Theresa Andrejack Loux, Ph.D., P.E.

589 Lenape Circle
Langhorne, PA 19047

Mobile: 717.574.5614
Email: tloux@aeroaggregates.com

EDUCATION

DREXEL UNIVERSITY, Philadelphia, PA. Ph.D. Civil Engineering, March 2010.

DREXEL UNIVERSITY, Philadelphia, PA. M.S. Civil Engineering, June 2006.

DREXEL UNIVERSITY, Philadelphia, PA. B.S. Civil Engineering, June 2006.

ACADEMIC EXPERIENCE

Rowan University, Glassboro, NJ, Adjunct Professor, 2018 – Present

Drexel University, Philadelphia, PA, Adjunct Professor, 2017

Temple University, Philadelphia, PA, Adjunct Professor, 2014

Bucknell University, Lewisburg, PA, Visiting Assistant Professor, 2009 –2011

As instructor, central goal was to communicate course material in a clear, engaging, and challenging manner. Other tasks included: organizing course structure and learning outcomes, designing problems for in-class work, homework, and exams to assist in student assessment, preparing and supervising laboratory experiments, offering feedback to students for written and oral assignments, and advising senior design groups and undergraduate research projects. ASCE 2010 ExCEEd Teaching Fellow.

Drexel University, Philadelphia, PA, Research and Teaching Assistant, 2006 – 2009
Advisor: Dr. Joseph Wartman; Dissertation: Multi-axial Tension Testing of Geosynthetics

Doctoral studies focused on assessing the multi-axial tension properties of woven geotextiles. The project was a combination of equipment and testing procedures development, testing program and data analysis and synthesis, and multi-scale modelling.

COURSES TAUGHT

CEE 08452/08552, Foundation Engineering (FA18, FA19, FA20, FA21) [Rowan]
CEE 08453/08553, Earth Retaining Systems (SP18, SP19, SP20, SP21) [Rowan]
CIVE 651, Geosynthetics II (WI17) [Drexel]
CEE3331, Soil Mechanics (SP14, FA14) [Temple]
CENG 350, Geotechnical Engineering I (FA09, FA10) [Bucknell]
ENGR 208, Mechanics of Materials (FA09, FA10) [Bucknell]
ENGR 242, Materials Engineering (SP09) [Bucknell]
ENGR 242L, Materials Engineering Lab (SP09) [Bucknell]
CENG 491, Civil Engineering Design (FA10/SP11) [Bucknell]

ENGR 101, 102, 103, Engineering Design (FA08/W09/SP09) [Drexel]
CIVE 310 (Laboratory), Soil Mechanics I (2007) [Drexel]
ENGR 101, 102, 103, Engineering Design (FA08/W09/SP09) [Drexel]

PROFESSIONAL EMPLOYMENT EXPERIENCE

Professional Engineer (PE), State of Delaware, License No. 20345, issued 6/8/16.

Aero Aggregates of North America, LLC, Eddystone, PA (2017 – Present)
Chief Technical Officer

- Report and direct R&D efforts including product development, formulation, testing, production and packaging.
- Pursue formal product approval with various transportation and environmental agencies.
- Prepare technical documentation and literature.
- Manage all current product lines to ensure performance and certification criteria are met and leads the Quality Control program for Aero Aggregates' internal product evaluation.
- Implement sales, marketing and other business initiatives including presentations at industry events, client's offices and Aero Aggregates' manufacturing facility.
- Provide on-site support and training during product installation.
- Create and coordinate communication efforts and produces photo and video content used to distribute product and company updates.

Golder Associates, Inc., Bristol, PA (2013 – 2017)
InterGEO Services/ CETCO Contracting Services, Trevose, PA (2011 – 2013)
Senior Project Engineer

- Collected and presented geotechnical and environmental data and use this data to perform engineering design and analysis.
- Created and implemented operations plans, schedules and budgets.
- Managed all stages of geo-environmental consulting and construction projects from the estimation, value engineering, and bid preparation phase to managing the project through completion. Largest project as project manager was in excess of $2 million.
- Completed geo-environmental and civil design as well as design/build construction projects and opportunities. Example projects included MSE berms and slopes, landfill lining, capping, and stormwater systems, pond/lagoon liners and covers, geofoam as lightweight fill, sediment capping systems, site remediation and development.
- Developed client and subcontractor relationships, pursued project leads, and supervised construction and consulting tasks.

U.S. Army Corps of Engineers, Philadelphia, PA (2005 – 2006)
Engineering Technician, Geotechnical Section

- Prepared details, plans, and drawings utilizing AutoCAD, including support for a spillway modification to Prompton Dam.
- Completed site visits to verify proper construction procedures.
- Performed dredge disposal area inspections, dam instrumentation inspections and monitoring, emergency response activities, and other inspections at project sites.
- Conducted laboratory tests on soil and rock specimens.

Deloitte & Touche, LLP, Philadelphia, PA (2004 – 2005)
Construction Advisory Services Co-op

- Organized data and information relating to major construction projects throughout the United States.
- Developed technical presentation graphics such as timelines, manpower analyses, and cost estimates.
- Collaborated on projects including: WTC Environmental Claim, Suffolk County Courthouse Renovation, Central Artery/Tunnel: "The Big Dig."

Gannett Fleming, Inc., Camp Hill, PA (2002 – 2003)
Engineering Technician

- Composed technical memorandums, cover letters, meeting minutes, and progress reports.
- Used Microstation Computer Design Program to assist in preliminary and final highway design.
- Performed hydrology and hydraulic computations.
- Verified design compliance with State and Federal standards.

FUNDED PROJECTS

"Evaluation of recycled foamed glass aggregates in lightweight precast concrete." PI: Grady Mathews, Penn State Harrisburg. Role: Industry Partner Representative.

PUBLICATIONS AND CONFERENCE PROCEEDINGS

Loux, T., McInnes, S., Crawford, R., and Filshill, A. (2021). "Design and Construction of a Geosynthetic-Reinforced MSE Structure with Foamed Glass Aggregate Lightweight Backfill." *7th European Geosynthetics Conference*, 4-7 September 2022, Warsaw, Poland. *In press.*

Loux, T.A., and Filshill, A. (2021). "Foamed Glass Aggregate for Resilient Waterfront Construction." *Geo-Extreme 2021,* 7-10 November 2021, Savannah, Georgia.

Loux, T.A., Filshill, A., and Bouchard, M. (2021). "Foamed Glass Aggregate: A Sustainable Insulation Material." *GeoNiagara 2021,* 26-29 September 2021, Niagara Falls, Ontario, Canada.

McGuire, M.P., Loux, T.A., and VandenBerge, D.R. (2021). "Field-Scale Tests to Evaluate Foamed Glass Aggregate Compaction." *IFCEE 2021,* GSP 326, ASCE.

Loux, T.A., and Filshill, A. (2021). "Ultra-Lightweight Foamed Glass Aggregate as MSE Wall Backfill: Properties and Case Studies." *Geosynthetics 2021*, Industrial Fabrics Association International, 22-25 February 2021, Virtual Event.

Loux, T.A., Filshill, A., and Zhang, Z. (2019). "Foamed Glass Aggregate Lightweight Fill Over Compressible Soils." *Geo St. John's 2019*, 29 Sept – 2 October 2019, St. John's, Newfoundland and Labrador, Canada.

Loux, T.A., Swan, Jr., R.H., Yuan, Z., and Filshill, A. (2019). "Pullout Testing of Geogrids, Geostraps and Steel Strips Embedded in Foamed Glass Aggregate." *Geosynthetics 2019*, Industrial Fabrics Association International, 10-13 February 2019, Houston, Texas.

Loux, T.A. (2018). "The New Lightweight Contender." *Geo-Strata*, American Society of Civil Engineers Geo-Institute, September-October 2018.

Loux, T.A., Laspee, H.E., and Filshill, A. (2018). "Foamed Glass Aggregate: A Lightweight Fill Alternative Finds the U.S. Market." *ASCE Metropolitan Section/ Geo-Institute Chapter Geotechnical Seminar "Practice on the Cutting Edge,"* 10 May 2018, New York City, New York.

Isola, M., Loux, T.A., and Scotto, M. (2016). "Case Study of a MSE Crusher Wall in Pennsylvania." *Geo-Americas 2016*, 10-13 April 2016, Miami Beach, Florida, USA.

Loux, T.A., and Calabria, C.R. (2015). "Processed Recycled Glass Used as Lightweight Aggregate and other Geotechnical Engineering Applications." *Central Pennsylvania Geotechnical Conference,* 4-6 November 2015, Hershey, Pennsylvania.

Loux, T.A., and Filshill, A. (2015). "Innovative Sediment Capping Techniques and Methodologies Using Geosynthetics." *Geosynthetics 2015,* 15-18 February 2015, Portland, Oregon.

Loux, T.A., and Filshill, A. (2015). "Contaminated Sediment Capping Construction: Case Studies and Lessons Learned." *Eighth International Conference on Remediation and Management of Contaminated Sediments,* 12-15 January 2015, New Orleans, Louisiana.

Loux. T.A., and Filshill, A. (2014). "Current Trends and Case Studies in Contaminated Sediment Capping." *RE3 Conference*, 27-29 January 2014, Philadelphia, Pennsylvania.

Loux, T.A., and Filshill, A. (2013). "Lining Systems for Shale Gas Drilling Activities." *Geosynthetics 2013,* 1-4 April 2013, Long Beach, California.

Andrejack, T.L., and Wartman, J. (2010). "Development and interpretation of a multi-axial tension test for geotextiles." *Geotextiles and Geomembranes, 28,* 559-569.

Andrejack, T.L., and Wartman, J. (2008). "Development of a multi-axial test for geotextiles." *Geo-Americas 2008,* 2-5 March 2008, Cancun, Mexico.

CURRENT AFFILIATIONS AND ACTIVITIES

- Delaware Valley Geo-Institute (DVGI), Board Member (2014 to Present), Current Vice-Chair
- Women's Transportation Seminar, Philadelphia Chapter, Member (2021-Present)
- ASCE Geo-Institute Sustainability in Geotechnical Engineering Committee (2021-Present)
- ASCE Geo-Institute Soil Improvement Committee (2021-Present)
- Drexel University Department of Civil, Architectural and Environmental Engineering External Advisory Board (EAB) [2017 to Present]
- American Society of Civil Engineers (ASCE) [2002-Present]
- American Society for Testing and Materials (ASTM) [2020-Present]
- International Geosynthetics Society (IGS) North America (2017-Present)
- ASCE Mid-Atlantic Region GeoWall Competition, Organizing and Rules Committee (2014-Present)
- Pennsylvania Junior Academy of Science, Judge (2002-Present)
- Mercer County Science Fair, Judge (2015-Present)
- Engineering Mini-Camp for High School Girls, Widener University (2018-Present)
- Girls Exploring Tomorrow's Technology (GETT) Conference Volunteer (2016-Present)