

**Xiaochao Tang, Ph.D., P.E.**

Department of Civil Engineering, Widener University, Chester, PA 19013

**EDUCATION**

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- Ph.D. in Civil Engineering, Pennsylvania State University, University Park, PA 2011
- M.S. in Civil Engineering, West Virginia University, Morgantown, WV 2006
- B.S. in Mining and Geotechnical Engineering, Central South University, Hunan, China 2002

**EXPERIENCE**

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**08/2024 – present**

Chair, Department of Civil Engineering, Widener University, Chester, PA

**09/2019 – present**

Associate Professor, Department of Civil Engineering, Widener University, Chester, PA

**08/2013 – 08/2019**

Assistant Professor, Department of Civil Engineering, Widener University, Chester, PA

**01/2012 – 07/2013**

Research Associate, Louisiana Transportation Research Center, Baton Rouge, LA

**07/2011 – 12/2011**

Senior Engineer, SGI Testing Services LLC, Atlanta, GA

**08/2006 – 06/2011**

Graduate Research Assistant, Pennsylvania State University, University Park, PA

**08/2004-08/2006**

Graduate Research Assistant, West Virginia University, Morgantown, WV

**PROFESSIONAL LICENSURE**

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Registered Professional Civil Engineer in California (License Number: 87685). Issuance Date: June 1, 2017

**PUBLICATIONS**

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**Refereed Journal Papers**

1. Alhassan, I., Park, J., and **Tang, X.** (2023). "Characterizing a Local Sewage Sludge Ash for Developing Alkali-Activated Geopolymer Mortar." *Transportation Research Record*, Vol. 2677 (9): <https://doi.org/10.1177/036119812311591>
2. Yang, M., **Tang, X.**, Wu, Z. (2020). "Slip Surface and Active Earth Pressure of Cohesionless Narrow Backfill behind Rigid Retaining Walls under Translation Movement Mode." *International Journal of Geomechanics*, Vol. 20 (8): [https://doi.org/10.1061/\(ASCE\)GM.1943-5622.0001746](https://doi.org/10.1061/(ASCE)GM.1943-5622.0001746)
3. **Tang, X.**, & Yang, M. (2020). "Analysis of Laterally Loaded Piles in Weathered Rock Slopes Based on p-y Curve Method." *International Journal of Geotechnical Engineering*, Vol.14 (7), pp. 809–819.
4. **Tang, X.**, Higgins, I., and Jililati, M. N. (2018). "Behavior of Geogrid-Reinforced Portland Cement Concrete under Static Flexural Loading." *MDPI Infrastructures*, 3(4), 41.

5. **Tang, X.**, Wang, P-Y., and Buchter, G. (2018). "Ion-Selective Electrodes for Detection of Lead (II) in Drinking Water: A Mini-Review." *MDPI Environments*, 5(9), 95.
6. Yang, M. and **Tang, X.** (2017). "Rigid Retaining Walls with Narrow Cohesionless Backfills under Various Wall Movement Modes." *ASCE International Journal of Geomechanics*, Vol.17 (11), 04017098.
7. **Tang, X.**, Palomino, A. M., and Stoffels, S. M. (2016). "Permanent deformation behaviour of reinforced flexible pavements built on soft soil subgrade." *Road Materials and Pavement Design*. Taylor & Francis, Vol.17 (2), pp. 311-327.
8. **Tang, X.**, Stoffels, S. M., and Palomino, A. M. (2016). "Mechanistic-empirical approach to characterizing permanent deformation of reinforced soft soil subgrade." *Geotextiles and Geomembranes*. Elsevier, Vol.44 (3): pp. 429-441.
9. **Tang, X.**, Abu-Farsakh, M., Shadi Hanandeh, S., and Chen, Q. (2015). "Performance of Reinforced/Stabilized Unpaved Test Sections Built over Native Soft Soil under Full-Scale Moving Wheel Loads." *Transportation Research Record: Journal of Transportation Research Board*. Vol. 2511, pp.81-89.
10. **Tang, X.**, Stoffels, S. M., and Palomino, A. M. (2013). "Resilient and Permanent Deformation Characteristics of Unbound Pavement Layers Modified by Geogrids." *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2369, pp.3-10.
11. **Tang, X.**, Palomino, A. M., and Stoffels, S. M. (2013). "Reinforcement Tensile Behavior Under Cyclic Moving Wheel Loads." *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2363, pp. 113-121.
12. **Tang, X.**, Stoffels, S.M., and Palomino, A.M. (2013). "Evaluation of Pavement Layer Moduli Using Instrumentation Measurements." *International Journal of Pavement Research and Technology*. Vol. 6 (6), pp. 755-764.
13. **Tang, X.** and Yang, M. (2013) "Investigation of Flexural Behavior of Geocell Reinforcement Using Multi-Layered Beam Model Testing." *Geotechnical and Geological Engineering*. Vol. 31 (2), pp. 1-13.
14. **Tang, X.** and Yang, X. (2013). "Inverse Analysis of Pavement Structural Properties Based on Dynamic Finite Element Modeling and Genetic Algorithm." *International Journal of Transportation Science and Technology*, Vol. 2 (1), pp. 15-30.
15. Chehab, G.R. and **Tang, X.** (2012) "The Use of a Multi-Setup, Reduced-Scale Accelerated Trafficking Simulator for Evaluating Roadway Systems and Products." *International Journal of Pavement Engineering*, Vol. 13 (6), pp. 535-552.
16. Donnell, E.T., Chehab, G.R., **Tang, X.**, and Schall, D. (2009). "Exploratory Analysis of Accelerated Wear Testing to Evaluate Performance of Pavement Markings." *Transportation Research Record, Journal of the Transportation Research Board*, Vol. 2107, pp. 76-87.
17. **Tang, X.**, Chehab, G.R., and Palomino, A.M. (2008). "Evaluation of Geogrids for Stabilizing Weak Pavement Subgrade." *International Journal of Pavement Engineering*, Vol. 9 (6), pp. 413-429.

### Refereed Conference Papers

1. **Tang, X.** and Nordfors, I. (2020). "Pozzolan Activity of Municipal Sewage Sludge Ash and Its Potential Use for Soft Soil Stabilization." *Geo-Congress 2020: Foundations, Soil Improvement, and Erosion* (GSP 315). Minneapolis, MN, Feb.25-28, 2020.
2. **Tang, X.**, Jilati, M. N., and Higgins, I. (2019). "Concrete Slab-on-Grade Reinforced by Geogrids." *Geo-Congress 2019: The Eighth International Conference on Case Histories in Geotechnical Engineering*, Philadelphia, PA, March 24 - 27, 2019.
3. Jilati, M., Brown, V., and **Tang, X.** (2019). "Comparative investigation of two design methods for slab-on-grade foundations subjected to concentrated loads." *10<sup>th</sup>*

*International Structural Engineering and Construction Conference*, Chicago, IL, May 20-25, 2019.

4. **Tang, X.**, Higgins, I., and Jilati, M. N. (Accepted). “Third-Point Bending Test of Simply-Supported Concrete Beams Reinforced by Geogrids.” *Geosynthetics Conference 2019*, Houston, TX, February 10-13, 2019.
5. Nordfors, I. and **Tang, X.** (2018). “Potential Use of a Municipal Sewage Sludge Ash as Cementitious Additives.” *The Thirty-Third International Conference on Solid Waste Technology and Management*, Annapolis, MD, March 11-14, 2018.
6. **Tang, X.** and Jilati, M. N. (2017). “Load-Carrying Capacity of Slab-on-Grade Foundations Supporting Rack Post Loads.” *Proceedings of Geotechnical Frontiers 2017*, 242-246, Orlando, Florida, March 12–15, 2017.
7. **Tang, X.**, Hill, Z., Yenser, E., Didomenico, G., and Mulzoff, J. (2016). “Prototype Wireless Sensing Nodes for Monitoring Substructure and Subsurface Conditions.” *Proceedings of Geo-Chicago 2016: Sustainable Materials and Resource Conservation*, K. R. Reddy, N. Yesiller, D. Zekkos, A. Farid, and A. De Eds., Aug. 14-18, 2016, Chicago, IL, pp. 581-588.
8. Abu-Farsakh, M., Hanandeh, S., **Tang, X.**, and Chen, Q. (2016). “Sustainability Evaluation of Geosynthetic Stabilized Soft Subgrade Soil in Unpaved Test Sections.” *Proceedings of Geo-Chicago 2016: Sustainable Materials and Resource Conservation*, K. R. Reddy, N. Yesiller, D. Zekkos, A. Farid, and A. De Eds., Aug. 14-18, 2016, Chicago, IL, pp. 687-696.
9. **Tang, X.**, Abu-Farsakh, M., Hanandeh, M., and Chen, Q. (2014). “Use of Geosynthetics for Reinforcing/Stabilizing Unpaved Roads under Full-Scale Truck Axle Loads.” *Proceedings of the Shale Energy Engineering 2014: Technical Challenges, Environmental Issues, and Public Policy*, C. L. Meehan, J. M. VanBriesen, and F. Vahedifard Eds., July 21-23, 2014, Pittsburgh, PA, pp. 591-602.
10. **Tang, X.**, Stoffels, S. M., and Palomino, A. M. (2014). “Mechanistic-Empirical Performance Prediction of Geogrid-Modified Soft Soil Subgrade.” *Proceedings of Geo-Congress 2014: Geo-characterization and Modeling for Sustainability*, M. Abu-Farsakh and L. R. Hoyos, Eds., Feb. 23-26, 2014, Atlanta, GA, pp. 3054-3061.
11. **Tang, X.**, Abu-Farsakh, M., Hanandeh, M., and Chen, Q. (2014). “Evaluation of Geosynthetics in Unpaved Roads Built over Natural Soft Subgrade Using Full-Scale Accelerated Pavement Testing.” *Proceedings of Geo-Congress 2014: Geo-characterization and Modeling for Sustainability*, M. Abu-Farsakh and L. R. Hoyos, Eds., Feb. 23-26, 2014, Atlanta, GA, pp. 3035-3043.
12. **Tang, X.**, Abu-Farsakh, M., Hanandeh, M., and Chen, Q. (2014). “Accelerated Load Testing of Geosynthetic-Reinforced and Stabilized Unpaved Roads Built over Native Soft Soil.” *CD-ROM of TRB 93<sup>rd</sup> Annual Meeting*, January 12-16, 2014, Washington, DC.
13. **Tang, X.** and Yuan, Z. (2013). “Boundary Effects of Gripping System on Internal Shear Strength Tests for Multi-Component Geosynthetic Clay Liners.” *Current and Future Practices for the Testing of Multi-Component Geosynthetic Clay Liners*, STP 1562, Kent P. von Maubeuge and J. P. Kline, Eds., pp. 99-108, doi:10.1520/STP156220120075, ASTM International, West Conshohocken, PA. Third Symposium on Current and Future Practices for the Testing of Multi-Component Geosynthetic Clay Liners, June 27, 2012, San Diego, CA.
14. **Tang, X.**, Chehab, G.R., and Palomino, A.M (2008). “Accelerated Testing of Geogrid-Reinforced Subgrade in Flexible Pavements.” ASCE Geotechnical Special Publication (GSP) No. 178, pp. 1049-1056.
15. **Tang, X.**, Chehab, G.R., Palomino, A.M, Allen, S., and Sprague J. (2008). “Effects of Geogrids Properties on Subgrade Stabilization of Flexible Pavements.” ASCE Geotechnical Special Publication (GSP) No. 178, pp. 1089-1096.
16. **Tang, X.**, Chehab, G., and Kim, S. (2008) “Laboratory Study of Geogrid Reinforcement

- in Portland Cement Concrete.” *Conference Proceedings , the 6<sup>th</sup> RILEM International Conference on Cracking in Pavements 2008*, Chicago, IL, June 16-18, 2008, pp. 769-778.
17. **Tang, X.**, Medeiros, M.S, and Chehab, G.R. (2008). “Numerical Modeling and Laboratory Testing of Geogrid-Reinforced Flexible Pavements.” *Conference Proceedings, the 4<sup>th</sup> International Gulf Conference on Roads*, Doha, Qatar, November 10-13, 2008, pp.769-782.
  18. **Tang, X.**, Palomino, A.M., and Chehab, G.R. (2008). “Laboratory Evaluation of Geogrids for Flexible Pavement Reinforcement.” *The GeoAmericas 2008 Conference Proceedings*, Cancun, Mexico, March 2-5, 2008, pp. 973-982.
  19. Wilson, T., Siriwardane, H., **Tang, X.** (2007). “Leakage Risks Associated with Coal Sequestration in Some Areas of the Central Appalachians: Subsurface, Seismic and Geomechanical Evaluations.” American Association of Petroleum Geologists (AAPG) Annual Convention, Long Beach, California, April 1-4, 2007.

### Conference Abstracts

1. Delestre, J., Wang, P-Y, **Tang, X.** (2021) “Prototyping of a Low-Cost Ion-Selective Electrode Sensor Unit for Determination of Lead Ions in Aqueous Samples.” Electrochemical Society Meeting Abstracts 239, Virtual.
2. **Tang, X.**, Patel T and Taylor P (2017). “Monitoring Low-Clearance Railway Bridges.” *ASME and ASCE Joint Rail Conference*, April 4-7, Philadelphia, PA.
3. **Tang, X.** (2015). “Mobilization and Tensile Behavior of Geogrid Reinforcement in Pavements.” *ASCE T&DI International Airfield and Highway Pavements Conference*, June 7-10, 2015, Miami, FL.

### Research Project Reports

1. Abu-Farsakh, M. Y., Yoon, S., Yu, X., and **Tang, X.** (2014). Structural Health Monitoring of I-10 Twin Span Bridge – Part I: Analysis of Lateral Load Test, *Report No. FHWA/LA.14/529*, Final Report Submitted to Louisiana Department of Transportation and Development, Baton Rouge, LA, USA.
2. Palomino, A.M., **Tang, X.**, and Stoffels, S.M. (2010). Determination of Structural Benefits of PennDOT-Approved Geogrids in Pavement Design. *Report No. FHWA-PA-2010-012-PSU 018*, Final Report Submitted to Pennsylvania Department of Transportation, Harrisburg, PA, USA.
3. Chehab, G.R., Palomino, A.M., and **Tang, X.** (2007). Laboratory Evaluation and Specification Development for Geogrids for Highway Engineering Applications, *Report No. FHWA-PA-2007-009-050110*, Final Report Submitted to Pennsylvania Department of Transportation, Harrisburg, PA, USA.

### PRESENTATIONS

1. Brubaker, D. and **Tang, X.** (2025). “Analyzing Ion Leaching in a Sustainable Geopolymer Mortar.” *23<sup>rd</sup> Global Joint Seminar on Geo-Environmental Engineering*, Montreal, Canada, May 22-23, 2025.
2. **Tang, X.** and Sengstock, C. (2025). “Developing a Low-Carbon Geopolymer Concrete using Sewage Sludge Ash and Ground Granulated Blast-Furnace Slag as Precursors.” *23<sup>rd</sup> Global Joint Seminar on Geo-Environmental Engineering*, Montreal, Canada, May 22-23, 2025.
3. Sengstock, C. and **Tang, X.** (2024). “Alkali-Activated Geopolymer from Sewage Sludge Ash: Mechanical and Microstructural Insights.” *22<sup>nd</sup> Global Joint Seminar on Geo-Environmental Engineering*, Kyoto, Japan, May 23-24, 2024.

4. **Tang, X.** and Kane, D. (2024). “Durability Investigation of Using Geopolymer Binder for Stabilizing Soft Soil.” *22<sup>nd</sup> Global Joint Seminar on Geo-Environmental Engineering*, Kyoto, Japan, May 23-24, 2024.
5. Alhassan, I., Park, J., and **Tang, X.** (2023). “Characterizing a Local Sewage Sludge Ash for Developing Alkali-Activated Geopolymer Mortar.” TRB 102<sup>nd</sup> Annual Meeting, Washington DC. Jan. 8-12, 2023.
6. Nordfors, I. and **Tang, X.** (2018). “Potential Use of a Municipal Sewage Sludge Ash as Cementitious Additives.” *The Thirty-Third International Conference on Solid Waste Technology and Management*, Annapolis, MD, March 11-14, 2018.
7. **Tang, X.**, Patel T, and Taylor P (2017). “Monitoring Low-Clearance Railway Bridges.” *ASME and ASCE Joint Rail Conference*, April 4-7, Philadelphia, PA.
8. **Tang, X.** (2017). “Load-Carrying Capacity of Slab-in-Grade Foundations Supporting Rack Post Loads.” *Geotechnical Frontiers 2017 Conference*, March 12-15, 2017, Orlando, FL.
9. **Tang, X.** (2017). “Customized Sensor Units for Superstructure and Substructure Monitoring.” Presentation at AFF40 Committee on Field Testing and NDE of Transportation Structures, Transportation Research Board 96<sup>th</sup> Annual Meeting, January 7-12, Washington, D.C.
10. **Tang, X.** (2017). “Customized Low-Cost Sensor Units for Civil Infrastructure Monitoring.” 7<sup>th</sup> Annual Workshop of International Association of Chinese Infrastructure Professionals, January 8, Washington, D.C.
11. **Tang, X.** and Jilati, M. N. (2017). “Load-Carrying Capacity of Slab-on-Grade Foundations Supporting Rack Post Loads.” *Proceedings of Geotechnical Frontiers 2017*, 242-246, Orlando, Florida, March 12–15, 2017.
12. **Tang, X.** (2016). “Prototype Wireless Sensing Nodes for Monitoring Substructure and Subsurface Conditions.” *ASCE Geo-Institute Geo-Chicago Conference*, Aug. 14-18, 2016, Chicago, IL.
13. **Tang, X.** (2016). “Sensor Technologies for Infrastructure Monitoring: Current and Future.” School of Civil Engineering and Resources Engineering, University of Science and Technology Beijing, June 23, 2016, Beijing, China. *Invited Talk*.
14. **Tang, X.** (2015). “Instrumentation and Sensor Technologies for Highway Infrastructure Monitoring.” Geomechanics Lecture Series, Department of Civil and Environmental Engineering, Pennsylvania State University, April 10, 2015, University Park, PA. *Invited Talk*.
15. **Tang, X.** (2015). “Mobilization and Tensile Behavior of Geogrid Reinforcement in Pavements.” *ASCE T&DI International Airfield and Highway Pavements Conference*, June 7-10, 2015, Miami, FL.
16. **Tang, X.**, Abu-Farsakh, M., Shadi Hanandeh, S., and Chen, Q. (2015). “Performance of Reinforced/Stabilized Unpaved Test Sections Built over Native Soft Soil under Full-Scale Moving Wheel Loads.” *Transportation Research Board 94<sup>th</sup> Annual Meeting*, January 11-15, Washington, D.C., *Poster Presentation*.
17. **Tang, X.**, Abu-Farsakh, M., Hanandeh, M., and Chen, Q. (2014). “Use of Geosynthetics for Reinforcing/Stabilizing Unpaved Roads under Full-Scale Truck Axle Loads.” *ASCE Shale Energy Engineering 2014*, July 21-23, 2014, Pittsburgh, PA.
18. **Tang, X.**, Stoffels, S. M., and Palomino, A. M. (2014). “Mechanistic-Empirical Performance Prediction of Geogrid-Modified Soft Soil Subgrade.” *Geo-Congress 2014*, Feb. 23-26, 2014, Atlanta, GA.
19. **Tang, X.**, Abu-Farsakh, M., Hanandeh, M., and Chen, Q. (2014). “Accelerated Load Testing of Geosynthetic–Reinforced and Stabilized Unpaved Roads Built over Native Soft Soil.” *93<sup>rd</sup> TRB Annual Meeting*, Washington, D.C., January 12-16, 2014.
20. **Tang, X.** (2013). “Research in Highway Infrastructure.” *School of Engineering Board of Advisors Meeting*, October 15, 2013, Old Main, Widener University.

21. **Tang, X.** and Abu-Farsakh, M. (2013). “Geosynthetics Stabilization for Soft Subgrade – Instrumentation and ME Approach.” *Louisiana Transportation Conference*, Baton Rouge, LA, Feb. 17-20, 2013.
22. **Tang, X.**, Stoffels, S.M., and Palomino, A.M. (2013). “Resilient and Permanent Characteristics of Unbound Pavement Layers Modified by Geogrids.” *92<sup>nd</sup> TRB Annual Meeting*, Washington, DC, Jan. 13-17, 2013.
23. **Tang, X.**, Palomino, A.M., and Stoffels, S.M. (2013). “Reinforcement Tensile Behavior under Cyclic Moving Wheel Loading.” *92<sup>nd</sup> TRB Annual Meeting*, Washington, DC, Jan. 13-17, 2013.
24. **Tang, X.** (2011). “Teaching and Research in Transportation Geotechnics.” *Invited presentation* at Department of Construction Management and Civil Engineering, Georgia Southern University, Aug. 5, 2011.
25. **Tang, X.**, Chehab, G.R., and Palomino, A.M (2008). “Accelerated Testing of Geogrid-Reinforced Subgrade in Flexible Pavements.” *ASCE GeoCongress 2008 Conference*, New Orleans, LA., March 9-12, 2008.
26. **Tang, X.**, Chehab, G., and Kim, S. (2008) “Laboratory Study of Geogrid Reinforcement in Portland Cement Concrete.” *6<sup>th</sup> RILEM International Conference on Cracking in Pavement*, Chicago, IL.
27. **Tang, X.**, Chehab, G.R., and Palomino, A.M (2008). “Laboratory Evaluation of Geogrids for Flexible Pavement Reinforcement.” *87<sup>th</sup> annual meeting of the Transportation Research Board*, Washington, DC.
28. **Tang, X.**, Chehab, G.R., and Palomino, A.M (2007). “Laboratory Evaluation & Specification Development for Geogrids for Highway Engineering Applications.” *86<sup>th</sup> annual meeting of the Transportation Research Board*. Washington, DC.

## **RESEARCH GRANTS**

1. “Developing Geopolymer Cement Using Sewage Sludge Ash as Precursors.” PI: **Tang, X.**, Co-PIs: Saha, D. and Wang, P. Y. Funding Agency: US Environmental Protection Agency (EPA). Award Amount: \$74,809. Project Period: Jan. 1, 2024 – May. 31, 2025. Status: completed.
2. “Repurposing Incinerated Sewage Sludge Ash for Nonstructural Concrete Applications.” PI: **Tang, X.**, Co-PI: Brown, V. Funding Agency: Pennsylvania Department of Community and Economic Development. Award Amount: \$69,438. Project Period: Jun. 1, 2024 – August 31, 2025. Status: completed.
3. “Developing a Low-Cost Wireless Device for Real-Time Monitoring of Lead Levels in Drinking Water.” PI: **Tang, X.**, Co-PIs: Song, X., Saha, D., and Wang, P. Y. Funding Agency: US Environmental Protection Agency (EPA). Award Amount: \$14,935. Project Period: Nov. 1, 2018 – Oct. 31, 2019. Status: completed.

## **IN-KIND DONATION FOR RESEARCH SUPPORT**

1. A Full Roll of TX-7 Triaxial Geogrids by Tensar International Inc., Atlanta, GA., approximate market value of \$1,000.

## **PROFESSIONAL SERVICES**

1. Member of Transportation Research Board (TRB) Committee on Geo-Environmental and Climate Impacts on Geomaterials (AKG30), 2020 – 2024
2. Member of TRB Committee on Mechanics and Drainage of Saturated and Unsaturated

- Geomaterials (AKG40), 2020 – 2024
3. Chair of TRB Subcommittee on Geo-Environmental Aspect of Geomaterials (AKG30(1)), 2023 – 2024.
  4. Panel Member of TRB National Cooperative Highway Research Program (NCHRP) Project 24-45 “Evaluating Mechanical Properties of Earth Material During Intelligent Compaction.”, 2013 – 2016.
  5. Session Organizer, “Session D: New Topics for Geoenvironmental Engineering.”, 22<sup>nd</sup> Global Joint Seminar on Geo-Environmental Engineering, Kyoto, Japan, May 23-24, 2024.
  6. Session Organizer, “Use of Geosynthetics with Cementitious Materials.” Geosynthetics 2019 Conference.
  7. Session Organizer for TRB subsurface drainage committee (AFS60) at TRB 2019 annual meeting: “Best Practices for Improving Drainage Performance.”
  8. Workshop Organizer for TRB subsurface drainage committee (AFS60) at TRB 2019 annual meeting: “Design and Performance of Porous Pavement”
  9. Session Co-Organizer, “New Technologies for Road and Rail Construction 2.” Geosynthetics 2015, Feb. 16-18, Portland, OR.
  10. Voting Member of ASTM Committee on Geosynthetics (D35), 2013-present
  11. Member, LTRC Report Review Committee
  12. Reviewer for Journals: ASCE Journal of Materials for Civil Engineering; ASCE Journal of Transportation Engineering Part A: Systems; ASCE Journal of Transportation Engineering Part B: Pavements; ASCE International Journal of Geomechanics; International Journal of Pavement Engineering; ASTM Journal of Testing and Evaluation; ASTM Advances in Civil Engineering Materials; Advances in Civil Engineering, Hindawi; KSCE Journal of Civil Engineering; MDPI Infrastructures; MDPI Sustainability; Elsevier Applied Mathematical Modeling.
  13. Reviewer for Conferences: TRB annual meetings 2014-2025; ASCE Geo-Chicago 2016; ASCE GeoCongress 2014, GeoFlorida 2010; GeoCongress 2008; Geosynthetics 2013; 2<sup>nd</sup> International Conference on Geotechnical and Earthquake Engineering, 2013; International Workshops on Environment and Geoscience (IWEG), 2018; The Tenth International Structural Engineering and Construction Society (ISEC), 2019.
  14. Grant proposal reviewer: University Research Board, American University of Beirut, 2012, 2014, 2015

### **SERVICE AT WIDENER UNIVERSITY**

1. Member of University Faculty Council Academic Affairs, Fall 2020 – Fall 2024
2. Member of PTAF Committee, Fall 2023 – present
3. Member of Awards Committee, School of Engineering, Fall 2017 – present
4. Member of Graduate Committee, School of Engineering, Widener, Fall 2013 – Spring 2017 (Served as Committee Chair from Fall 2016 to Spring 2017)
5. Member of ABET Assessment Team, School of Engineering, Fall 2016
6. Representative to University Faculty Council, Spring 2016 – Fall 2020
7. Faculty Advisor to ASCE Student Chapter at Widener, Fall 2014 – present
8. Faculty Advisor to Widener Geowall Competition Team at Mid-Atlantic ASCE Student Chapter Conference on April 7, 2018 (won 2<sup>nd</sup> place of competition)
9. Member of the Faculty Search Committee, Department of Civil Engineering, Widener, 2014, 2015
10. Participation in Outreach Events: Accepted Students Day, Widener Day, Engineering Mini-Camp, Bishop Shanahan High School Engr 111, Engineering Summer Camp, Mousetrap Competition, Urban Excursion.

## **WORKSHOPS**

1. KEEN Foundation Innovating Curriculum with Entrepreneurial-Mindset (ICE) workshop at University of New Haven, New Haven, CT, June 2 – 6, 2014.
2. “Geotechnical Site Characterization: Testing, Drilling, and Sampling” Short Course at Geo-Congress 2014, Feb. 23, 2014, Atlanta, GA.
3. NSF proposal writing workshop at University of Pennsylvania, Oct. 1, 2013.

## **PROFESSIONAL AFFILIATIONS**

1. Associate Member of American Society of Civil Engineers (ASCE)
2. Associate Member of ASCE Geo-Institute
3. Member of American Concrete Institute (ACI)
4. Member of American Society of Testing and Materials (ASTM)

## **AWARDS**

Thomas D. Larson Pennsylvania Transportation Institute Tuition Grant	Penn State	2008
Thomas D. Larson Pennsylvania Transportation Institute Travel Grant	Penn State	2008
Harvey & Geraldine Brush Graduate Fellowship in Engineering	Penn State	2006

## **COURSES TAUGHT (WITH MOST RECENT EVALUATION)**

CE343 Soil Mechanics, CE343 Lab, CE446 Foundation Engineering, ENGR 111 Engineering Techniques Laboratory, ENGR 323 Mechanics of Deformable Bodies, ENGR326 Materials Engineering, ENGR 401 and 402 Senior Design Project, ENGR 636 Finite Element Analysis

## **New Course Development**

1. ENGR 636 Finite Element Analysis, Spring 2015
2. Laboratory Project for ENGR 111, Fall 2017: “Structural Analysis and Monitoring of Truss Bridges”

## **MS GRADUATE STUDENTS ADVISED**

1. Catie Sengstock. “Mechanical and Microstructural Characteristics of Alkali-Activated Geopolymer Developed from Sewage Sludge Ash.” Graduation Date: May 2025.
2. Jacob Small. “Characterizing Resilient Modulus for a Densely Graded Aggregate in Pennsylvania.” Graduation Date: May 2021.
3. Ian Nordfors. “Characterization of a Local Sewage Sludge Ash as Non-Structural Cementitious Materials for Soil Stabilization.” Graduation Date: May 2019.
4. Gabrielle Buchter. “Developing an Ion-Selective Electrode Membrane for Lead (II) Level Detection in Drinking Water.” Graduation Date: May 2019.