



**GEO-
INSTITUTE**
**Delaware Valley
Chapter**

DELAWARE VALLEY GEO-INSTITUTE

DVGI October 2023

Volume 23 Issue 7

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October DVGI Meeting 2023

SPEAKER: James Gardner, PE, WSP

TOPIC: Mtg-Geotechnical Investigations and Monitoring of MSE Perimeter Berms for Land Containment

DATE: Tuesday October 17, 2023 – 5:30 PM to 8:30 PM

WHERE: Valley Forge Casino– Parkview Ballroom, 1160 1st Ave, King of Prussia, PA 19406

COST: \$55 Standard, \$20 Government/Retired, \$10 Students

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October DVGI Dinner Meeting 2023

MEETING ABSTRACT:

Two municipal solid waste landfills were designed and constructed in eastern Pennsylvania utilizing mechanically stabilized earth (MSE) as the entire landfill perimeter berm. These MSE berms vary in height from approximately 15 to 95 feet. Significant portions of the MSE berm and landfill footprint are underlain by low shear strength, compressible soils and fill materials.

The first site is a former sand and clay mine. A portion of the site contains an appreciable thickness of mine spoils, which were placed in an "un-engineered" manner. Instrumented test fills were constructed over two areas of the mine spoil to evaluate both the amount and rate of strength gain of these materials under load due to consolidation. The second site is a former steel manufacturing facility. Portions of the site are underlain by a paleochannel containing approximately 1 to 4 feet of compressible organic silt. Other portions of the site were formerly used as open borrow pits. These borrow pits were backfilled in an uncontrolled manner using slag, debris, and other fill materials, and more recently in a controlled manner using submerged fill with granular materials resulting in variable density of the backfill. Instrumentation was used during construction and subsequent landfill operations to monitor for horizontal displacements of the MSE berm and to measure pore pressures of the foundation soils. Data collected indicate that movements of the MSE berm and pore pressures have been within anticipated ranges.

ABOUT THE SPEAKER:

Jim is a Lead Consultant at WSP USA Inc, formerly Golder Associates Inc. He holds a B.S. in civil engineering and an M.S. in geotechnical engineering from Drexel University. He has 15 years of professional experience in geotechnical engineering for waste containment including municipal waste landfills and environmental remediation and capping projects. His expertise is in slope stability, geosynthetic design, and geotechnical instrumentation and monitoring.

Please register with QR code by October 10, 2023 :





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September Meeting 2023

Speaker : Bashar Qubain, Ph.D., P.E., President/Founder GeoStructures, Inc
Topic : DVGI Project of the Year - The Laurel Rittenhouse Square

MEETING ABSTRACT:

A 52-story high rise building in Philadelphia is constructed adjacent to a 3-story historic structure, supported on a rubble foundation at a depth of 8 ft below grade. The high rise is supported on a mat foundation at a depth 36 ft below grade with an average service contact pressure of 14 ksf. Evidently, the existing foundation requires underpinning but extra care is necessary to safeguard the historic building. A detailed finite element analysis, accounting for the construction sequence, showed that the mat foundation would settle about 1.5 in. Although such settlement would be acceptable for the high rise it would cause intolerable distress to the historic building by dragging down its underpinning. To minimize the settlement impact, an innovative micropile solution was implemented to safely transfer the underpinning load into the underlying mica schist bedrock and prevent the existing building from being overstressed by the mat foundation. Validation of the concept was achieved by FEM modeling of the mat foundation together with its surroundings. Settlement monitoring records were also carried out until the building was topped off and showed that the settlement had indeed stabilized with measurements in remarkable agreement with the FEM results. The new building was completed almost two years ago and the adjacent historic building has been functioning well without any signs of distress.

ABOUT THE SPEAKER:

Bashar is the founder and president of GeoStructures, Inc. He has over 30 years of professional experience in geotechnical engineering for buildings, bridges and sensitive machines. His expertise and research interests are in foundation analysis and design and soil-structure interaction. Bashar served as the chief geotechnical engineer on many transportation and high-rise projects.





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GETT October 2023

GETT 2023
Saturday, October 28th
12:00pm-5:00pm
www.gettpa.org

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The GETT Expo is an opportunity to show hundreds of girls just how fun STEM careers can be! Showcase your industry or resources to girls in grades 5-10 and their parents and educators. Meet and talk with the girls to help them understand STEM through a hands-on activity. Be the real-life, successful woman who shows them how STEM is fun and can prepare them to help others and change the world!



Benefits for Exhibitors

- Visibility to more than 1000 attendees including parents, educators, speakers, students, and network with fellow women in STEM.
- Inclusion in pre-event marketing and social media
- Access to future volunteers and interns



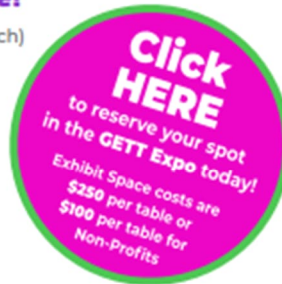
What should you bring?

- A 5-minute hands-on activity that can be repeated multiple times for the girls at GETT
- 2-3 women stationed at your Expo table to lead the activity and engage the attendees
- Tablecloth, posters, activity supplies, organization information, giveaways, etc.



What is included in my Expo Space?

- 6' Table (additional tables available at \$50 each)
- 2 Chairs
- 8' x 10' Area
- Setup 10:00am – 11:30am
- For an additional fee, one standard electrical plug (limited availability)



Interested in becoming an EVENT SPONSOR?
Expo tables included at every sponsor level. For more information contact Tracey Oberholtzer, toberholtzer@ccedcpa.com

Contact Tracey Oberholtzer (toberholtzer@ccedcpa.com) or Susan Boardman (sboardman@dasd.org) with any questions.



More about GETT: Girls Exploring Tomorrow's Technology® (GETT) is an exciting one-day event for girls in grades 5 through 10 and that features hands-on STEM activities led by a diverse group of women in STEM from across Eastern PA and beyond. Attendees learn the facts about how STEM careers can be fulfilling, fun, and rewarding personally, professionally and financially. GETT is sponsored by the Innovative Technology Action Group (ITAG).





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GETT October 2023




GETT 2023
Saturday, October 28th
12:00pm-5:00pm
www.gettpa.org




Sponsorship Levels & Benefits

- 


Premier Sponsor \$5,000

 - Company logo featured on multiple high quality posters positioned throughout the event venue
 - Inclusion of company name in all press releases
 - Customized Expo Exhibit space
 - Company logo included on GETT website and online registration
 - 12 Social Media mentions
- 

Innovator Sponsor \$2,500

 - Inclusion of company name in all press releases
 - (4) 8' x 10' Expo Exhibit spaces - includes four tables, chairs and electricity access (\$1,000 value)
 - Company logo included on GETT website and online registration
 - 6 Social Media mentions
- 


Visionary Sponsor \$1,000

 - (3) 8' x 10' Expo Exhibit spaces- includes three tables, chairs and electricity access (\$750 value)
 - Company name included on GETT website and online registration
 - 4 Social Media mentions
- 

Pioneer Sponsor \$750


 - (2) 8' x 10' Expo Exhibit Spaces including two tables, chairs and electricity access (\$500 value)
 - Company name included on GETT website and online registration
 - 2 Social Media mentions

**Contact Tracey Oberholtzer (toberholtzer@ccedcpa.com)
for more information about sponsorship opportunities.**







**Chester County
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More about GETT: Girls Exploring Tomorrow's Technology® (GETT) is an exciting one-day event for girls in grades 5 through 10 and that features hands-on STEM activities led by a diverse group of women in STEM from across Eastern PA and beyond. Attendees learn the facts about how STEM careers can be fulfilling, fun, and rewarding personally, professionally and financially. GETT is sponsored by the Innovative Technology Action Group (ITAG).



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 [gettpa](http://gettpa.org)    [GETTstem](https://www.linkedin.com/company/gettstem)



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ANNOUNCEMENTS

****DVGI SCHOLARSHIP WINNERS****

Congratulations to the following scholarship winners for 2022-2023

Scholarship Winners:

Gwen Clark, Temple University - \$1500

Anupam Bhattarai, Villanova University - \$1500

Katherine Weimann, Lehigh University - \$1000

Thomas Mayer, Villanova University - \$1000

Andrew Kline, Villanova University - \$1000

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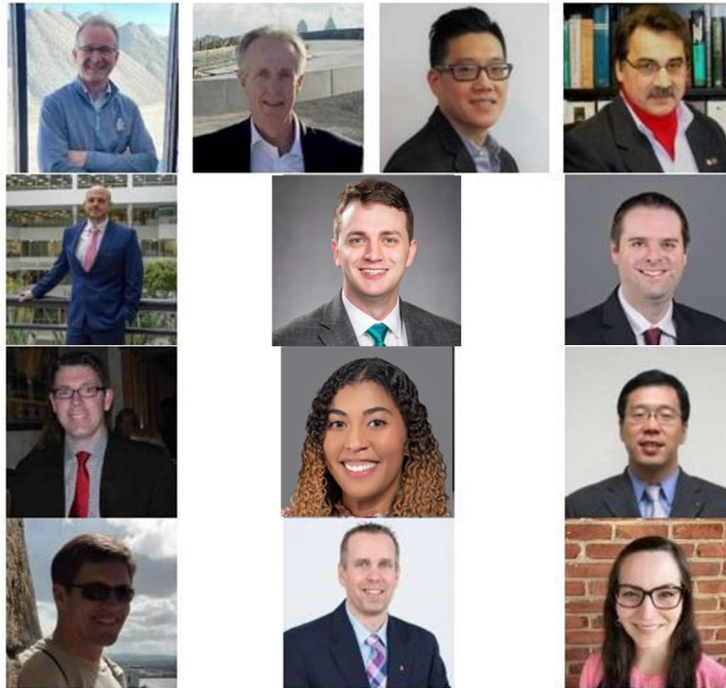
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Social Media

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(knelson@schnabel-eng.com)



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Geosynthetic Institute

GSI RECORDED WEBINARS

- Topics, and Registration at www.geosynthetic-institute.org/webinar.htm
 - Each Webinar Carries 1.5 Professional Development Hours Upon Completion of a 10-Question Multiple Choice Test
 - Each presentation lasts approximately 90 minutes

Upcoming GSI Webinars for 2023

11-Oct	W-26	Applications and Design of Geotextile Tubes- Description
15-Nov	W-34	Geosynthetics in Roadways- Description
13-Dec	W-6	Geosynthetics in Heap Leach Mining - Description

ALL WEBINARS WILL BE RECORDED AND CAN BE PURCHASED FOR VIEWING AT YOUR CONVENIENCE

GSI/GMA Members \$200.00 USD per each Webinar

ASCE/G-I Members:

Read past and present issues of Geo-Strata magazine online at www.asce.org



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Upcoming Dates for 2023-24 Dinner Meetings and events are as follows:

10/17/2023 – TBA

11/21/2023 – DFI Lecture- Jesus Gomez

12/12/2023 – Special Webinar with Dan Brown

One PDH will be awarded for most meetings that you attend.

If you are interested in presenting at one of our monthly meetings or have ideas about potential speakers, please get in touch with a DVGI board member.

On Director's Cut

Geo-Institute Director Brad Keelor interviews G-I members about anything and everything. You might hear about their favorite geotechnical project, their favorite music, or their favorite pie. In Episode 18 of Season 3, Brad speaks with Theresa Andrejack Loux of Aero Aggregates!

See the video here: <https://youtu.be/Gn-aDAHfCXg>

ASCE/G-I Members:
Read past and present issues of Geo-Strata magazine online at www.asce.org



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HAVE DVGI PUBLISH YOUR ARTICLE, ADVERTISEMENT, OR JOB POSTING

- Do you have an interesting article on a project or individual in your organization that you would like to have published in the DVGI newsletter?
- Would you like to get the word out about a job opening, new venture, etc. to our membership via the newsletter?

Please submit your articles or news items for consideration in the next edition of the newsletter or get in touch about our reasonably priced advertising by contacting Neil Scafonas (neil.scafonas@aecom.com).

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