



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

DELAWARE VALLEY GEO-INSTITUTE

DVGI December 2023

Volume 23 Issue 9

Inside this issue:

December 2023 1
November 2023 2
Announcements 3-8
Corporate Sponsors 9-12
Universities 13

December Virtual Meeting 2023

SPEAKER: Dan Brown, Ph.D, PE, D.GE Dan Brown and Associates

TOPIC: Drilled Foundation Construction in the 21st Century, or the Art & Science of Hole Digging

DATE: Tuesday December 12, 2023 – 12 PM (Noon) Presentation

WHERE: Teams link to be provided to registrants.

COST: \$10

**2023-2024
Board of Directors**

Chair

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

Past Chair

Jim Beideman, P.E.

Vice-Chair

Bob Crawford, P.E.

Treasurer

Conrad Cho, P.E.

Secretary/Sponsorship

Jeremy Brown, P.E.

Newsletter Editor

Neil Scafonas, P.E.

Web Advisor

Michael Bennett, P.E.

Director of Scholarship

Daniel Marano, P.E.

ASCE Liaison

Russ Preuss, P.E.

Board Advisors

Craig Calabria, Ph.D., P.E.

Announcements/Golf Outing

Lei Gu, P.E.

Social Media

Kayla Nelson

November DVGI Dinner Meeting 2023

MEETING ABSTRACT:

Since the pioneering work of Dr. Lymon Reese in the early 1970s, the equipment and techniques used to construct drilled shafts and other types of drilled foundations have made substantial advancements and opened new opportunities for engineers to employ these types of foundations. Machines for construction of drilled foundations provide capabilities to extend these foundations to depths and diameters never before considered. It is critical to understand construction techniques and soil behavior during construction in order to facilitate continued advancements in construction and to design and employ drilled foundations effectively and reliably. This presentation describes modern techniques for construction of both drilled shafts and continuous flight auger piles, with an emphasis on a fundamental understanding of stability through the process of excavation and concrete placement. The discussion also describes factors affecting the influence of construction techniques on the axial resistance of the completed drilled foundation.

ABOUT THE SPEAKER:

Dan A. Brown, Ph.D., P.E., D.GE, is recognized as one of America’s leading authorities on the construction and design of deep foundations. After completing his education and his early engineering career in Louisiana, Brown spent 22 years on the faculty at Auburn University, where he taught and conducted research on deep foundations. He remains active in deep foundation practice through his consulting firm, Dan Brown and Associates. His consulting work includes the foundation design of numerous large bridge projects as well as commercial structures. He remains active in teaching through short courses, including the National Highway Institute course on drilled shafts, and in organizing the ADSC Professor Training Workshops in Chattanooga, Tennessee.

Please register with QR code by December 11, 2023 :





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

November DVGI Dinner Meeting 2023

Speaker : Jesús E. Gómez, Ph.D., P.E., D.GE

Topic : Dos and Don'ts in Lateral Stabilization of Soils Using Deep Foundation Elements

MEETING ABSTRACT:

Besides their main application to support vertical and lateral loading from a superstructure, deep foundation elements are often subject to lateral loading from the soil itself. In some cases, the foundation elements may need to resist lateral movement of the soil during a potential lateral spreading event in a seismic area, or they may potentially be subject to lateral movement when installed near or below a slope.

This presentation discusses potential situations where deep foundation elements may be required to withstand lateral soil movements. A theoretical, simple slope instability case will be used to illustrate the various steps of analysis, including assessment of movement profile, development of the foundation reaction-displacement function, evaluation of the slope and foundation stability. This example depicts suitable methods of analysis of these systems and will be used to highlight analysis flaws that are often seen in practice.

Several case histories will also be presented that include lateral "squeezing" of soft soils located under or near the edge of an embankment and its effect on driven piles; mitigation of lateral squeeze using drilled foundations; design and testing of augered cast-in-place piles to withstand a lateral spreading event; and slope stabilization using micropiles. Design and construction of these systems, most of which were recently completed, will be discussed in some detail.

ABOUT THE SPEAKER:

A well-known geotechnical expert, and member of DFI, Gómez will travel and present a series of lectures to university students, professional groups and industry associations. The program promotes the field of geotechnical engineering and deep foundation construction by encouraging students to explore a career in the deep foundations industry, providing information on topics of interest to members of the industry and raising awareness of how DFI and its activities support the industry.





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

2024 DVGI Scholarship Award

2024 DVGI Scholarship Applications

Students interested in applying for a 2024 DVGI scholarship can click [here](#) to download the application file. Over \$6,000 in scholarship funds are expected to be distributed with a minimum award of \$500 to the successful applicant(s).

All applications should be e-mailed to Dan Marano at: dmarano@pennoni.com and must be received by **January 19, 2024** for consideration.

Eligibility Criteria:

The applicant must be a full-time student enrolled in a college program leading to a bachelor's or master's degree in a program related to civil/geotechnical engineering, environmental engineering, geology, or other related fields.

Preference will be given to students who reside in or are attending school in the Delaware Valley area.

Applicants must submit their most recent college transcripts, including grades for the most recent semester completed. Unofficial copies are acceptable.

Evaluation: Each applicant will be evaluated on a point system as follows:

25 points – Grades and Academic Performance

75 points – Career Questions (5 questions, 15 points each)

E-mail Dan Marano (dmarano@pennoni.com) with any questions related to the application or to request an electronic version of the application.

Please encourage any local student meeting the above criteria to submit an application.



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

ANNOUNCEMENTS

2024 DVGI Student Night Presentation Applications

Students interested in either delivering a presentation or presenting a poster at the March 2024 DVGI Student Night can [click here](#) to download the application file.

All applications should be e-mailed to Dan Marano at: dmarano@pennoni.com and must be received by January 19, 2024 for consideration.

GRL
Engineers, Inc.

The advertisement features a photograph of a construction site. In the foreground, there are large green steel beams. One of the beams has the letters 'GRL' printed on it in a large, bold, black font. Below the beams, there is a green weight labeled '1000 TON'. In the background, there are several tall, rusted steel columns and a concrete structure under construction. The sky is blue with some clouds.

**Deep Foundation
Testing and Analysis**

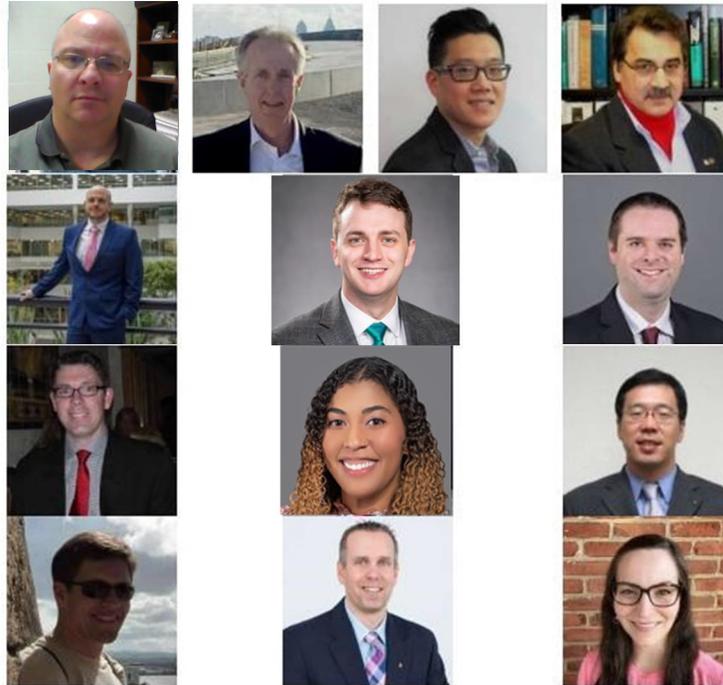
grlengineers.com
610-459-0279



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

ANNOUNCEMENTS

2023-2024 Board of Directors



Chair

Theresa Loux, Ph.D., P.E.
(tloux@aeroaggregates.com)

Past Chair

James M. Beideman, P.E.
(jbeideman@kleinfelder.com)

Vice-Chair

Bob Crawford, P.E.
(bobc@jjaconstruction.com)

Treasurer

Conrad Cho, P.E.
(ccho@langan.com)

Secretary

Jeremy Brown, P.E.
(jbrown@schnabel-eng.com)

Newsletter Director

Neil Scafonas, P.E.
(neil.scafonas@aecom.com)

Web Advisor

Michael Bennett, P.E.
(mbennett@agesinc.com)

Academic Liaison

Robert Swan, Jr.
(rhs53@drexel.edu)

ASCE Liaison

Russ Preuss, P.E.
(rpreuss@gfnet.com)

Board Advisors

Craig Calabria, Ph.D., P.E.
(rcalabria@msn.com)

Director of Scholarship

Daniel Marano, P.E.
(dmarano@pennoni.com)

Announcements/Golf Outing

Lei Gu, P.E.
(lgu@gfnet.com)

Social Media

Kayla Nelson
(knelson@schnabel-eng.com)



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

ANNOUNCEMENTS



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

**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



**GEO-
INSTITUTE**
Delaware Valley
Chapter

ANNOUNCEMENTS

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

12/12/2023 – Special Webinar with Dan Brown

01/16/2024 – Kimberly Martin, Keller

02/20/2024 – Joint Meeting with SEI

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



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

ANNOUNCEMENTS

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).

D
V
G
I

C
O
R
P
O
R
A
T
E

S
P
O
N
S
O
R
S



Geotechnical Engineering • Environmental Services
Transportation Planning • Highways • Bridges
ITS & Traffic Engineering • Transit & Rail
Water/Wastewater • Stormwater Management
Geographic Information Systems

Ara G. Mouradian, PE, PEng
Valley Forge Office • 610.715.2564
www.gannettfleming.com



Ultra-Lightweight Foamed Glass Aggregate

85-90% Lighter than quarried aggregates
High friction angle
Excellent insulating properties

(833) 261-8499 aeroaggregates.com



Solving Infrastructure Challenges

610-696-6066
schnabel-eng.com



JAMES J. ANDERSON CONSTRUCTION COMPANY, INC.

6958 Torresdale Avenue, Suite 200
Philadelphia, PA 19135
215-331-7150

ROBERT CRAWFORD, P.E., M. ASCE
Structure Division Chief Engineer
e-mail: bobc@jjaconstruction.com



Geotechnical Engineers & Geologists

SHORING & UNDERPINNING DESIGN
RETAINING WALL DESIGN
CONSTRUCTION MONITORING AND SOILS LABORATORY

Full-Service Locations

West Berlin, NJ
856-768-1001
Mechanicsburg, PA
717-697-5701
Emmaus, PA
610-967-4540

Corporate Headquarters
115 W Germantown Pike, Suite 200
East Norriton, PA 19401
610-277-0880

Service you can trust
Quality you can count on

www.earthengineering.com



INNOVATIVE GEOSYNTHETIC SOLUTIONS AND APPLICATIONS

High Strength Reinforcement Sediment Capping
Drainage Remediation
Lightweight Fill Geosynthetic Lining Systems
Recycled Materials Sustainable Solutions



Archie Filshill, Ph.D. archie@inova-geo.com +1 215-416-7373



180 Sheree Blvd., Suite 3800
Exton, PA
19341

o | +1 610.594.1444
ext.109
m | +1 610.656.4419
f | +1 610.594.2743

James M. Beideman, PE
Program Manager

jbeideman@kleinfelder.com

kleinfelder.com



Integrated engineering and
environmental services

Jared Green, PE
Senior Associate

1818 Market St #3300,
Philadelphia, PA 19103
(215) 845-8900

langan.com

Technical Excellence · Practical Experience · Client Responsiveness

D
V
G
I

C
O
R
P
O
R
A
T
E

S
P
O
N
S
O
R
S

HILLIS-CARNES
ENGINEERING ASSOCIATES

(484) 434-1000 | www.hcea.com

GLA Known for excellence.
Built on trust.

American Geotechnical & Environmental Services, Inc.

CONETEC

RIMKUS
CONSULTING GROUP, INC.
Forensic Engineers and Consultants



Geotechnical speciality contractor

North America Keller companies Bencor, Case Atlantic, Case Foundation, Hayward Baker, HJ Foundation, Keller Canada, McKinney Drilling and Moretrench have joined together and rebranded to Keller.

Martin McDermott, PG
Senior Business Development Manager
908-209-3914 • mmcdermott@keller-na.com

Matt Klanica
Vice President
610-353-0600 • mjklanica@keller-na.com

Philadelphia office: 610-353-0600

www.keller-na.com



Design of Excavation Support, Ground Anchors, Underpinning, Cofferdams, Micropiles...

1220 Valley Forge Road, Suite 14, Phoenixville, PA 19460
Phone: (610) 933-8353 • Fax: (610) 933-8359
www.PeirceEngineering.com • Mail@PeirceEngineering.com

GeoStructures, Inc.
Geotechnical Engineering & Construction Material Testing

- drilling and CPT services
- laboratory testing
- petrographic examination
- foundation/retaining wall design
- real-time geotechnical instrumentation
- environmental assessments

King of Prussia, PA 610.265.1818 www.geostructures.net



menard

Ground Improvement Starts Here

Philadelphia Office:

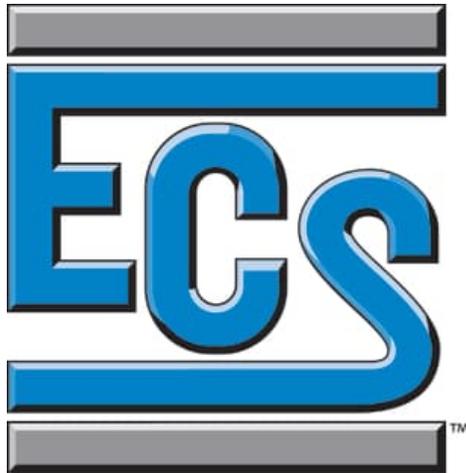
Brandon Buschmeier, P.E.
Director of Engineering
Menard USA
(215) 971-2648
bbuschmeier@menardgroupusa.com

- Vertical Wick Drains
- Vacuum Consolidation
- Earthquake (EQ) Drains
- Dynamic Compaction
- Dynamic Replacement
- Rapid Impact Compaction
- Vibro-compaction
- Aggregate Piers
- Vibro Stone Columns
- Controlled Modulus Columns
- Bi-Modulus Columns
- Soil Mixing

D
V
G
I

C
O
R
P
O
R
A
T
E

S
P
O
N
S
O
R
S



Justin J. Smith, P.E.
Area Manager – located in Philadelphia

(814) 598-1775 • jsmith@geostructures.com
413 Browning Court • Purcellville, VA 20132
www.geostructures.com

Low-Density Cellular Concrete
Permeable / Non-Permeable

- ▲ Soft Soil Remediation
- ▲ Slope Stabilization
- ▲ Bridge Approach
- ▲ Utility Protection
- ▲ Annular Fill



610.398.7833
aerixindustries.com
info@aerixindustries.com
Allentown, PA



...For Trusted Quality and Service



Kyle T. Plaza, P.E.
Northeast Region Manager

Cell: 609.577.2724
Email: kyle.plaza@subsurfaceconstructors.com

SUBSURFACE CONSTRUCTORS, INC.

8919 NEW FALLS RD, SUITE 15, LEVITTOWN, PA 19054
www.subsurfaceconstructors.com



Consulting
Engineers and
Scientists



GOLDER
MEMBER OF WSP



Frederick (Rick) Brinker, PE
Associate Vice President/
Geotechnical Division Manager

FBrinker@Pennoni.com

Pennoni
81 Highland Avenue
Suite 230
Bethlehem, PA 18017

T: 610-422-2411
M: 484-894-8989

www.pennoni.com



Customized Solutions

Delaware Valley Locations

Philadelphia | Exton | Lehigh Valley
Conshohocken | Mt. Laurel

610 868 4201 | colliersengineering.com

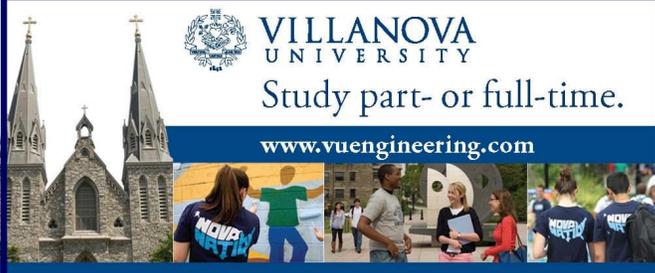
Accelerating success.



T College of Engineering
TEMPLE UNIVERSITY

Joseph Thomas Coe, Ph.D.
Assistant Professor

Civil & Environmental Engineering
1947 N. 12th Street
Philadelphia, PA 19122-6018
t 215-204-6100 f 215-204-4696
e-mail joseph.coe@temple.edu
www.temple.edu/engineering/cee



VILLANOVA UNIVERSITY
Study part- or full-time.
www.vuengineering.com

Combine geotechnical courses with environmental, structural, transportation, or water resources courses or create your own interdisciplinary program.



WHERE THEORY MEETS PRACTICE.

Learn more about **Penn's Master of Science in Applied Geosciences.**

WWW.UPENN.EDU/MSAG

Master of Science in Applied Geosciences



Muhannad T. Suleiman, Ph.D.
Associate Professor

Department of Civil and Environmental Engineering
STEPS Building
1 West Packer Avenue
Bethlehem, PA 18015-3001
(610) 758-2592 Fax (610) 758-6405
e-mail: mts210@lehigh.edu
<http://www.lehigh.edu/~incee>



Beena Sukumaran, PhD
Chairperson
Professor

Department of Civil & Environmental Engineering
Rowan Hall
201 Mullica Hill Road
Glassboro, NJ 08028

856-256-5324
856-256-5242 fax
sukumaran@rowan.edu

LAFAYETTE COLLEGE

Department of Civil and Environmental Engineering

Acopian Engineering Center
740 High Street • Room 319 • Easton, Pennsylvania 18042
TEL 610-330-5437 • FAX 610-330-5059



DREXEL UNIVERSITY
College of Engineering

Robert H. Swan, Jr, PhD
Teaching Professor;
Associate Department Head
For Undergraduates

Department of Civil, Architectural and Environmental Engineering
3141 Chestnut Street
Alumni Engineering Labs 270J
Philadelphia, PA 19104
Tel: 215.571.4561
rhs53@drexel.edu
drexel.edu/engineering



Department of Civil & Environmental Engineering

Christopher L. Meehan, Ph.D., P.E., FASCE
Associate Professor
Director, Delaware Center for Transportation

355 Du Pont Hall
Newark, DE 19716

Phone: 302-831-6074
Fax: 302-831-3640
Email: cmeehan@udel.edu

<http://udel.edu/~cmeehan/>

Widener University