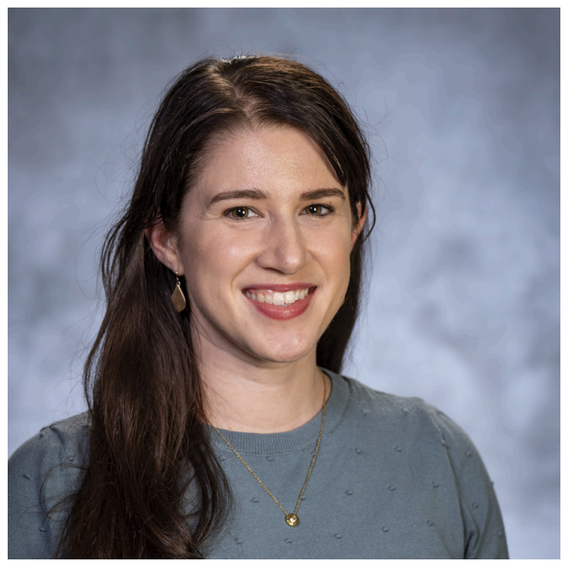
GEO-
INSTITUTE
National Capital Chapter

December 2025
VOLUME 4-25

# LETTER FROM THE PRESIDENT



## Sharon Hartley

President

**In this month's President's Letter, I'd like to highlight a new initiative our chapter has launched: the Student Scholarship. Many of the most established and successful GI chapters across the country already offer scholarships for students. After reviewing our financial position, the board determined that sponsoring a scholarship is a meaningful way to invest in the future of our profession and to put our available funds to work.**

**You can read more about the scholarship application requirements later in this newsletter, but I wanted to share some insight into why the board chose to pursue this opportunity. We all recognize that the growth of the geotechnical industry depends on a strong pipeline of new engineers. At the same time, geotechnical engineering does not always receive the visibility that other civil engineering disciplines do. Case in point - how many of us entered school planning to become structural engineers?**

**That's why we believe it's important to engage undergraduate engineering students early and encourage them to consider geotechnical engineering as a potential career path. This has already been a priority for the board, reflected in our student-focused geotechnical panel events at George Mason University and the University of the District of Columbia over the past year. The scholarship represents the next step in this "PR campaign" of sorts for geotechnical engineering. As part of the application, students will be asked to reflect on how they hope to contribute to the field. Our goal is that this process encourages them to explore the industry more deeply and sparks genuine curiosity about our unique discipline.**

**We hope the scholarship is a success and that we can continue offering it for years to come. Ultimately, we owe thanks to you as ASCE National Capital GI members. This scholarship would not be possible without the strong attendance at our chapter lunches and symposium. We also want to thank our sponsors, whose continued support makes it possible for us to give back to the geotechnical community.**

**Read more later on in this newsletter, and please feel free to share the scholarship announcement with any current students you know!**

# January Event – Luncheon

## Drilled Shafts at the Portal Bridge

The current Portal Bridge was built by the Pennsylvania Railroad in 1910. This century-old structure now carries one of the busiest commuter rail track lines in the entire country and is a vital link in the highly congested territory of Newark, New Jersey and Penn Station, New York. New Jersey Transit and Amtrak awarded the contract to construct the new Portal North Bridge to Skanska Traylor PNB Joint Venture (STJV) in October of 2021. The new structure, comprising nearly 2.5 miles of total track replacement, will rise 50 feet over the Hackensack River and will help eliminate major interruptions caused by the current bridge's movable swing span.

The new bridge foundations consist of a combination of drilled shafts, ranging from 4-feet to 10-feet in diameter, and driven piling. The installation of the drilled shafts for the project was a joint effort between Underpinning & Foundations Skanska (UFS) and Malcolm Drilling Company, Inc. (MDCI) with additional project support. UFS installed 201 shafts, including multiple bi-directional load tests, with diameters ranging from 4-feet to 6-feet. MDCI installed (32) 8-foot diameter drilled shafts for the four main river piers, (4) 10-foot diameter drilled shafts for the river spanning catenary foundations, and (1) 8-foot diameter bi-directional load test.

The drilled shafts on the project provided multiple challenges to both shaft contractors, as well as to STJV in the support that they were required to provide. The primary driving force behind those challenges was access to install the work and proximity to the existing track and structure. Additional challenges include navigating tight installation tolerances and strict specifications, an abundance of known (and unknown) utilities, difficult geotechnical subsurface conditions that include extremely dense hardpan and thick layers of decomposed rock, and strict non-destructive testing acceptance criteria.

While the project is still in progress, a majority of the drilled shaft work is complete and overall, both drilling contractors and STJV were able to effectively navigate all of these challenges to provide a successful project for the owner.

## SPEAKER

**WHO:** Brendan Dwyer
Jim Glider

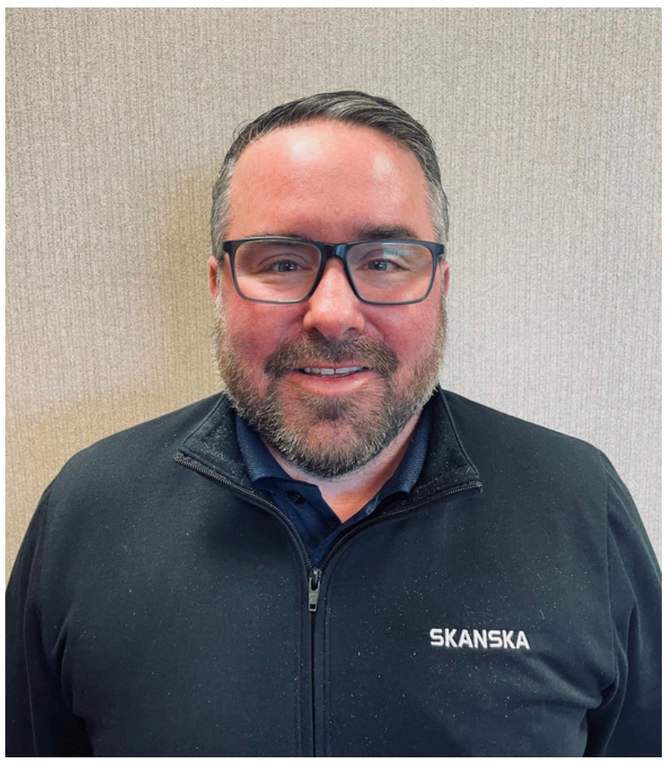
**WHEN:** Thursday, January 15, 2026
11:15 a.m. to 1:15 p.m. EST

**WHERE:** Wildfire Steaks, Chops & Seafood
2001 International Drive
McLean, VA 22102

**COST:** $55

**REGISTRATION LINK:**
https://www.eventbrite.com/e/drilled-shafts-at-the-portal-bridge-tickets-1978310479900?aff=oddtdtcreator

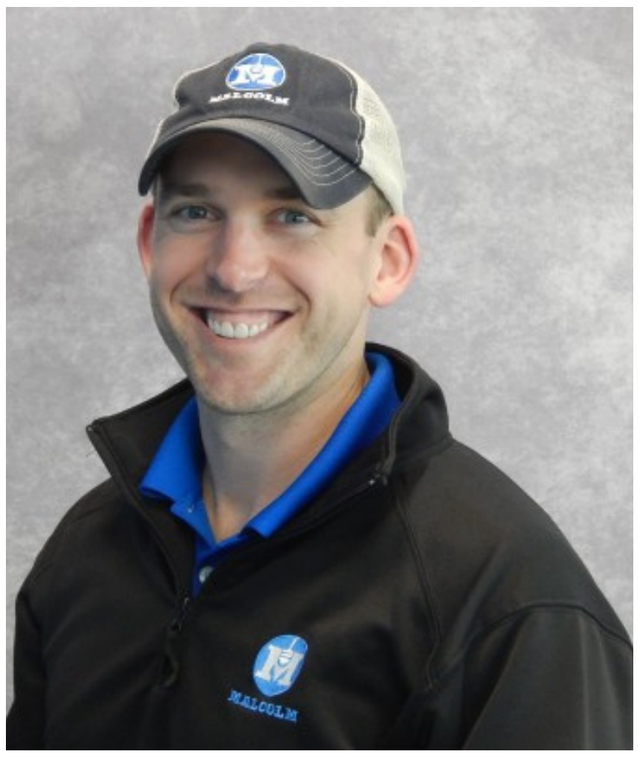
# About Our Speakers:




## Brendan Dwyer

Speaker

**Brendan Dwyer is currently a Project Executive for Underpinning & Foundations Skanska and has over twenty years of experience in the heavy/civil and deep foundation industry. These projects include high-capacity drilled shafts, driven piles, secant walls, and micro-piles primarily within the New York metro region. Brendan's experience includes both challenging marine based and land based projects. As a result of Brendan's expertise in drilled shaft technology as well as drilling means and methods, he serves as the company's large diameter drilling operations advisor. In this role Brendan supports estimating and operations teams with strategizing, planning and oversight of all large diameter drilling within the Company. He holds a BS in Construction Management from Central Connecticut State University.**

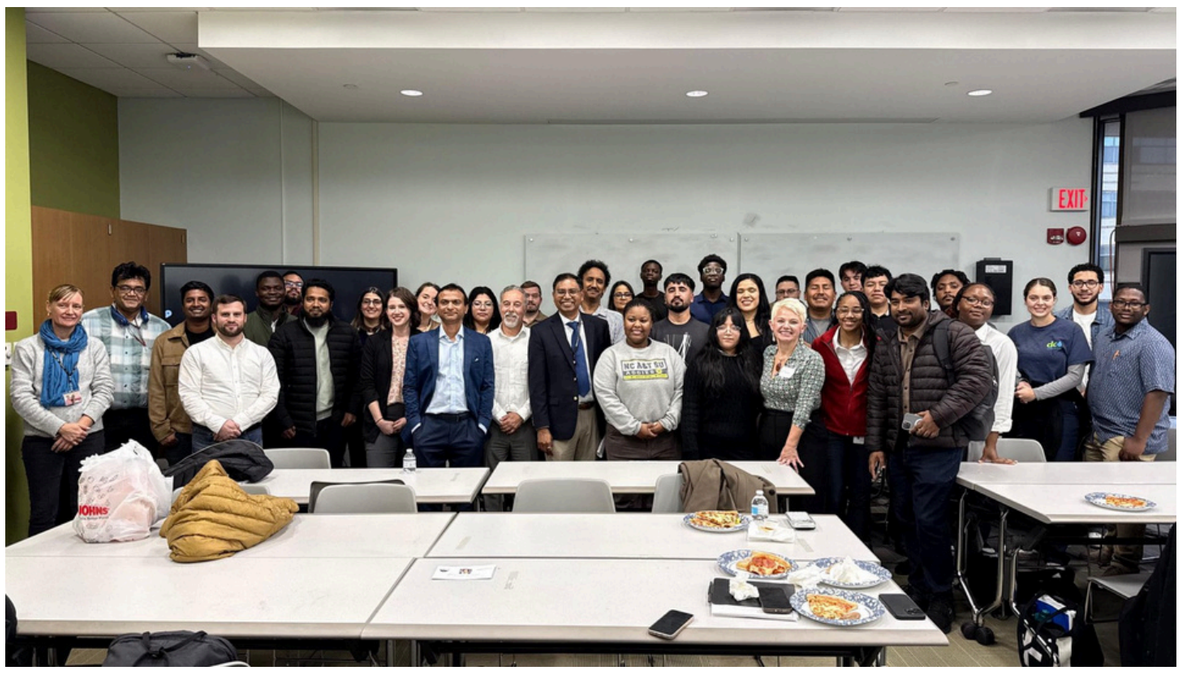


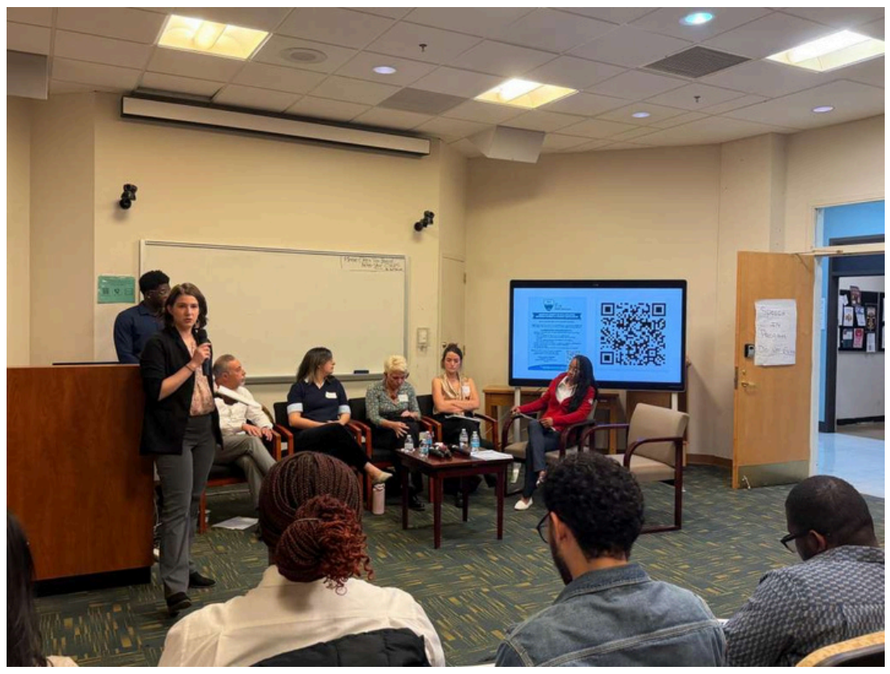

## Jim Glider

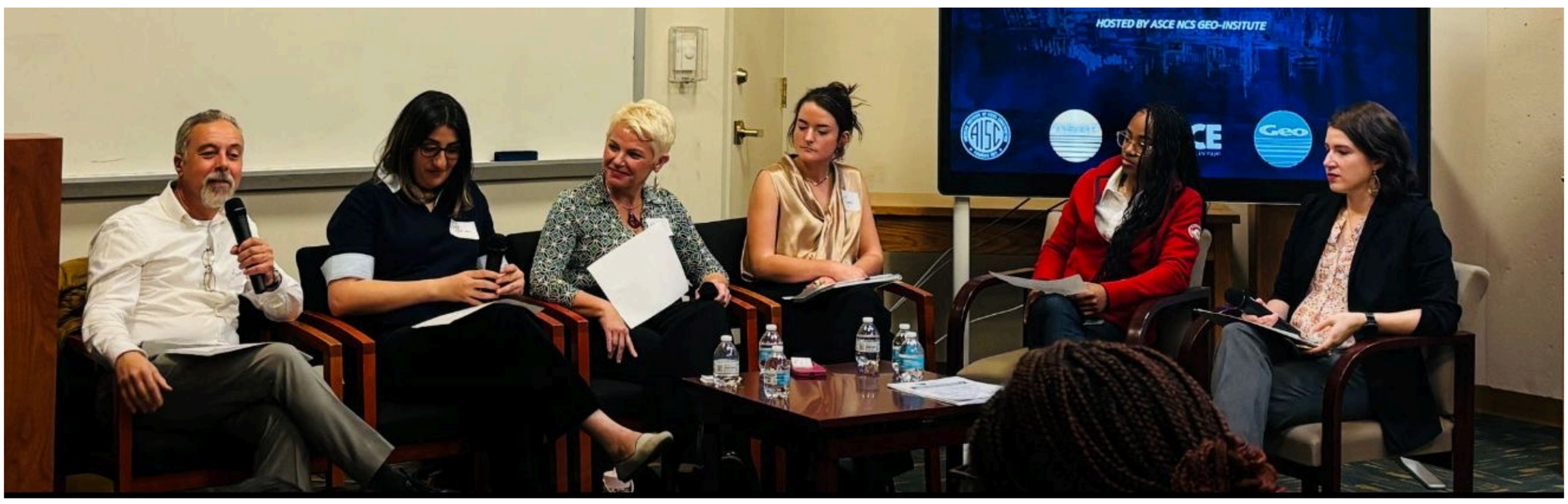
Speaker

**Jim Glider is a Senior Project Manager for Malcolm who estimates and manages projects throughout the Midwest and East Coast. He started as a Project Manager for Malcolm back in 2018 after spending seven years in the heavy civil/bridge industry. He has been involved in several of Malcolm's large critical infrastructure projects including the Portal North Bridge, Gordie Howe International Bridge, and Madawaska International Bridge. He holds a BS in Civil Engineering from the University of Wisconsin-Madison.**

# EVENT RECAP






## ASCE National Capital Section Geo-Institute Hosts Student Panel and Networking Event at UDC

**The ASCE National Capital Section Geo-Institute hosted a successful Panel Discussion and Networking Event on November 18th at the University of the District of Columbia. The event brought together students, early-career professionals, academics, and experienced practitioners for an engaging afternoon focused on careers in geotechnical engineering.**

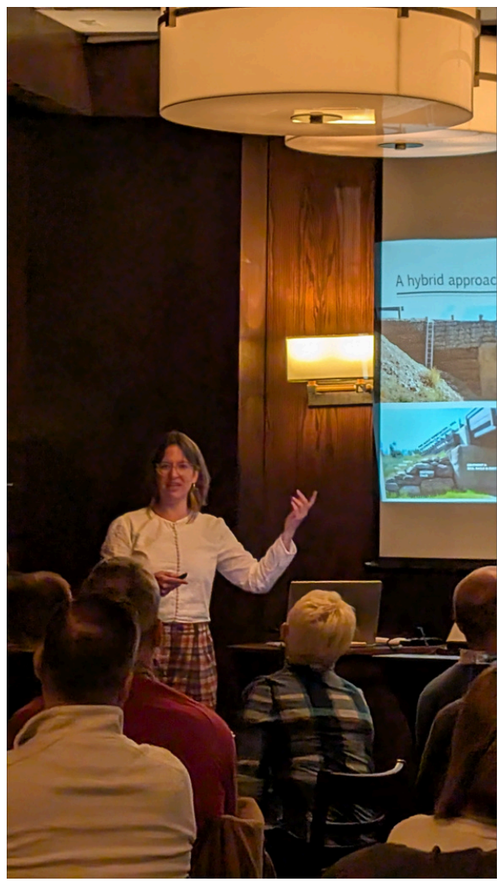
**The session introduced students to the diverse pathways within geotechnical engineering, including consulting, construction, laboratory testing, and research. Panelists shared their career experiences in the different paths of geotechnical engineering.**

**The event was moderated by Sharon Hartley, PE, president of the ASCE NCS Geo-Institute and Janel Baxter, President of the UDC ASCE Student Chapter. The panel featured an impressive lineup of speakers representing a wide range of career perspectives. Panelists included: Anna Kotas, Director of Business Development at GeoTesting Express, who highlighted opportunities in geotechnical testing; Morgan Berger, Geotechnical Specialist at A.G.E.S., Inc., who discussed early-career experiences in industry and geotransportation; Burak Tanyu, Professor at George Mason University, who shared his experiences as a former practitioner in geotechnical and geoenvironmental engineering fields as well as academic pathways and considerations for pursuing a PhD; and Mariam Halata, Senior Project Manager at Clark Foundations, who covered construction-focused geotechnical careers.**

**Students had the opportunity to ask questions, learn about internships and full-time positions, and gain clarity on graduate school and professional development options. Attendees were also encouraged to bring résumés, connect with panelists, and build valuable relationships with industry professionals.**

**The Geo-Institute looks forward to continuing its student outreach efforts and supporting future engineers as they explore and enter the geotechnical profession. Interested parties can join our mailing list by completing the form at https://asce-ncsgi.org/**

# EVENT RECAP




## November Luncheon “Preventing Serviceability Issues in MSE Wall Design and Construction

**On November 20th, the NCS GI chapter hosted Ashley Loyola, P.E., at Wildfire in McLean. Ashley is currently a Project Manager at Florida International University, where she is working on a $10M Coastal Infrastructure Study. Ashley’s presentation, titled “Preventing Serviceability Issues in MSE Wall Design and Construction,” was about a project she previously worked on where over 65 MSE walls in a single infrastructure program exhibited serviceability issues as early as the first year of service. In Ashley’s talk, she discussed the project and wall serviceability issues/failures, the monitoring program designed by Geocomp, development of prediction tools for the service life of walls within the larger inventory, and a discussion of “Do’s and Don’ts” for future wall projects.**

**The project site Ashley presented consisted of a residential development outside of Park City, Utah. The site contained a large inventory MSE walls with steel grid reinforcing and gabion basket facing. Ashley showed photos of bulging facing, tilting walls, and other failures that were noted within the first year of wall service life. The project had an extensive investigation program that included traditional geotechnical exploration and instrumentation/monitoring, periodic wall observations, and partial and complete wall de-construction.**

**Ashley emphasized the fact that MSE walls utilize proven design methods that have been in use for several decades in US infrastructure. Geotechnical engineers know how to properly design and build MSE walls for long-term performance. The walls on this project failed due to a combination of construction-related defects or design issues, both of which could have been mitigated. On the design-side, more thorough analysis for corrosive soils and consideration for future road salt (among other design considerations), which affected the steel reinforcing, could have avoided some serviceability issues. In addition, construction-related serviceability issues could have been avoided through construction oversight, using properly specified materials, and proper compaction of wall reinforcing and backfill materials. Ashley stressed the importance of well-written and descriptive material specifications, which can avoid issues related to improper material selection and placement during construction.**

**Significant amounts of data were generated from the evaluation, which Geocomp used to create service life predictions for other walls in the overall development. These models allowed for future maintenance and management decisions regarding the overall wall inventory. Ashley discussed that this may be the largest set of MSE wall failures to date.**

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GEO-
INSTITUTE

National Capital Chapter

# AMERICAN SOCIETY OF CIVIL ENGINEERS NATIONAL CAPITAL G-I STUDENT SCHOLARSHIP

**UP TO $4000 IN TOTAL SCHOLARSHIPS AWARDED**

**Applicants must be a current undergraduate or graduate student of a DC, MD, or VA university enrolled in a civil engineering program.**

## SUBMISSION REQUIREMENTS:

- **Original, personal essay of approximately 500 words answering the following:**
  - **Why the applicant chose to pursue engineering**
  - **The importance of professional societies such as the Geo-Institute**
  - **How the applicant hopes to contribute to the field of geotechnical engineering**
- **Résumé, including involvement in student or industry organizations**
- **Contact information for faculty member reference**
- **Unofficial transcript**
- **For graduate students: summary of current project or research**

**Winner(s) will be chosen based on academic record, geotechnical interest, and student/industry group involvement.**

**APPLICATION DEADLINE:**
**JANUARY 16, 2026**
**Winners will be announced by the end of February**

**For questions, contact Ben Stark, Secretary:**
**NCS.ASCE.GI.Scholarship@gmail.com**

# GEO SUCCESS

**In each edition of our new newsletter, we'll be highlighting the incredible accomplishments of our members. Have you or someone on your team recently received an award, earned a promotion, or reached a professional milestone? Are you presenting at an upcoming conference or event? We want to celebrate with you!**

**Please send your success stories to ascencsgec@gmail.com with the subject line "Geo-Success" so we can share them in an upcoming issue. Let's inspire and uplift each other by spotlighting the great work happening in our community!**

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# Annual Lunch Series Sponsorship

**Thank You to Our 2024–2025 Annual Lunch Series Sponsors!**

American Geotechnical & Environmental Services, Inc.

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**As a valued sponsor, your logo will be prominently featured in this newsletter and displayed in the pre-meeting slideshow at a minimum of six lunch events throughout the series.**

**Interested in becoming a sponsor? Reach out to Anna Kotas or Sharon Hartley today to secure your spot and elevate your visibility within our community!**

**Sign up to sponsor:**
**https://www.eventbrite.com/e/1501992202109?aff=oddtdtcreator**

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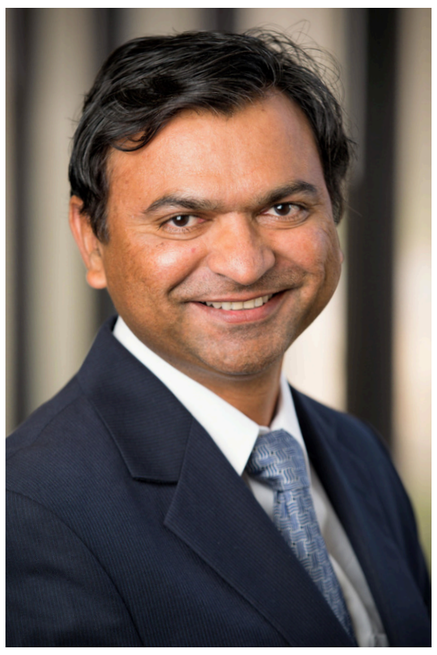
# Academic Anchors




## Ujwalkumar D. Patil, Ph.D., P.E., M. ASCE

Associate Professor
University of The District of Columbia


**What is your current role and academic focus?**

I am an Associate Professor of Civil (Geotechnical) Engineering in the School of Engineering and Applied Sciences at the University of the District of Columbia (UDC), where my role spans teaching, mentoring, and program development in geotechnical engineering and infrastructure resilience. My academic focus is on designing and delivering courses in soil mechanics, foundation engineering, and geotechnical risk and reliability for undergraduate and graduate students, and my research centers on unsaturated soil mechanics, rainfall-induced slope stability, and biogeotechnical solutions such as vegetation-based stabilization and reliability-based risk assessment of natural and engineered slopes under changing climate conditions.

**What inspired you to pursue a career in academia?**

A career in academia appealed to me because it combines three things I value: advancing knowledge through research, solving practical geotechnical problems, and helping students grow into independent professionals. Early experiences with research on unsaturated soils and swelling clays, coupled with industry practice, convinced me that a university setting was the best place to integrate rigorous science with real-world impact.

**How do you balance teaching, research, and service in your work?**

Balancing these roles starts with alignment: my teaching, research, and service are all centered on geotechnical risk, unsaturated soils, and slope stability, so effort in one area supports the others. I use structured weekly planning, clearly defined student and project milestones, and selective professional service—such as focused journal and conference work in my research areas—to maintain productivity without compromising classroom quality.

**What current or recent research project are you most excited about?**

I am most excited about ongoing projects that couple transient rainfall infiltration, vegetation effects, and probabilistic methods to assess the stability of tropical and urban hillslopes under typhoon-scale or extreme events. Recent work on the probabilistic stability of Guam's hillslopes and vetiver-vegetated slopes under successive typhoons is particularly rewarding because it connects advanced unsaturated soil mechanics, field data, and practical design guidance for hazard mitigation.

**How do you see your work influencing practice in the field?**

My work aims to provide practitioners with tools and data to better account for suction, vegetation, and climate-driven extremes in slope stability and infrastructure design. This includes calibrated constitutive and suction-stress models, guidance on vegetation selection and root reinforcement, and reliability-based frameworks that can inform codes, corridor planning, and risk-based asset management for transportation and coastal infrastructure.

**What's a concept or finding from your work that you think deserves more attention?**

One concept that deserves more attention is the combined hydrological and mechanical role of vegetation in slope stability, especially under prolonged or successive extreme rainfall events. Designers often consider vegetation qualitatively, but quantitative root cohesion, root water uptake, and their integration into probabilistic slope stability models are critical to avoid both overestimating and underestimating resilience.

**What's your favorite course to teach, and why?**

My favorite course to teach is Introduction to Risk & Resiliency in Engineering because it allows students to connect probability theory with real geotechnical and infrastructure problems, including slopes and foundations. Seeing students transition from deterministic "factor of safety only" thinking to risk-informed decision-making is especially rewarding.

**What do you hope your students take away from your classes?**

From my classes, I want students to leave with a strong conceptual understanding of soil behavior and a practical mindset about uncertainty, data quality, and safety. Equally important, I hope they develop professional habits—clear communication, ethical judgment, and curiosity—that will serve them in consulting, government, or graduate studies.

**How has student engagement or learning changed in recent years?**

Student engagement has become more technology-driven, with greater expectations for interactive content, real datasets, and immediate feedback. There is also a stronger interest in climate, resilience, and sustainability topics, which creates opportunities to connect core geotechnical theory with current events and community-focused projects.

**How can we strengthen the connection between academia and industry?**

The connection can be strengthened through co-developed projects where industry partners provide real problems and data, while faculty and students contribute modeling, testing, and analysis—plus offering geotechnical internships for students during summer breaks. Regular guest lectures, joint short courses, and practitioner involvement on advisory boards and capstone reviews also keep curricula and research aligned with evolving practice.

**What trends or shifts are you seeing in engineering education?**

Key trends include a shift toward project-based learning, integration of climate and resilience content, and greater emphasis on data analytics and computational tools in traditional civil engineering courses. There is also growing attention to inclusive pedagogy and support structures to help a diverse student body succeed in rigorous technical programs.

**What's one lesson you learned the hard way in your academic journey?**

A major lesson was that saying "yes" to too many service and reviewing commitments can dilute impact and slow research and mentoring progress. Learning to prioritize and occasionally decline good opportunities has been essential for sustaining quality in teaching, research, and personal well-being.

**Who influenced or mentored you in your career, and how?**

My career has been shaped by mentors such as Professors Anand Puppala and Laureano Hoyos, who modeled how to connect advanced experimental work, constitutive modeling, and field applications in unsaturated soils and geotechnical engineering. Their guidance on research rigor, proposal writing, and professional service has strongly influenced how I supervise students and build collaborations.

**What's one academic resource, habit, or tool that's essential to your work?**

An essential habit is systematic documentation—carefully organizing experimental data, numerical models, and revisions—so that results are traceable and reusable for publications and future projects. In terms of tools, a combination of advanced numerical software (e.g., GeoStudio, FLAC, PLAXIS) and reference managers for literature keeps both research and teaching up to date and efficient.

**What's something your students or colleagues might be surprised to learn about you?**

A surprising fact is that, as a child, I wanted to become a medical doctor treating patients—but I ended up as a geotechnical academic instead. I still joke that I did become a doctor, just of a different kind: I am a "doctor" of subsurface problems, diagnosing and curing geotechnical issues through testing, modeling, and research on soils and slopes.

**Give our geo-students one piece of advice.**

Master the fundamentals, then deliberately build skills in numerical modeling, data analysis, and communication—and carry curiosity, humility, and a mindset of lifelong learning throughout your career.

# Meet Your Board

## Don Seserko

Associate Principal Engineer
ECS Mid-Atlantic, LLC

**What is your role on the board, and how long have you served?**

At-Large Director, less than 1 year.

**What inspired you to get involved with the ASCE NCS Geo-Institute?**

I have always enjoyed the topics and format of the lunch meetings for this group, and I reached a point in my career where I was ready to further my professional contacts in the local area.

**What's your favorite part of being on the board?**

I enjoy the camaraderie and how welcoming everyone has been, even though I have only recently joined the board.

**What do you hope to contribute during your board term?**

I hope to contribute from my background in geotechnical consulting for transportation projects.  Working almost exclusively on transportation projects for most of my career makes the local geotechnical world even smaller, but at the same time I have seen a lot on mega projects like Purple Line and 495 NEXT.

**What's one goal the board is working toward that you're especially excited about?**

I am excited about our plan to introduce a scholarship, available to local geotechnical students. As the recipient of some scholarships myself during college, I appreciate the impact it can have on a student.

**How do you see the board supporting members or advancing the profession?**

Particularly with the implementation of the new scholarship program, I see the board as essentially advertising to the local geotechnical students that there is a professional group ready to support them in their chosen civil engineering discipline.

**What's your day job, and what does your typical work involve?**

Most of my days are spent writing proposals and reports for transportation-focused geotechnical projects.  We do a lot of our work directly with VDOT or as part of design-build teams on VDOT-advertised projects.  There are many intricacies when planning fieldwork in and near roadways, and also when submitting reports for VDOT review.

**How has your involvement in this organization impacted your professional life?**

Participating with this organization has allowed me to quickly make friends and acquaintances at some firms I would have otherwise looked at solely as competitors.

**Are there any skills from your job that help you in your board role — or vice versa?**

When you are working on large projects, you often don't have a choice but to email or call someone you haven't worked with before to find an answer.  I think my comfort level with reaching out has already served me well on the board.

**What advice would you give to someone thinking about getting involved?**

I would encourage prospective board members to get involved. We are not a large or intimidating board and I felt quickly welcomed despite not having served before.

**What's a misconception people may have about board service?**

Serving with the board does not require an excessive time commitment and people may be surprised how much board business is conducted quickly over email.

**What do you wish more members knew about the work the board does?**

I think more members should be aware of the work the board does behind-the-scenes to ensure our chapter is recognized nationally. For example, the National Capital Section is often featured in the ASCE GeoStrata magazine.

**What is the most useful thing on your desk right now?**

The notebook I constantly have open on my desk is the most useful thing I have. I personally have not gone 100% digital and still use my notebook for to-do lists, quick calculations, and notes from calls and meetings.

# BOARD MEMBERS

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