March 2019 DVGI Dinner Meeting

SPEAKER: Jonathan F. Hubler, Ph. D., Assistant Professor of Civil & Environmental Engineering, Villanova University

TOPIC: Student Night 2019!

DATE: Monday, March 18th, 2019

LOCATION: Villanova University, Connelly Center, 800 Lancaster Ave., Villanova, PA

TIME: 5:30 PM Social Hour, 6:30 PM Dinner and 7:15 PM Presentation

***Registration and Payment Online at www.dvgi.org***

The DVGI Student Night will again be hosted by Villanova University. This year’s event will include a keynote address by Jonathan F. Hubler, Ph.D., Assistant Professor of Civil and Environmental Engineering, Villanova University. Following the keynote address there will be three short student presentations and the DVGI Scholarship award presentations. Our student presenters will be:

- Siavash Mahvelati from Temple University
- William Baker from the University of Delaware
- Mehdi Kadivar from the University of Delaware

We hope to see you at Student Night!
February 2019 DVGI Dinner Meeting

Micropiles: Introduction and Fundamentals

Jonathan Bennett, PE, D.GE, Mid-Atlantic Regional Manager Axiom Foundations, LLC

The presentation explained what micropiles are, how they work, and what you can do with them. It addressed the following questions:

• What is a micropile?
• What are some of the different kinds of micropiles?
• What are some applications of micropiles?
• How much do they cost?
• Why use micropiles as opposed to something else?
• How do you design a micropile?
• How do you test a micropile?

ABOUT THE SPEAKER:
Jon Bennett has 25 years of design-build specialty experience focused primarily on geotechnical construction including deep foundations, ground anchors, anchored structures and ground improvement. He holds a Master’s degree in Engineering and Technology Management from George Washington University, Master’s and Bachelor’s degrees in Civil Engineering from West Virginia University, and is a Licensed Professional Engineer in Virginia, West Virginia, Maryland and Pennsylvania. He was inducted into the ASCE Academy of Geo-Professionals in 2009. Jon is the immediate past Chairman of the DFI-ADSC Joint Micropile Committee and has been involved in Micropile industry development and training across the United States.
Upcoming Dates for 2019 Dinner Meetings and events are as follows:

- March 18th (Monday) Dinner Meeting (Student Night @ Villanova): Jonathan Hubler, Ph.D.
- April 18th (Thursday) Joint ASCE Dinner Meeting: Rick Brinker, Pennoni
- May 21st Joint AEG Dinner Meeting: TBD
- June TBA: DVGI Golf Outing

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

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

DVG I

At-Large Advisor Election

DVGI has an open position for an At-Large Advisor at the conclusion of the 2018-2019 DVGI Season. Biographies for those members who wish to be considered for this position are on the following pages. Please vote at the following link:

[https://www.surveymonkey.com/r/C58HJLZ](https://www.surveymonkey.com/r/C58HJLZ) or from the [www.dvgi.org](http://www.dvgi.org) website.
ANNOUNCEMENTS

At-Large Advisor Candidate Bio

Conrad Cho, P.E.
Project Manager
Langan Engineering & Environmental Services, Inc.

Conrad Cho is a geotechnical engineer at Langan’s Philadelphia office. Conrad received a bachelor’s degree in civil engineering from The Cooper Union, a master’s degree in geotechnical engineering from Virginia Tech and is a registered professional engineer in the Commonwealth of Pennsylvania. His engineering career began in New York City as a staff engineer performing various field observations and testing. After receiving his master’s degree, Conrad transferred to Philadelphia where the majority of his design experience is based and currently holds the role of project manager. Conrad recently served on Langan’s Next Gen committee, a group dedicated to up-and-coming individuals within the firm and currently serves on the local organizing committee for the upcoming GeoCongress in Philadelphia. Some of Conrad’s notable projects in the region include: The Pavilion at Penn Medicine, the River Walk towers in Center City, the NorthxNorthwest residential development on Spring Garden Street, the new PHA Headquarters in North Philadelphia, the Patient Pavilion at Bryn Mawr Hospital, the Palmer Pittenger and Roberts Hall at Swarthmore College, and the Rutgers Nursing and Science Building in Camden.

Conrad’s drive for excellence, passion for math and science and love of the outdoors has led him to a fulfilling career in geotechnical engineering – a field where the man-made marvels of today integrate with the natural world. He is dedicated to the advancement of the geotechnical engineering industry and the fellowship of the engineering community to promote growth, knowledge and new ideas. He resides in Narberth, PA and enjoys camping, snowboarding and rock climbing and is an avid fan of manual transmission cars.

Please vote at the following link:
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At-Large Advisor Candidate Bio

Lei Gu, P.E., PMP, ENV SP
Senior Geotechnical Engineer
Gannett Fleming, Inc.

Lei Gu possesses over 14 years of experience on a variety of geotechnical engineering projects throughout the country. Lei’s experience includes geotechnical investigations, shallow/deep foundation analyses and testing, slope stability analyses, retaining wall and reinforced slope design, pavement design, laboratory testing, and construction monitoring services for buildings, bridges, railroad facilities, and storage tanks.

Prior to joining Gannett Fleming, Lei worked as a Geotechnical Engineer at Terracon Consultants in North Carolina. While at Terracon Lei gained essential field and design experience with building foundations, retaining walls, and ground improvement methods. Lei joined the Geotechnical Department in Gannett Fleming’s Valley Forge, PA office in 2009. Lei has worked as part of a multidisciplinary team on several major infrastructure projects with Gannett Fleming including the Reconstruction of I-95 Girard Viaduct for PennDOT, the Raritan River Bridge replacement for NJ Transit, the Reconstruction of Northeast Extension and the I-95/I-276 Interchange for the Pennsylvania Turnpike. During his time in Terracon and Gannett, Lei has worked on projects located in Pennsylvania, New Jersey, New York, North Carolina, South Carolina, Virginia, Nevada, California and Canada. Lei has authored three professional publications and presentations at national geotechnical conferences.

Lei holds Professional Engineer licenses in Pennsylvania and North Carolina. Lei earned his Bachelor’s degree in Civil Engineering from Dalian University of Technology (China) and completed his Master’s degree in Civil Engineering with a focus on Geotechnical Engineering at the University of Cincinnati. Lei is married to a traffic engineer and has two children. In his free time, Lei enjoys traveling, skiing, running, coaching youth sports, and spending quality time with his family.

Please vote at the following link:
https://www.surveymonkey.com/r/C58HJLZ or from the www.dvgi.org website.
Sarah McInnes is the District Geotechnical Engineer in District 6-0. Sarah has spent her twenty two year career in the Geotechnical Unit and has held the DGE position for the past eleven years. She is an experienced professional geotechnical engineer involved in all phases of transportation project development including geotechnical scope, proposal review, report review and preparation, preliminary engineering, subsurface investigations, foundation design, plans review and construction consultation. Sarah also provides geotechnical support and guidance to Construction and Maintenance for unique and difficult geotechnical related problems, unforeseen conditions and failures. As District 6-0 Geotechnical Engineer, she manages the District’s geotechnical program and staff to ensure timely project delivery and safe, economical and constructible transportation projects. She undertakes exceptional effort to implement a geotechnical design program to minimize construction and future maintenance costs and utilize the latest technologies to further the Department’s mission.

Sarah has a Bachelor’s in Civil Engineering from Syracuse University and a Master’s in Civil Engineering from Villanova University. Sarah has been a guest lecturer for the Souderton School District and for Villanova, Temple & Lehigh Universities as well as being a current research project partner with Temple. She is also involved in several TRB committees and is a steering committee member of the Highway Geology Symposium. She is a PennDOT LEAD mentor and a job shadow mentor for Souderton High School and Syracuse University students. Sarah is married to a civil engineer (construction) and has two children ages 10 and 7. In her free time, Sarah enjoys travel, camping, being outdoors, live music, learning and adventures with her family.

Please vote at the following link:
https://www.surveymonkey.com/r/C58HJLZ or from the www.dvgi.org website.
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ANNOUNCEMENTS

Upcoming GSI Webinars for 2019
(1.5 PDH/each upon completion of exam)

11:30 AM—1:00 PM (Eastern Time)

Topics, Dates and Registration at www.geosynthetic-institute.org/webinar.htm

Cost: GSI Members $200; Nonmembers $250

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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 Theresa Loux (tloux@aeroaggregates.com).

DVGI Merchandise Available for Purchase

Coffee mugs ($8) and lapel pins with the DVGI logo ($5) are available for purchase. See Russ Preuss if you are interested in purchasing either of these items.

ASCE/G-I Members:
Read past and present issues of Geo-Strata magazine online at www.asce.org
Steve Welsh, P.E.
Schnabel Engineering

Stephen (Steve) Welsh is a Project Engineer with Schnabel Engineering in the Chadds Ford office location. He has over 10 years of experience in geotechnical consulting and has worked on a wide variety of projects including rail and highway, landslide investigations, airport facilities, water resources, and has extensive experience in karst topography. In addition to subsurface investigations, Steve has been involved in micropile load testing and limited mobility compaction grouting. Steve received his undergraduate and masters degrees in Civil Engineering from Drexel University in 2008 and 2015, respectively. He is a registered Professional Engineer in Pennsylvania and active member in the DVGI.

Steve is originally from South Jersey and maintains a strong sense of Jersey-pride. He now lives in Havertown, PA and successfully converted his wife, Amanda, to an Eagles/Phillies fan. He and Amanda stay busy with their son Jack, who is 2 going on 10. They enjoy exploring new parks, local trails, listening to Bruce Springsteen, and the Jersey shore. As an avid runner, Steve is typically found pushing Jack in the jogger around Havertown’s paved trails.

Q & A with Steve:

Q: What got you first interested in the geo-world?
A: As an engineering student you typically like hard, exact answers to the 0.00 decimal point. In our soil mechanics (regular and advanced) classes we learned how elastic/consolidation settlement were a function of loading, time, sample disturbance, etc. I found it very interesting how much more engineering judgment was required in the geo-world.

Q: What is your favorite thing about your Alma Mater?
A: The great thing about being a Drexel engineering alum in the Delaware Valley is that it’s a very small world. Everywhere I go, there’s always a number of alum, whether it’s a project or event.

Q: What is something about yourself that would surprise us?
A: I like to cook (no baking) and my signature dishes include shepherd’s pie and brined, Thanksgiving turkey with home-made stuffing.

Q: What advice would you give to students studying a geo-profession?
A: Industries change very rapidly with technology, and the geoengineering world will continue to evolve. Have a 1 and 5 year plan but realize that your interests and available opportunities will likely change over time. Also get out of the office because you can learn a lot in the field.

We will continue to feature DVGI members in upcoming issues of the Newsletter. Please feel free to contact any of the board members with any general comments or member spotlight suggestions. Board member email addresses can be found on Page 7.
Q: What are three career lessons you’ve learned thus far?

A: 1. Focusing on project details is important but it’s also important to take a step back to see how your work applies to the project as a whole. 2. Experienced operators and drillers know their equipment and can vary drill pressures and penetration rates. Ask them about the conditions because what the inspector sees can vary based on how the equipment is operated. 3. Education doesn’t end with a diploma. Ongoing learning, training, and professional development are essential throughout your career.

Q: What are your hopes for our industry?

A: I hope that the industry can continue to distinguish itself to owners and clients as a vital part of projects. Inadequate geotechnical information and testing can result in increased project risks and construction costs. One of my best friends, who is a CM project manager, actually asked me if there was a foundation system that could be used for all foundation applications, regardless of soil/rock conditions, loading, or performance. It was beyond a “you don’t know what you don’t know” type of situation where I had to explain the importance of a geotechnical engineer. For the record, this friend is an Ivy League alum and this anecdotal (and true) example demonstrates the importance of a Drexel education!

Q: What is your favorite thing to do in Philadelphia?

A: Aside from visiting McGillan’s, the oldest (and best) bar in Philadelphia, I love running “the loop” along West River, Kelly Drive, and around the Art Museum.

Q: What aspect of your job do you enjoy the most?

A: Every project is different, whether it’s the soil conditions, client needs, or project requirements.

Q: What is the most challenging aspect of your job?

A: Determining the number of borings in karst without geophysics!

Q: What do you like most about working at Schnabel?

A: It’s great to see a wide variety of projects, big and small from the design-side and contractor-side. Schnabel is also very connected between different offices and this allows for more collaboration. Within the company it’s routine to talk about project specifics with subject matter experts in other offices.

Q: What is a favorite aspect of your role at Schnabel?

A: It’s tough to pick a favorite because I’ve been in some interesting places: subway tunnels, a culvert under a PA town, hillside landslides, airport infields, to name some. I’m currently working on a large earthwork project with soil-lime treatment and it’s very interesting. I’m looking forward to seeing it progress through design and into construction.

Steve Welsh, P.E.
Schnabel Engineering
EVENTS AND CONFERENCES

Geotechnical Symposium on Support of Excavation

Are you working on projects with support of excavation needs? Do you need continuing education credits? Join ASCE NCS GEC for our annual symposium. This year’s focus is on temporary and permanent support of excavation. Check out the speaker line-up below and then register to secure your spot!

**Building a 85 foot high wall to catch jets for Chuck Yeager Airport**
Presented by: Allen Cadden, PE; Schnabel Engineering Associates

**Design and Construction of VDOT Midtown Tunnel**
Presented by: Ketan H. Trivedi, PE; Mueser Rutledge Consulting Engineers

**Design and Coordination Complexities at Apex**
Presented by: Sarah Martino, PE; Clark Foundations

**Smithsonian National Zoo General Services Building & Retaining Wall**
Presented by: Keith R. Moser, PE; Gomco Enterprises, Inc.

**Analysis of Predicted Capacity versus Load Test Results of Ground Anchors in Multi-Regional Geology**
Presented by: Eric Backlund, PE; Kleinfelder

**Soil Mixing for Support of Excavation**
Presented by: Dr. Michael Arnold; Bauer Foundation Corp.

**Protection of Structures - A discussion on SOE design with Zone of Influence of Critical Infrastructure**
Presented by: Christopher H. Locussol, PE; GEI Consultants, Inc.

**Challenges with Regulatory Reviews of SOE Documents**
Presented by: Morgan A. Eddy, PE, MSc; Steele Foundation LLC

**The use of the Observational Method in the construction of a 42 foot deep, internally braced 3 level sheet pile cofferdam in Norfolk, Virginia**
Presented by: Gunaratnum Ghana, PE; D.W. Kozera, Inc.

**The Cajalos Tower**
Presented by: Luis Gonzalez, PE; GeoStructures, Inc.

**Earth pressure analysis from Confined Granular Fill**
Presented by: Mohab Sabry, PhD, PE; Bechtel

**Deflection Based Design for the Capitol Crossing SOE**
Presented by: Harald Ludwig, PE; Schnabel Foundation Co.

**History of Shoring in the DC area - 1960 to present**
Presented by: Ronald W. Steele, PE; Steele Foundation, LLC

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**When:**
Thursday, May 16, 2019
from 8:00 AM to 5:15 PM

**Where:**
Marriott Tysons Corner
8028 Leesburg Pike
Tysons Corner, VA 22182

8 Professional Development Hours*

*New York approval pending

**Registration Fee:**
$275/person

Fee includes continental breakfast, lunch & parking.

**Register today!**
EVENTS AND CONFERENCES

Geo-Congress 2019
Philadelphia, Pennsylvania | March 24–27, 2019

43rd ANNUAL MET SECTION GEOTECHNICAL SEMINAR
Seminar: May 9, 2019
http://www.ascemetsection.org/tech-groups/geotechnical/home

GEO-STRUCTURAL ASPECTS OF PAVEMENTS, RAILWAYS, & AIRFIELDS 2019
Building Infrastructure from the Ground Up
November 4–7, 2019 | Colorado Springs, Colorado | The Antlers