

# DELAWARE VALLEY GEO-INSTITUTE

DVGI October 2022

Volume 22 Issue 7

#### Inside this issue:

 October 2022
 1

 September 2022
 2

 Announcements
 3-9

 Advertisements
 10-14

 Corporate Sponsors
 15-17

 Universities
 18

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#### **October 2022 DVGI Dinner Meeting**

SPEAKER: Professor Jie Han, Ph.D., PE, F.ASCE, Roy A. Roberts

(University) Distinguished Professor in the Civil, Environmental, and Architectural Engineering Department at the University of Kansas

**TOPIC:** The 3<sup>rd</sup> RM Koerner Award Lecture - Geosynthetic-Reinforced

Column-Supported Embankments: Bridging Theory and Practice

**DATE**: Tuesday October 18, 2022 – 5:30 PM to 8:30 PM

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

COST: Cost for general admission \$55. One PDH will be given

for verified attendance.

#### **MEETING ABSTRACT:**

Geosynthetics have been successfully used to improve performance of column-supported embankments on soft soils. Geosynthetic-reinforced column-supported embankments involve complex load transfer mechanisms, including soil arching, tensioned membrane, and column-soil interaction. This lecture proposes a simplified and unified design procedure based on the ground reaction curve and considering subsoil resistance and tensioned membrane effects of strain strips to reasonably predict stresses, settlements, and tensile strains of the geosynthetic reinforcement, and verify this design procedure with two case studies of geosynthetic-reinforced column-supported embankments.

#### ABOUT THE SPEAKER:

Dr. Jie Han is a Roy A. Roberts (University) Distinguished Professor in the Civil, Environmental, and Architectural Engineering Department at the University of Kansas. He is a board governor of the ASCE Geo-Institute, the chair of the US Transportation Research Board (TRB) Transportation Earthworks committee, and the specialty chief editor of Frontiers of Built Environment. Prof. Han has gained extensive teaching, research, and industry experiences in geosynthetics, ground improvement, pile foundations, buried structures, and roadways. He is the sole author of the book entitled "Principles and Practice of Ground Improvement" and has published more 450 peer-reviewed journal and conference papers. Prof. Han has been invited to give more than 200 keynote/invited lectures and short courses around the world, including the State of the Practice Lecture at the 21st Annual George F. Sowers Symposium in Atlanta, Georgia in 2018, the 18th UK IGS Lecture in London in 2018, and the 3rd Robert M. Koerner Award Lecture in 2021. He has received numerous awards from the profession including but not limited to the 2014 the International Geosynthetics Society Award, the 2017 ASCE Martin S. Kapp Foundation Engineering Award, and the 2018 ASCE Kansas City Section Engineer of Year Award. Prof. Han was elected to the ASCE Fellow in 2014.

Please register online via this link: <u>DVGI October 2022 Dinner Meeting - The 3rd Robert M. Koerner Award Lecture (constantcontact.com)</u>



#### **September 2022 ASCE-DVGI Joint Meeting**

**Speaker :** Dr. Timothy D. Stark , Professor of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign

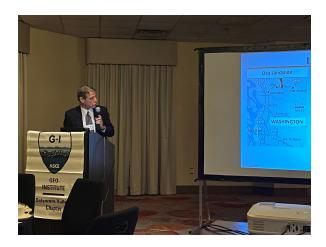
Topic : Oso, Washington Landslide: Failure Mechanism and Runout Analysis

#### MEETING ABSTRACT:

Professor Stark will present an update of his study of the 22 March 2014 Oso landslide near Oso, Washington. This major and tragic landslide exhibited some interesting aspects of geo-mechanical behavior and is contributing to a better understanding of landslide triggering mechanisms and improved methods of runout analyses for hazard and risk assessments. This study evaluates the accuracy of three runout software packages, DAN3D, Anura3D, and FLO-2D, for modeling the runout of the 2014 Oso landslide and investigates the viability of predicting the runout of other landslides and slope failures, such as, tailings dams. These analyses show the importance of: (i) using a digital terrain model in the runout analysis, (ii) modeling field representative shear strength properties and failure mechanisms, and (iii) predicting runout distance, splash height, and duration to improve public safety.

#### **ABOUT THE SPEAKER:**

Timothy D. Stark is a Professor of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign with an expertise in Geotechnical Engineering. Dr. Stark has been conducting research and teaching on the static and seismic stability of natural and manmade slopes, embankments, and earth structures for over twenty-five (25) years. Dr. Stark has received a number of awards for his research, teaching, and service activities including: 2022-2023 Cross-USA Lecturer from the American Society of Civil Engineers (ASCE); 2021 T.H. Wu Lecturer at Ohio State University; 2019 George H. Norman Medal, ASCE; Best Paper in Geosynthetics International Journal, 2016; 2015 James M. Hoover Lecturers at Iowa State University; Thomas A. Middlebrooks Award, ASCE, 2013 and 1998; Associate Editor Award, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 2012; Journal of Legal Affairs and Dispute Resolution in Engineering Scholarly, Paper, ASCE, 2011; R.M. Quigley Award from the Canadian Geotechnical Society, 2003, and Walter L. Huber Research Prize, ASCE, 1999.







#### 2022 Landreth Steward of the Environment Award

Winner 2022: Theresa Andrejack Loux, Ph.D., P.E.,



The Geosynthetics Institute (GSI) provide this award to recognize "distinguished engineering achievement related to the environment." We are proud to announce our own board member at DVGI as the 2022 winner: Theresa Andrejack Loux, Ph.D., P.E.

Congratulations, Theresa!



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#### Upcoming GSI Webinars for 2022

11:30 AM—1:00 PM (Eastern Time)
(1.5 PDH each / upon completion of exam)

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

September 7	W-26	Applications and Design of Geotextile Tubes - <u>Description</u>
October 12	W-27	Stability Design of Landfill Cover Soils - <u>Description</u>
November 9	W-29	QA/QC of Geosynthetics - <u>Description</u>
December 7	W-34	Geosynthetics in Roadways - <u>Description</u>

### ALL WEBINARS WILL BE RECORDED AND CAN BE PURCHSED FOR VIEWING AT YOUR CONVENIECE

GSI/GMA Members \$200.00 USD per each Webinar Non GSI/GMA Members \$250.00 USD per each Webinar



Upcoming Dates for 2022-23 Dinner Meetings and events are as follows:

10/18/22 - Jie Han - Koerner Lecture
 11/15/22 - Eli Brinker and Elisabetta Iannetti - Pennoni 2021-2022 Project of the Year Winner "uCity Square Development"

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: <a href="https://youtu.be/Gn-aDAHfCXq">https://youtu.be/Gn-aDAHfCXq</a>



#### **DELAWARE VALLEY ENGINEER OF THE YEAR 2023 AWARD**



Delaware Valley Engineers Week | February 16-25, 2023



#### Call for Nominations - Delaware Valley Engineer of the Year

#### Attention all Engineering and Technical Societies of the Delaware Valley!

On behalf of the engineering and technical societies of the Delaware Valley, the Engineers' Club of Philadelphia is issuing this call for nominations. If you have an individual that you feel is worthy of such recognition, please nominate him/her for 2023 Delaware Valley Engineer of the Year. <u>The deadline for submission of nomination packages is 5:00 pm on Friday. October 28, 2022.</u> Societies are encouraged to team up with other societies in preparing a nomination.

You are encouraged to contact the EOY Coordinator\* to let us know if you are considering or intending to nominate a candidate. Information on all the candidates will be posted at <a href="www.engrclub.org">www.engrclub.org</a> prior to the election.

The complete Engineer of the Year Nomination Packet contains important details on the qualifications, election process, and duties of the selected Engineer of the Year and should be read by all intending to submit a nomination. The packet is available at <a href="https://www.engrclub.org">www.engrclub.org</a>.

#### NOMINATION PROCESS

Nominations must be submitted by one of the technical and professional societies in the Delaware Valley by Friday, October 28, 2022.

#### NOMINATION SUBMISSION

Submit the Nomination Form, a 1000-word biography, and photograph to Mark Kinnee\*. (See the nomination form for file specifications.)

The candidates will also be asked to attend the election and address the delegates prior to the election.

#### ELECTION PROCESS

Delegates from the Engineering and Technical Societies of the Delaware Valley<sup>1</sup> will vote on the Delaware Valley Engineer of the Year the week of November 14, 2022. The voting will most likely be held electronically and additional information will be provided.

Each society is entitled to appoint two delegates to the election. Each society's list of delegates is due to the Club\* by Friday, November 4, 2022.

<sup>1</sup> Bucks, Chester, Delaware, Montgomery and Philadelphia counties in Pennsylvania and Burlington, Camden, Gloucester, Mercer and Salem counties in Southern New Jersey)

#### QUALIFICATIONS AND DUTIES OF THE DV EOV

There are specific qualifications and duties expected of the EOY, as noted in the Engineer of the Year Nomination Packet. Briefly, the EOY should have a career of achievement and leadership, be a person of stature and visibility; and be a person who will represent the profession well and proudly acclaim its virtues.

\*Questions and Submissions: Nominations and any questions should be directed to the EOY Coordinator, Mark Kinnee, PE at (215) 922-8081, x1667 or <a href="mailto:makinnee@urbanengineers.com">makinnee@urbanengineers.com</a>. The list of delegates to the election should be emailed to the Club at contact@engrclub.org.



#### 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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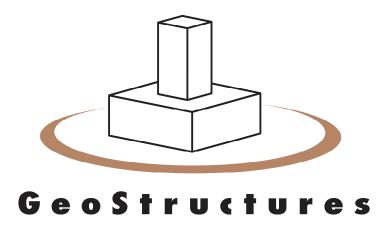
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#### **GRADUATE GEOTECHNICAL ENGINEER**

We are seeking Geotechnical Engineers with an excellent reputation to join our Lehigh Valley (Bethlehem, PA), Philadelphia, PA and Haddon Heights, NJ offices as Graduate Level Engineers. In this full-time position, the successful candidates will be responsible for assisting staff and senior level engineers with the execution of multiple concurrent geotechnical projects and working with other staff engineers and geologists as well as communication and coordination with clients, drilling subcontractors and other design professional on the project team. This position will also require working with other field staff and coordination with clients and contractors during construction. As a Graduate Level Engineer, this individual will be performing various site visits. Responsibilities will include assistance with and geotechnical engineering investigations, preparing performing reports, and developing recommendations. Excellent communication and organizational skills are a must as well as basic geotechnical engineering experience. Must be capable of overseeing construction inspection operations as well. Must be able to work effectively as part of a team and individually, balance workload and meet deadlines. Please send resumes directly to fbrinker@pennoni.com for immediate consideration.









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By creating a community of learners who are undertaking internships and coursework together and providing the framework for students to reflect critically on their learning, Intern Philly is built to teach and mentor students as they develop independence and resilience while exploring urban life and the world of work.

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- Integration of theoretical and practical knowledge through customized internship placements and their connections to learning through doing.
- Teaching and learning engagement involved in structured interactions with local and professional communities to develop capacity for critical thinking and self-reflection.
- Mentored experience with navigating complex issues of race, culture, and diversity through working and learning in Center City Philadelphia.
- Growth of skills and abilities desired by employers including independence, adaptability, initiativetaking, and problem-solving.
- Development of a Philadelphia network for career opportunities and/or graduate study.
- Health, safety, and student life expertise to support student learning and engagement

#### SUPERVISOR'S RESPONSIBILITIES

The Field Supervisor contracts to be a mentor to the student, particularly in relation to the work content, workplace organization, and industry. The student's learning is a primary focus for a supervisor. Specific ways a supervisor can assist the student include:

- •Helping student with their learning plan of action and providing suggestions for things to consider, as work tasks and responsibilities develop
- •Participating in meetings with Academic Director to discuss learning plan of action, contributions, tasks and responsibilities, etc.
- •Providing some project-based work in which student can take some ownership and produce a deliverable by the final week of the internship
- •Meeting with student to provide feedback, criticism, and such about progress, work products, and achievements
- •Offering advice concerning professional development and career aspirations
- •Submitting a formal written evaluation at end of the semester of the student's work performance and products, contributions, and skills' development, as well as student's work habits and practices as a member of the organization

#### **CONTACT INFORMATION:**

Mark Andrew Clark, Ph.D., Academic Director

Intern Philly, Arcadia University

(at-home office presently on Broad Street, 2513 South Broad Street, Philadelphia, PA 19148)

Cell: 717-940-8960

Email: clarkm@arcadia.edu



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Beena Sukumaran, PhD Chairperson Professor Department of Civil & Environmental Engineering

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



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Joseph P. Martin, Ph.D., P.E. Professor

Department of Civil, Architectural and Environmental Engineering

3141 Chestnut Street Philadelphia, PA 19104

TEL 215.895.2363 610.446.6477 FAX 215.895.1363 E-MAIL martinjp@drexe

**E-MAIL** martinjp@drexel.edu www.drexel.edu/coe/cae



Department of Civil & Environmental Engineering

Christopher L. Meehan, Ph.D., P.E., F.ASCE

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

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