

2020 ASCE-NCS Annual Awards Banquet

Celebrate Our Region's Outstanding Projects and People

By Michael D. Venezia, P.E., ASCE-NCS Vice President

Join us on Tuesday, March 24th at the Hilton Arlington for the National Capital Section's (NCS) signature event of the year. This event gives us an opportunity to recognize and celebrate local excellence in projects, engineers, and students who have contributed to our profession and our community. Recognized parties include the ASCE-NCS Outstanding Civil Engineering Project, Sustainable Project of the Year, Meritorious Service and Community Service Award winners, NCS Student Scholarship Award recipients, Outstanding Graduating Seniors from local civil engineering universities, and members of the NCS who have achieved Life Member or Fellow status during the past year.

During the banquet, monetary scholarships will be awarded to students

from our Section's five universities – Catholic University of America, George Mason University, George Washington University, Howard University, and the University of the District of Columbia – acknowledging Outstanding Graduating Seniors from each university, and recognizing Regional and National award winners from the National Capital Section.

Service awards will be presented to members who have gone above and beyond their dedication and commitment to the Section. In addition, the Project of the Year will be presented.

Please join us for an enjoyable evening with a diverse gathering of ASCE NCS members from Student Members to Life Members. ■

Please join us on **Tuesday, March 24** at the Hilton Arlington, 950 North Stafford Street, Arlington, VA, on the second floor in the Gallery Ballrooms. Parking is available at the hotel (\$10), at the Ballston Mall garage (\$1 after 6 pm), and on the street (free after 6 pm). The Hilton is on the same block as the Ballston Station on Metro's Orange and Silver lines. Registration and networking will be from 6:00 to 6:45pm, followed by dinner. The program will end by 8:30 pm. The cost is \$45 for those preregistering, \$10 for students and \$55 for walk-ins, as space allows. For questions, please contact [Kelly Cronin](#). Please [click here](#) to register by **Wednesday, February 12**.

Note that no-shows will be charged the full registration fee. We welcome walk-ins, including any registrations made after the guaranteed number of guests is provided to the hotel. However, the cost for walk-ins is higher because the Section is charged accordingly by the hotel for late registrations.

January Section Meeting Recap

Climate Resiliency at US Diplomatic Posts

Presented by The U.S. Department of State, Bureau of Overseas Buildings Operations

John Pitts, Director of Civil and Structural Engineering, and David Keller, Structural Engineer and Natural Hazards Program Manager, both with the Department of State's Bureau of Overseas Buildings Operations (OBO), presented at the January 2020 ASCE-NCS Section Dinner Meeting on January 21st. The presenters discussed OBO's work towards mitigating risk to its facilities from natural hazards, and the direction toward holistically addressing climate resiliency concerns. The presentation was well attended, and our presenters graciously stayed after the presentation to chat with people individually and answer questions.

OBO manages the US Department of State's building program which includes planning, acquisition, design, construction, operation, maintenance, and disposal of overseas properties. Their mission is to provide safe, secure, resilient, and functional facilities. These facilities are comprised of embassies, consulates, office and support annexes, various housing, warehouses and shops, and cultural heritage properties.



For new construction, OBO is addressing potential natural hazards through site selection and established standards. For existing buildings and new acquisitions, OBO is addressing hazards by working to identify and mitigate risk from natural hazards. The biggest natural hazards that are being identified and evaluated are floods and geohazards (landslides, sinkholes, etc.), earthquakes, tropical cyclones and hurricanes, and tsunamis. OBO is currently visiting properties around the world and is in the process of developing maps identifying specific risks and rating scales for that risk. Once the hazards

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President's Corner

A lot of people have asked me why I am active with ASCE and the answer is simple – the people! I am constantly amazed by who I bump into at events and how interconnected we are. Despite the different fields within the umbrella of civil engineering, we really are a small community. You never know where your career will take you. Someone you meet at an ASCE event may one day become a co-worker or a client or a point-of contact for a new project. I wish everyone would take advantage of all the networking opportunities that ASCE offers. We have many different committees – both technical and non-technical that host numerous events at a variety of times and locations.

One of the best ways to advance your career is by building relationships and networking. I realize that this can be harder for some than for others, but the more you do something the easier it becomes. There is a stereotype of engineers being socially awkward, or



being technically brilliant but when it comes to communicating with others, we fall flat. I do not agree with this stereotype, based on my experience successfully communicating with engineers all day long! My advice: network as often as possible. If you see someone at an event, I encourage you to simply introduce yourself and ask them what field of civil engineering they are in – chances are no matter what their field of expertise is, you'll find something in common with them and start a conversation.

I have many examples of how networking through ASCE has benefitted me; I have had ASCE contacts reach out to me about job opportunities and conversations with people at ASCE events about how our individual companies could potentially partner and collaborate on a project. At the last section meeting, I wound up speaking with a gentleman who has been a client of my colleagues for years and I never knew it!

I know all too well that your time is limited – between hectic careers and personal lives – there are always things to be done; however, I feel that incorporating networking into your professional life is critical to success. I have two small kids at home, and me and my husband both work full-time. When we had our kids, we agreed that we could each have one night a week out for work, if we needed it. While many weeks I choose to come home and play with my kids before bedtime, I look forward to ASCE section meetings and having a night with fellow civil engineers.

As always, please feel free to reach out to me at president@asce-ncs.org about ASCE-NCS networking opportunities, or to express feedback or ideas about ASCE-NCS events.

Sincerely,



Kelly Cronin, PE
ASCE NCS President

January Section Meeting Recap

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and vulnerabilities are identified, OBO can then communicate these risks to stakeholders in order to develop and

implement risk mitigations and allow integration of climate resiliency into future project funding and prioritization.

For more information, please visit www.overseasbuildings.state.gov. ■

Newsletter

Maria Raggousis, *Editor*

April 2020 Issue Deadline: March 15, 2020

To Submit Articles: newsletter@asce-ncs.org

NCS eNewsletter Archives: go to www.asce-ncs.org and view along the sidebar.

Address Changes: Call 1-800-548-ASCE, e-mail member@asce.org, visit www.asce.org, or write: ASCE – Membership, 1801 Alexander Bell Drive, Reston, VA 20191. Include your membership number.

National Capital Section

Officers (2019–2020)

Kelly Cronin, *President*
Mike Venezia, *Vice President*
Vic Crawford, *Treasurer*
Jameelah Ingram, *Secretary*
Emily Dean, *Past President*
Brian Barna, *Previous Past President*
Maria Raggousis, *Newsletter Editor*
Joe Whartenby, *YMF President*

Norine Walker, *Director*
Elizabeth Wheeler, *Director*
Lisa Anderson, *Director*
Tricia Wolfbauer, *Director*
Shainur Ahsan, *Reston Branch President*

Committee Chairs

Please refer to the [NCS website](http://www.asce-ncs.org) for a current list of NCS committees and chairs.

Branches from the Same Tree: Humanities and Engineering

A book review by Ranjit S. Sahai, PE, F.ASCE

A noteworthy characteristic of college education today is the odd association of two incompatible ideas: integrative education is all the rage among educators – and no one knows what integrative education looks like.

It's as if you were to ask contractors to build a structure without telling them what that structure is to be.

A consensus study report titled *Branches from the Same Tree*, published by the *National Academies Press*, highlights this problem by stating, in *Chapter 3: What Is Integration?*, that "Higher education has not yet agreed on a definition of what the integration of the [humanities and sciences] is and what it is not."

The report offers compelling anecdotal evidence of the value of integrating humanities and sciences in helping students learn how to think critically and solve problems creatively.

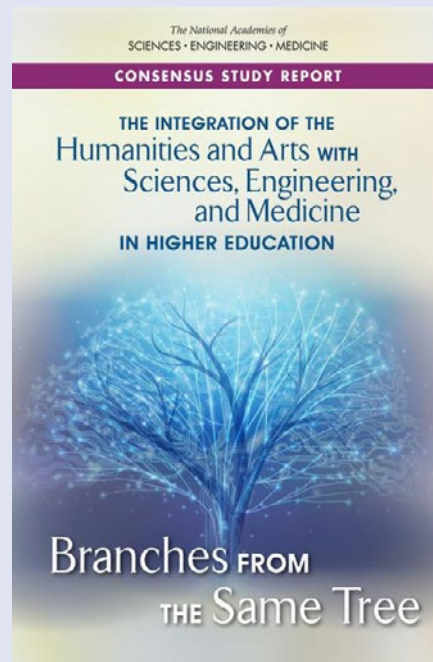
For instance, it states, "This holistic view of all human knowledge and inquiry as fundamentally connected is reflected in human history – from the traditions of Socrates and Aristotle, to the era of industrialization, to the present day. This view holds that a broad and interwoven education is essential to the preparation of citizens for life, work, and civic participation. An educated and open mind empowers the individual to separate truth from falsehood, superstition and bias from fact, and logic from illogic."

Such an outcome is critical on two counts:

- It will address the key concern of employers that job applicants today lack communication, critical thinking, and problem-solving skills.
- It will prepare our youth to tackle successfully not only the coming big challenges, but also to thrive with an efficacious attitude toward life, work, and civics.

Though the Report's call to action for educational institutions to develop and implement integrated curriculum is sound, the Report leaves a critical piece of the puzzle unanswered: What is Integration?

The core value of the Report, despite its failure to develop an original theory of what integrated education should look like, lies in the vast collection of data points it places in plain sight for a critical thinker to sift through, to analyze, to discard the irrelevant, to mine the relevant, and to develop a theory on which to base the development of an integrated curriculum to test and validate.



The Report offers many valuable insights into the essential nature of an effective theory on integrated education. For instance, from Page 39, integrated education should help students "learn by encouraging and actively teaching them how to develop conceptual frameworks [as it] may also enable them to learn content more readily because they can then better understand the relevance of that information and its connections with otherwise seemingly disparate facts."

Another nugget of gold among its data points, from Page 112, includes a reference to a study that observed, "students who were required to apply their understanding of neurotransmission through the creative activity of making a 3- to 5-minute film significantly outperformed those who learned the concept from more conventional approaches." That study went on to derive another required attribute of an integrated curriculum, "The process of creating helped them reduce the complexity of the scientific concept to its most salient features."

Among the barriers to the development of integrated approaches, the book cites "tenure and promotion criteria, institutional budget models, workloads, accreditation, and funding sources."

The book ends with a call to continue its battle because, "integration's grand challenges, like societies, are also its most promising opportunities."

To download a free PDF copy of the Report, point your browser to: <https://www.nap.edu/catalog/24988/>

Coming up Next Month

Join us again next month as this column continues its exploration of the value of humanities to students of not only STEM, but of life itself. We will review what some of the most influential minds that walked this earth have had to say about literature. What it is, why it is important, what are its key attributes, how to evaluate it, and how great literature can help you remain motivated to be the best you can be.

About the Author

Ranjit, a Past President (2013–14) of ASCE-NCS, is a principal and founder of RAM Corporation, a firm serving State DOTs with a focus on traffic engineering design, stormwater facility inspections, and IT solutions for engineering workflows. He is also an [author](#) and speaker.



On Building Industry-Academia Collaborations

This month, my guest author Dr. Byunggu Yu, a well-known researcher and educator in Computer Science and Artificial Intelligence, will be exploring new ideas on Industry-Academia Collaborations:

There is a widening gap between academia and industry in the area of product development platforms (including technologies, knowledge, and techniques therein). Industry's adoption of new development platforms is agile and additive, while academia's adoption is conservative and supplanting.

We are in an era of rapid prototyping. Every industry player is looking for new product development platforms for competitive advantages. The variety of industry adopted platforms is rapidly growing. On the other hand, academic degree programs have a limited capacity in leading or catching-up the inflation of the platforms. This is due to the fact that the programs are constantly required to meet various internal and external accreditation requirements. Therefore, the adoption of new product development platforms in academic curricula is conservative and supplanting.

Unlike academia, industry players have to keep their stakes in each adopted platform often through its legacy stages. They are mandated by existing customers/clients or by contracts to continue to maintain or service legacy systems, while competition in growth is constantly encouraging them to be agile in adopting new platforms. Therefore, industry's adoption of new development platforms is often additive, further increasing the variety of development platforms they use.

Particularly in disciplines related to software engineering, such as computer science and its variants, there are hundreds of software development platforms and new platforms are being born every day, accelerated by the worldwide open source trend. The industry is much more agile in these changes than academia. Therefore, academic curricula, that also need to satisfy the slowly changing accreditation guidelines, cannot catch up the

widely varying and rapidly evolving needs of the industry. For example, in the area of web applications, there are 28 development platforms listed on <https://www.w3schools.com/whatis/> and even more open-source platforms that are not listed there. While our academic programs can cover a small subset of the platforms there, it is not and will never be enough. In fact, this gap between industry and academia has been rapidly widening.

The challenge we face here is summarized as follows: the percentage of new graduates from academic degree programs who can find exact job matches is decreasing. Therefore, both initial student success rates as well as our industry's competency are being suppressed. Because this challenge is rooted at the interplay of the two different value systems – industry and academia – our approach should be collaborative. To be successful and effective, such collaborations need to be mutually beneficial.

This semester, we are conducting two experimental projects to address this challenge with our industry partners (companies). Project One is to build a system of industry-proposed projects for experiential learning in our classrooms; Project Two is to develop pre-employment weekend programs. Both projects are designed and conducted by industry-academia teams spanning graduating seniors, graduate students, faculty, and companies in various industries including health, logistics, marketing and advertising, information technology, and finance.

Project One can provide participating students with hands-on and experiential learning opportunities regarding various industry applications and development platforms beyond their curricula. At the same time, the industry partners can build a collaboration basis with the participating professors, which can extend their research capacity with a quick turnaround option. For Project One, we are collaborating with CapSource (www.capstonesource.com). CapSource has kindly helped us initiate and design various industry-academia collaboration projects.

For Project Two, our sponsoring companies including Precise Software Solutions developed a notion of “pre-employment certification program” as follows:

1. Company “C” wants to hire new graduates with a certain skill set (e.g., low-code programming on Appian and Agile-Scrum-Sprints);
2. A free tailor-made weekend or summer training program is designed and offered to graduating seniors;
3. The training sessions are taught by experts from Company “C” and optionally by participating professors;
4. Company “C” sponsors industry-recognized certifications and hires a number of top-performing students closing the program.

We have found that this kind of collaboration can produce Win-Win-Win if well designed and carefully communicated with high work standards and ethics: Students get a free training, certification, and employment opportunity; Professors can contribute to student success and get hands-on exposure to industry technologies and platforms; Sponsoring companies can identify and hire best tailor-made employees.

Projects One and Two were just born (Spring 2020) and highly experimental. We expect that the projects will undergo a lot of changes in the near future. If you are interested in partnering with us, please do not hesitate to contact me at byu@udc.edu or via my LinkedIn page at <https://www.linkedin.com/in/byunggu-yu-79a70551/> anytime. We are constantly looking for new partners.

Dr. Byunggu Yu,
Professor of Computer Science
LinkedIn: <https://www.linkedin.com/in/byunggu-yu-79a70551/>



FGIA unveils new logo, brand at Annual Conference

Schaumburg, Illinois – During the Fenestration and Glazing Industry Alliance (FGIA) inaugural 2020 Annual Conference, the association officially launched its brand, including a [new logo](#) and [promotional video](#) never before seen by the industry. On Jan. 1, 2020, the American Architectural Manufacturers Association (AAMA) and the Insulating Glass Manufacturers Alliance (IGMA) officially came together to form a new, united organization: FGIA.

“That alliance called for the creation of a new brand to represent not just the combining of these two industry leaders, but to cast a vision for the future of FGIA. Much planning, creativity and thoughtfulness went into the development of the new logo, as well as the verbal and visual languages of the FGIA brand,” stated Angela Dickson, FGIA Marketing and Communications Director.

Developing the FGIA Brand

Members of the AAMA and IGMA Marketing Committees and the AAMA and IGMA Boards of Directors held several meetings last year to gain insight



from rebranding experts to determine the best path forward. Part of that initiative was considering the color, font and logo creation. This included the positioning line: “Your trusted resource, setting the standards for fenestration and glazing.”

As part of the branding process, primary personality traits of the brand were developed to help convey the character of the new organization: precise and detailed, knowledgeable, insightful and enlightening, design-driven, innovative and evolving.

The branding strategy developed for FGIA calls for the AAMA and IGMA brands to appear with the FGIA brand indefinitely in order to leverage the existing AAMA and IGMA brand recognition. This approach aids in building the FGIA brand over time.

About the Logo

Thoughtfully designed to represent the unification of IGMA and AAMA, the new FGIA logo is made up of a frame – representing fenestration products – and an opening, which represents the glazing. The frame is offset, creating movement and dynamism, reflecting the innovation and intentional evolution that are two primary traits of the brand. The clean and bold font is both versatile and modern, exuding clarity and confidence.

“The color palette is bold and modern, conveying our products’ connection with daylighting, sustainability and energy efficiency,” said Dickson.

Promotional Video

Several FGIA members participated in a [video promotion](#) project meant to convey all the programs and services FGIA offers and the benefits of membership. Some of those interviews have been summarized in a video, relaying excitement around the new, unified organization. Some themes include combined synergies, the bigger picture, thought leadership and more.

“It really brings together two organizations that have a long history, and a similar history, or producing documents and standards that help advance the industry [and] help keep the playing ground equal,” concluded Donnie Hunter, FGIA Board Chairman, of Kawneer.

The FGIA 2020 Annual Conference was held from February 10th through 13 in Ft. Lauderdale, Florida.

More information about FGIA can be found at <https://fgiaonline.org>. ■



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Geo-Institute Geotechnical Symposium on Innovations and Lessons Learned in Ground Improvement

Are you working on projects requiring Ground Improvement? Do you need continuing education credits? Join ASCE Geo-Institute National Capital Chapter for our annual symposium. This year's focus is on Innovations and Lessons Learned in Ground Improvement. Check out the speaker line-up below and then register to secure your spot for our Spring Symposium on Wednesday, April 15th!

Registration Fee: \$275/person

Fee includes continental breakfast, lunch & parking
[Register Here!](#)

If you are traveling and require a hotel room, Marriott is offering a discounted rate of \$259 + taxes. Use this link to make your hotel reservation: [Marriott Tysons Group Rate](#) (reservation must be made prior to Friday, March 27th for group rate)

Sponsorship Opportunities!

Limited Spots are available for SPONSORS for the our Spring Symposium on Wednesday, April 15th. All sponsors will be asked to provide their company logo for advertising as well as 2-3 powerpoint slides that will be rotated during breaks and lunch. Sponsorships are first come, first served and do not include event registration. Please contact Shana Carroll (scarroll@dwkozera.com) to reserve your spot!

Option 1: Lunch Sponsor (1)

Available. Cost is \$450 and includes one tabletop display and a 10 minute "pitch" spot during lunch.

Option 2: Breakfast Sponsor (1) Available.

Cost is \$400 and includes one tabletop display and a 5 minute "pitch" spot during lunch.

Option 3: Tabletop Sponsors (5) Available. The cost is \$300.

Due to space limitations, all tabletop displays include only a 6 ft x 6 ft table and no chairs. Electricity is not available.

List of Presentations

A Discussion on Dynamic

Compaction. Presented by: Chris Woods, PE, GE, D.GE., Vice President, Densification, Inc.

Ground Improvement of Compressible Soils using Mechanically Stabilized Earth Surcharge Embankments Adjacent to Existing Structures and Utilities.

Presented by: Hiren J. Shah, PE, Senior Associate, Mueser Rutledge Consulting Engineers

Global Failure of MSE Wall Founded in Ground Improvement.

Presented by: Tim Stark, Ph.D., PE, D.GE, F.ASCE, University of Illinois

Case Studies Using Cement-Treated Rammed Aggregate Piers.

Presented by: Valerie Merida, PE, Vice President of Engineering, GeoStructures, Inc.

Lake Eloise Drive Elevation increase using Permeable Low-Density Cellular Concrete (PLDCC 25-35 lbs/ft³).

Presented by: Nico Suttmoller, Global Lightweight Fill Specialist, Aerix Industries



Case Histories of Complications & Innovations with Rigid Inclusions in the Capital Region: Where Ground Improvement Meets Deep Foundations.

Presented by: Taylor Towle, PE, M.ASCE, Senior Design Engineer, Menard Group US

Foamed Glass Aggregate Lightweight Fill as Ground Improvement: Case Studies in Transportation and Commercial Development.

Presented by: Theresa Loux, Ph.D., PE, Technical Director, Aero Aggregates of North America

Highway Embankment Failure even with Prefabricated Vertical Drains and Controlled Filling.

Presented by: Tim Stark, Ph.D., PE, D.GE, F.ASCE, University of Illinois

Case History, Design, Numerical Analysis, Ground Improvement.

Presented by: Giovanni Bonita, PE, GEI Consultants, Inc. and Ken Kniss, PE, Hayward Baker/Keller

Monitoring of a Marginally Stable Hill in Edmonton, Canada, During Construction of a Temporary Work Bench.

Presented by: Kimberly Hummer, PE, Bechtel Nuclear Security Environmental ■

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Region 2 Director's Report

Future World Vision

Civil engineers, in reimagining the world, must adapt how we design, build, operate, and maintain our infrastructure systems.

Using data-driven, in-depth, scenario-planning analysis, Future World Vision puts civil engineers in position to lead not just today but five decades into the future. Four types of cities are being imagined:

- Resilient Cities
- Progressive Megacities
- Dispersed Settlements
- Unequal Enclaves

By mapping out key trends and potential outcomes, a projected range of plausible future-based scenarios is being developed. Each scenario models how society might interface with cities, infrastructure, and operational systems, while illustrating what civil engineers must do to develop solutions for this changing future.

Future World Vision will help ensure that the decisions we make as civil engineers, in building high-tech, resilient, and sustainable communities of the future, optimize desirable outcomes while avoiding undesirable and unintended consequences.

Go to futureworldvision.org to learn more about this exciting undertaking.

Region 2 Member Shout Out Nicholas Johnson and Phillip Harter of the Reading Branch

Nicholas Johnson works at Great Valley Consultants in Reading, Pennsylvania. GVC is a small consulting firm focused on civil and municipal engineering in Berks County and surrounding areas. Nick focuses on Environmental and Water Resources engineering within the Civil Engineering discipline. He has gained valuable field experience in his 12+ year career which broadened his knowledge of other civil engineering specialties. He attended Penn State from 2003 to 2007 and joined ASCE in 2009. Nick joined because he wanted to branch out, and to better understand the experiences of other in our broad civil engineering industry, and to better serve in the civil engineering profession.

Philip Harter is currently juggling overtime, a toddler, and has a second

child expected in May. As a structural engineer at Worley, Phil has had the opportunity to complete designs of numerous power generating facilities in the U.S. and around the world. Most recently, Phil has been lucky enough to be working on one of the first, major offshore wind power facilities in the United States. Phil joined ASCE during college as part of the Steel Bridge team and participated in the national event at the University of Florida. Phil stayed with ASCE after graduating from Penn State because it supported infrastructure investment and the education of the next generation of engineers.

Coincidentally, it is interesting to note that Phil and Nick have been friends since 2000, when they met in the 9th grade at Governor Mifflin Senior High School in Shillington, Pennsylvania.

Please share in my thanks to both Nick and Phil for their involvement in ASCE and to their being part of the resurgence of the Reading Branch.

Leadership and Management Training Opportunity for Young Civil Engineers

Region 2 is offering to reimburse Sections and Branches for the cost of purchasing ASCE's [Professional Skills Series in Leadership and Management](#) training modules. Please contact [me](#) if interested in learning about this limited time reimbursement offer.

Module = \$249/Each, Reimbursement from Region 2 = \$249/Each
Your Final Amount = \$0!!

Visit an ASCE Designed Historic Site

These sites illustrate the creativity and innovative spirit of civil engineers. Visit <https://www.asce.org/landmarks> to find sites near you. Share photos of your travels with me and I will post in Region 2 correspondence and on our Region's social media pages.

Detroit-Windsor Tunnel, Detroit MI

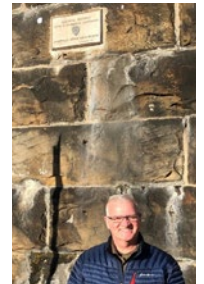
In November, I visited the historic Philadelphia City Hall. This month, I visited the Detroit-Windsor Tunnel which connects Detroit, MI to



Ontario, Canada and was completed in 1930. It was the third underwater vehicular tunnel constructed in the United States. It was designed by the firm Parsons, Klapp, Brinckerhoff and Douglas. The tunnel is 5,160 feet in length and at its lowest point, the two-lane roadway is 75 feet below the surface of the Detroit River.

Rockville Bridge, Harrisburg PA

In February, I visited the historic Rockville Bridge. This railroad bridge was built in 1900-02 and continues to carry rail freight across the Susquehanna River near Harrisburg, PA. It is the longest stone masonry arch railroad viaduct in the world. Constructed by the Pennsylvania Railroad, it has forty-eight 70-foot spans, for a total length of 3,820 feet.



Pittsburgh Section Shout-Out

The Pittsburgh Section was awarded the Outstanding Section and Branch Award for Large Sections and Branches. The award, presented in January at the MRLC in Philadelphia, recognized the Pittsburgh Section for its exceptional activities and engaged Board Members, Student Chapters and various Committees as presented in their Annual Report.

The Pittsburgh Section of ASCE has nearly 1,700 members and hosts over 50 events per year including the Annual Kick-off Dinner, the Life Member Recognition Banquet, and the Engineers Week Awards Banquet. It has five technical institutes and a very active Younger Member Forum as well as very supportive activities for the local Student Chapters.

I look forward to seeing you at ASCE events.

Jack A. Raudenbush, P.E., F.ASCE
Director, Region 2

jraudenbush@navarrowright.com
717.944.0883

Jack A. Raudenbush, P.E., F.ASCE, your Region 2 Director is a member of the Central Pennsylvania Section. Jack will be representing you at the next Society Board meeting in Washington, DC on March 14-15, 2020.

ASCE-NCS Committee and Branch News and Updates

Education Committee – Collegiate

By Jameelah M. Ingram, PE, M. ASCE

Mr. Raymond “Paul” Giroux presents on Building the Golden Gate Bridge at Howard University.

Mr. Raymond “Paul” Giroux, Dist. M.ASCE, visited Howard University in February to present the Building of Golden Gate Bridge to ASCE NCS Student Chapters. It was arranged through Mr. Bernie Dennis, ASCE-NCS Scholarship Trust and History and Heritage Chair. The event was hosted and organized by HU ASCE (Howard University ASCE), including Ms. Camille Wallace (HU ASCE President) and Dr. Hessam Yazdani (HU ASCE Faculty Advisor). Mr. Bryan Minarczyk, the ASCE student chapter president at the Catholic University of America (CUA ASCE), also attended the event.



Mr. Giroux used animation techniques to describe the technical challenges of building the historic Golden Gate Bridge. The presentation was as much a story of how the bridge was built, as a fascinating tale of the bridge engineers who made it possible. By illuminating contributions of the engineers, the Golden Gate Bridge came alive. Students stayed around well after the

presentation ended to ask questions, with topics ranging from seismic design features to cost.

Mr. Giroux is an engineer at Kiewit Corporation. His colleague, Ms. Andrea Alcantara, also gave an overview of the company and the many internship opportunities available for students.

April Showers Down Student Opportunities. April showers are full of opportunities for students in the National Capital Section. Please take a look below!

2020 Virginias Conference at West Virginia University. The 2020 Virginias’ Section Regional Student Conference will be held from April 2nd through April 3rd at West Virginia University. Engineer volunteers are always welcome to judge student competitions. Please visit https://www.asce.org/student_conferences/ for more information and a list of contacts.

ASCE NCS Coffee + Connections (Networking Event for Students and Professionals). The ASCE NCS Education Committee will host “Coffee and Connections” this spring, on Wednesday, April 15, 2020. This event is an opportunity for students across ASCE NCS chapters to interact with other students and professionals, outside of the career fair environment – over crafted coffee, tea, and hot chocolate. Last year, one student connected with a professional and eventually landed an internship and full-time job, prior to his senior year! Please save the date.

The event will take place on Wednesday, April 15, 2020 from 6 pm to 8 pm at Slipstream (a café in the Navy Yard neighborhood at 82 I Street SE, Washington, DC 20003). Details on how to register will follow in future correspondence.



Education Committee – K-12

By Christopher Gorman

Melissa Fabrizio is the STEAM Fair Coordinator at Wakefield Forest Elementary School in Fairfax/Annandale area. She has requested volunteers for this year’s 4th Annual STEAM Fair on Thursday March 26th from 6-8pm. Please contact Vic Crawford and Chris Gorman if you are interested to sign up.

We are also looking for volunteers to judge and evaluate the 9th to 12th grade science fair projects at the Fairfax County Regional Science Fair at Robinson Secondary School on Saturday March 21st from 8:00am-12pm. Click here to sign up: <https://insys.fcps.edu/ScienceFair/judge> No previous experience required, but previous experience is welcomed.

ASCE-NCS Reston Branch

By Christopher J. Friend, P.E., Reston Branch Vice President

On February 11th, the Reston Branch hosted Dean Westman, P.E. (Whitman, Requardt and Associates) for a lunch technical presentation. Dean, who has over 40 years of water and wastewater utility experience, presented on the keys behind effective practices for easements and right of way acquisition. Easements and right of way are essential for the safe construction, operation and maintenance of roadways and other



publicly owned infrastructure such as pipelines and drainage channels. Acquisition, development and maintenance of easements is an important task for engineers involved with public works. Although proper allocation of resources for public facilities is a priority for the engineering community, allocation of time and money and consideration of life-cycle management of easements is only recently coming into focus as property owners, regulators and other stakeholders take a greater

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interest in the built environment. Dean's overview and highlights of these latest trends made for a very interesting and informative presentation!

On March 10th, ASCE Structural Engineering Institute (SEI) President Glenn Bell will provide an update on various important and exciting initiatives underway in SEI including advancements in performance-based design, case studies recently processed from Confidential Reporting on Structural Safety – US, young professionals initiatives, sustainability and resilience, consideration of leadership training programs for SE leaders of the future, and collaboration with other organizations such as NCSEA, CASE, and IStructE. Glenn will also lead a town-hall type discussion with participants on advancing the profession from local and national perspectives.



The Reston Branch has launched a [group](#) on LinkedIn to provide regular updates for the branch as well as offer a place for branch members to connect. See the following link for additional information: <https://www.linkedin.com/groups/13759693/>

Construction Committee

By Kunqi Zhang, P.E., Co-Chair of the ASCE-NCS Construction Committee

Northeast Boundary Tunnel Construction Site Tour.

The Construction Committee, in cooperation with Lane Construction Corporation, organized two site visits to the Northeast Boundary Tunnel (NEBT) on January 16 and February 13, 2020. Mr. Shane Yanagisawa, P.E., NEBT Project Director, graciously hosted the 20 visitors (10 on each tour). The tours started at 5 pm with a safety and project briefing by Mr. Yanagisawa in the project office at RFK Stadium Lot 8. After the briefing the groups rode the construction elevator down the 100-ft



"Chris" the TBM



Visitors for the first tour on January 16



Visitors for the second tour on February 13

deep main shaft, at the bottom of which they boarded a small rail transport train going into the tunnel. After a 30-min ride to reach about 13,000 ft into the tunnel, the groups departed the train and saw "Chris" – the Tunnel Boring Machine (TBM) – and the crew installing the precast concrete segmental tunnel lining. The groups also observed how the tunneling process was controlled, with the aid of a laser guidance system, from the operator's cabin. The visitors left the tunnel through the same route that they entered. The tour took about two hours. Each visitor received two PDHs for coming to the event.

The Northeast Boundary Tunnel is part of a \$2.7 billion program by DC Water to mitigate combined sewer overflow (CSO) discharges into the Anacostia and Potomac Rivers and bring flood relief to northeast Washington D.C. The tunnel is a challenging alignment with 15 curves, shaft entry and exit, and only one shaft online in 26,647 ft to check alignment. TBM muck is removed by conveyor belt in the tunnel and by a 17-cy clamshell at the shaft. The 23-ft diameter tunnel and all associated structures have a 100-year design life. Lane Construction is the Design-Builder for the \$579 million project.

The tours were popular as the spaces were filled within 20 min of the email announcement. There were requests for additional spaces and more tours, which Lane Construction regrettably couldn't accommodate. Mr. Shane explained that the 10-people tour size is limited

by the seating capacity of the train and the desire to maintain uninterrupted tunneling operations. For the 20 visitors that signed up and came, the tour was a great experience. They lauded the Lane Construction team for guiding the tour and expressed interests in joining future site visits like this.

Call for Committee Members. Please reach out to Kunqi Zhang (kunqizhang@gmail.com) or Ivan Carrasco (cpij4u@yahoo.com) for information regarding the Construction Committee and how to join. Also, please join the committee mailing list at this link <https://groups.google.com/forum/#!forum/asce-ncs-cc> to stay up to date on events, job openings, and construction news etc. The committee is seeking individuals interested in joining the leadership team. Prospective individuals should be able to regularly attend meetings in person or by phone and should be comfortable sharing ideas in group settings.



Younger Members Forum

By Sarah Shay, YMF Secretary/Newsletter
Monthly Happy Hour. The NCS Younger Members Forum (YMF) holds monthly happy hours, alternating between Arlington, VA and Washington, DC. Happy hours are usually the first Wednesday of each month unless a holiday falls during that week.

In February, the NCS YMF rang in the new year with a networking happy hour at [Blue Jacket Restaurant and Brewery](#) in Washington D.C. near the Navy Yard metro stop.

The group will host their next happy hour starting at 6PM on March 4th at [Ireland's Four Courts](#) in Arlington, VA near the Courthouse Metro. This happy hour will be a joint event between the YMF group and the Association for Women in Science (AWS), and also an opportunity to talk to Committee members from the Architectural Engineering Institute (AEI) and learn more about the upcoming NCS Dinner Meeting featuring Pecha Kucha-style presentations. We hope to see you there!

Our April Happy Hour will be hosted at Madhatter in Washington, DC in honor of April Fool's Day on Wednesday, April 1st. Mark your calendars!

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Professional Development. If you have suggestions for professional development meeting topics, or would like to become more involved with the YMF in other areas, please contact the YMF President at ncsymfpresident@gmail.com.

Stay Connected! Check out photos and stay up-to-date with YMF events by visiting the new YMF Facebook page (ASCE National Capital Section Younger Members Forum), following us on Twitter (@asce_ncs_YMF), connecting with us on LinkedIn (ASCE National Capital YMF), and following us on Instagram (@asce_ncs_ymf)

Get Involved! Are you interested in getting involved with more Younger Members activities? Do you have ideas for social events or volunteering activities? The NCS Younger Members Group is always looking for new members! Let us know if you are not already on our mailing list! If you would like to become more active with the YMF or would like more information on our events, please email the YMF President.

Life Members' Forum

By Christian Manalo, P.E., BCEE, F.ASCE
ASCE-NCS hosts Order of the Engineer Ring Ceremony. Coinciding with the 50-year anniversary of the Order of the Engineer, ASCE-NCS hosted a Ring Ceremony for new members of the Order during Engineers Week, on February 18 in Arlington, Virginia. The Ring Ceremony was officiated by former ASCE Director John Casana, P.E., F.ASCE, former ASCE Region II Governor Dr. Robert Efimba, P.E., LM.ASCE, and ASCE-NCS President Kelly Cronin, P.E., M.ASCE.

Begun in 1970, the Order is a national organization of graduate and professional engineers who take a solemn oath, recognizing their obligation to the profession. Members pledge to practice integrity and fair dealing, tolerance and respect; uphold devotion to the standards and the dignity of the profession; always be conscious of the obligation to serve humanity; participate in only honest enterprises; provide skill and knowledge without reservation for the public good; and give their utmost in the performance of duty and in fidelity to the profession. The engineer oath is similar in purpose to the Hippocratic oath, recited by doctors graduating medical school. The oath reinforces the values and ethics of the profession. Members



of the Order of the Engineer wear a specially-crafted stainless steel ring, which serves as a symbol and reminder of their obligation as an engineer.

This is the second year in a row that NCS has hosted a Ring Ceremony for the Order of the Engineers. The annual event began last year as an initiative of NCS Life Member Forum (LMF) President Dr. Phillip Melville, P.E., F.ASCE. For more information about the Order, visit the organization's website at <https://order-of-the-engineer.org/>. If you wish to become a member of the Order, please contact Christian Manalo at manalo_christian@bah.com.

Order of the Engineer Inductees:

- Dominic Agyepong, P.E
- Elfatih Ahmed, Ph.D, P.E.
- Muhammad Khalid Alvi, P.E.
- Stephen Barna, P.E.
- Richard Cramond, Jr, Ph.D., P.E., PMP
- Embree C. Hunnicutt Jr., P.E.
- Ronald E. King, Jr.
- Ronald L. Marshall, D.Eng., P.E.
- Harold V. McKittrick, P.E., F.ASCE
- Caryle B. Miller, P.E.
- Tolulope A.O. Odunlami Ph.D., R.A.
- Efren M. Sebastian, P.E.
- Christina Vulova, MSc, P.E.
- Dennis B. Warner, Ph.D., P.E.



Architectural Engineering Institute Committee

By Christian Parker

The Architectural Engineering Committee is gearing up for several major events for the end of winter and early spring. On March 12, the Committee will host an interdisciplinary discussion on the Heights School in Arlington. Our first volunteer event of 2020 will be a community river cleanup slated for late April. Plans are also underway for a model home tour in northern Virginia in April or May. Keep an eye on your inbox and – as ever – follow us on Instagram for details on these events and more.

Finally, May 19 at the Hilton Arlington is the AE Committee's LIGHTNING TALKS Dinner Meeting, a series of fast-paced, engaging presentations by members of the civil and building engineering community. We're looking for presenters with all levels of experience who are interested in giving 5-minute presentations, with the option to follow the PechaKucha style. Presentations may be on any topic related to the presenter's career as an engineer, including collaborative project experiences or lessons learned. If you have a topic you think would benefit from this presentation style, please fill out the form [HERE](#) to let us know. Please email us at aei.washingtondc@gmail.com with any questions. Thank you to those who have already expressed interest in presenting – watch you inbox for upcoming events to discuss additional information on the event!

Curious about the Lightning Talks format? Interested but on the fence? Stop by the YMF happy hour at Arlington's Four Courts on March 4 to talk with the AE Committee. The organizers will be in attendance to answer any questions you have in a casual social setting.

Environmental & Water Resource Institute Committee

By Ken Klewicki, P.E., Ph.D., BCEE

Planning Meeting. EWRI NCS is under new leadership. Ken Klewicki is taking over from Rachel Schneider. He will be holding a planning meeting to plan events for the upcoming year on Monday March 30, 2020 from 12:00 noon to 1:00 PM. The meeting will be held by teleconference at 1-800-300-3070 access code 643 197 563. For those downtown wishing to meet Ken in person he will be hosting lunch at the

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Booz Allen Hamilton offices at 901 15th Street. If you are planning on attending in person or cannot attend the meeting but have ideas for upcoming events please contact Ken Klewicki at Klewicki.joseph@bah.com or 571-277-4920.

Professional Development

Symposium. Calling all young water professionals: in conjunction with its International Low Impact Development Conference, EWRI is hosting a one-day professional development symposium for young water professionals. The symposium is planned for July 19, 2020 at the Bethesda North Marriott. The symposium is titled Engineering your Civil Career and will include motivational speakers along with technical sessions on low-impact stormwater development. There will also be opportunities for networking and mentoring. Take advantage of this local opportunity to meet water professionals from around the country and to advance your career. For more information check out the EWRI website [here!](#)

Top 5 Reasons to Attend

1. Learn from national and international leaders in municipal green infrastructure program operations and research by attending panels, sessions, and workshops.
2. Earn Professional Development Hours. A full participant can earn up to 26.0 PDHs by participating in the conference, technical workshops and technical tours.
3. Network with industry leaders and make valuable contacts.

4. Connect with exhibitors showcasing state of the art products, services and solutions.
5. Explore Green Infrastructure (GI) installations as part of an exciting technical tour.

Bethesda North Marriott Hotel & Conference Center

5701 Marinelli Road
Rockville, MD 20852

Membership & Survey Committee

By Norine Walker

As promised, the Section Member Survey will be issued by separate e-mail in the next few weeks. The short 12 questions will take only 2 to 3 minutes to answer. There are lots of activities offered to Members to become involved in the Section. We look forward to an excellent response by all ASCE NCS members. Thank you!

Geo-Institute – National Capital Chapter

Emergency Rock Slide Stabilization with Shear Pins: Design, Construction, the Media. The presentation by Sebastian Lobo-Guerrero, Ph.D., P.E., will cover the emergency response to stabilize a massive rock slide in Central Pennsylvania that was endangering a shopping plaza, a gas line, and electrical utilities located at its toe (see picture below). The presentation will cover the design and construction of the remediation using shear pins (uncased micropiles). The project received significant media attention due to the eminent threat it represented.

The positive and negative aspects of the media's role in the project will be highlighted. [Register Now!](#)

Student Essay Contest. "What is your vision of the future of geotechnical engineering?"

Why should you participate? The winner will receive a prize of \$1,000 and free attendance at our Annual Geotechnical Symposium on April 15, 2020 where you will have the opportunity to network with over 100 geotechnical professionals in the DC metro area.

Rules:

- Your essay must be original and address the topic of your vision of the future of geotechnical engineering and be a minimum of 300 words. Essays may be longer than 300 words.
- Without exception, submissions are due to scarroll@dwkozera.com by midnight on March 15, 2020.
- The winner will be notified on March 31, 2020.
- A complete submission form must accompany your entry. Please do not list your name on your essay as they will be judged without regard to any identifying information.

Eligibility: You must be a full-time student studying engineering at an ABET accredited school located in The District of Columbia, Maryland, or Virginia.

Click [HERE](#) for rules and Submission Form ■

ASCE NCS Member Survey



Please help us check in with our members by providing responses to a 2-3 minute (12 question) survey for the purpose of improving the Section.

Thank you for helping to improve your Section!

[SURVEY](#)

Upcoming Events

March 10

Reston Branch Lunch Technical Meeting

- Tuesday, March 10, 2020 from 11:45 AM to 1 PM
- [ASCE National Headquarters](#) (1801 Alexander Bell Dr, Reston, VA)
- *Update and Discussion on Pursuit of the SEI Vision for the Future of Structural Engineering* presented by Glenn R. Bell, P.E., S.E., SEI President

March 12

The Heights School Presentation by AEI Committee

- Thursday, March 12, 2020 from 6:30 PM to 8 PM
- Location TBD – Watch for an email

March 15

Geo-Institute Student Essay Contest

- Application Deadline is Sunday, March 15th at midnight
- Click [HERE](#) for rules and Submission Form

March 18

Geo-Institute Lunch Technical Meeting

- Wednesday, March 18, 2020 from 11:30 AM to 1:30 PM
- [Maggiano's Little Italy](#), Galleria, McLean, VA
- Emergency Rock Slide Stabilization with Shear Pins: Design, Construction presented by Sebastian Lobo-Guerrero Ph.D., P.E. – Register [HERE](#)

March 21

Fairfax County Regional Science Fair

- Saturday, March 21, 2020 from 8 AM to Noon
- [Robinson Secondary School](#) (5035 Sideburn Rd, Fairfax, VA)
- Looking for volunteer judges, sign up [HERE](#)

March 24

Annual ASCE NCS Awards Banquet Dinner Meeting

- Tuesday, March 24, 2020 from 6 PM to 8:30 PM
- [Hilton Arlington](#) (950 N. Stafford Street, Arlington, VA)
- *Celebrate Our Region's Outstanding Projects and People* with the ASCE NCS Annual Awards Banquet

March 26

STEAM Fair at Wakefield Forest Elementary School

- Thursday, March 26, 2020 from 6 PM to 8 PM
- [Wakefield Forest Elementary School](#) (4011 Iva Lane, Fairfax, VA)
- Please contact Vic Crawford and Chris Gorman if you are interested in volunteering

April 14

April ASCE NCS Dinner Meeting

- Tuesday, April 14, 2020 from 6 PM to 8:30 PM
- [Hilton Arlington](#) (950 N. Stafford Street, Arlington, VA)
- Topic: Frederick Douglass Memorial Bridge/South Capitol Street Bridge Revitalization

April 15

Geo-Institute Geotechnical Symposium on Innovations and Lessons Learned in Ground Improvement

- Wednesday, April 15, 2020 from 7:45 AM to 5:15 PM
- [Marriott – Tysons Corner](#) (8028 Leesburg Pike, Tysons, VA)
- Earn up to 7 PDH credits at the ASCE Geo-Institute National Capital Chapter Geotechnical Symposium – [Register Here!](#)

April 15

Education Committee – Coffee & Connections

- Wednesday, April 15, 2020 from 6 PM to 8 PM
- [Slipstream](#) (82 Eye Street SE, Washington, DC)
- Networking Event for Students & Professionals

April 23–26

USA Science and Engineering Festival

- Thursday, April 23, 2020 to Sunday, April 26, 2020
- [Washington Convention Center](#) (801 Mt Vernon PI NW, Washington, DC)
- [Click here to learn more!](#)

Employment Clearinghouse

The NCS provides the Employment Clearinghouse as a free service to its membership. The Clearinghouse allows members to post short notices for available positions or candidates seeking employment. All employers

listed herein are equal opportunity employers. If you have questions, are seeking employment or would like to post a position please contact the [newsletter editor](#) and visit our [jobs page](#).