Foundations Session and Reviewer for the International Foundation Congress and Equipment Expo 09, Orlando, Florida, March 2009

37. Reviewer for Geotechnical Special Publication: The Art of Foundation Engineering Practice; Honoring Clyde Baker, Geo-Institute, ASCE, 2009
38. Reviewer for Geotechnical Special Publication No. 180: “From Research to Practice in Geotechnical Engineering”; Honoring John H. Schmertmann, Geo institute, ASCE, 2008

Professional Development

1. Participated in Transportation Research Board Meetings
2. Participated in the CMMI NSF Conferences
3. Participated in the NSF-NEES Workshop at University of California, Davis – Rensselaer Polytechnic Institute
4. Participated in the NSF-NEES Workshop at Cornell University
5. Participated in the NSF-NEES Workshop at University of Illinois at Urban Champaign
6. Participated in a grant writing workshop
7. Participated in Preparing Future Faculty program at Iowa State University
8. Participated in ASCE Geo-Institute Geotechnical Conferences
9. Participated in the University of Minnesota Geotechnical Conference
10. Participated in Iowa Geotechnical Conferences, 2000 to 2006

Professional Affiliation

1. Member of Network for Earthquake Engineering Simulation Consortium, Inc.
2. Member of the Deep Foundation Institute
3. Member of Sigma Xi
4. Member of American Society of Civil Engineers (ASCE), Geo-Institute
5. Member of International Association for Bridge Maintenance and Safety
6. Member of United States Universities Council on Geotechnical Education and Research
7. Member of the Geo-professional Business Association