

### November Section Meeting: DC United Stadium

The National Capital Section is pleased to announce the November Section meeting will feature an update and discussion by Turner Construction Company and A+F Engineers on the new home of DC United, Audi Field. Currently under construction, the 20,000-seat stadium is located on a 13-acre former industrial site in Southwest DC known as Buzzard Point. To enable construction, the team has performed substantial utility relocation, demolition, and 30,000 CY of contaminated soil removal and replacement. Presently, structural work is underway which is comprised of 6000 tons of structural steel framing with 600 pieces of precast stadia. This structure sits atop approximately 300 auger cast piles and 4200 CY of grade beams reinforced with over 1000 tons of rebar. Heavy construction work will eventually give way to the installation of a natural Bermuda grass playing field that is currently being grown on Maryland's eastern shore.

The completed stadium will feature 31 luxury suites, a bike valet, and 500,000 SF of mixed-use /retail, and possibly on-site renewable energy sources, as the project is pursuing LEED gold certification. In addition to soccer, the facility is designed and built to host football, lacrosse, concerts, and other

entertainment and community events. With a groundbreaking on 27 February 2017, utilizing a design-build delivery model, this complex project is has a very tight timeline; substantial completion is scheduled for mid-July 2018. Join us this month to find out more about current progress and challenges faced in design and construction.

A webcam currently records work on the jobsite: <http://www.audifielddc.com/stadium-webcam/>.

The Project Team consists of:

- General Contractor: Turner Construction Company
- Owners Representative: Legends Project Development
- Architect: Populous with Marshal Moya
- Structural Engineer: A+F Engineers
- Geotechnical Engineer: Haley Aldrich
- MEP Engineer: M-E Engineers and Limbach
- Civil Engineer: WSP – Parsons Brinckerhoff

Please join us on **Tuesday, November 14**, 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 6–6:45 pm, 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. One Professional Development Hour is available to attendees. For questions, please contact [Brian Barna](#). Please click [here](#) to register by **November 9**.

*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.*



## President's Corner

My wife and I were blessed with the birth of our daughter a few weeks ago. This has me thinking about the future. What effects will infrastructure changes have on our lives by the time she is ready to drive in 2033? Will the proliferation of self-driving cars be so widespread that driving a car "manually" will refer not to a stick-shift but to physically steering the car rather than having the computer drive itself? Will the promise of high-speed transit along the Northeast Corridor allowing travel from DC to Baltimore in 15 minutes or DC to New York in 1 hour ever come to fruition? Will materials science and structural engineering advance to allow a one-mile tall skyscraper (or should I say 1.6 kilometers, since most supertalls are currently being built outside of the US)? Will we repair our huge backlog of structurally deficient bridges and replace our 100+ year old water mains?



course, both are critically important. Our national grade point average of a D+ in ASCE's latest [Infrastructure Report Card](#) signals that our infrastructure is not well-maintained and is becoming outdated. Fortunately, both major political parties generally agree on the need for major infrastructure investment.

Unfortunately, that has not yet led to the major commitment to this investment at the federal level. However, we have seen some encouraging signs over the last few years. Several states have passed increases to their gas taxes, which previously was seen as a political third-rail issue (the federal gas tax remains unchanged since 1993). After a false start, the Maryland Purple Line appears to be back on track. The Purple Line is one of the largest P3 (public-private partnership) projects ever and includes funding at both the state and federal levels.

The final question in that list may seem incongruous with the others, as it deals with maintenance of our existing infrastructure rather than new technologies and investments. Of

ASCE is a major proponent of infrastructure investment. You can help by becoming a [Key Contact](#). Key Contacts have the ability to shape the infrastructure policy with what could

be a very minimal time commitment. At the most basic level, a Key Contact commits to subscribing to Key Alerts and taking action when they receive those emails. The requested action is usually sending a pre-drafted email or personal email to your legislators or legislative staff in support of ASCE priorities. The minimal commitment would be about 10–15 minutes per month. I have sent emails to my local congressmen through this program and have received nice responses. Your elected officials will read your messages, and you can make an impact. If you believe that we should have world-class infrastructure locally and nationally, I encourage you to become a Key Contact today!

Sincerely,



*Brian M. Barna, PE  
ASCE-NCS President*

## Newsletter

**Jim Palmer**, Editor

**Sumon Chatterjee**, Editor-in-Training

**January 2018 Issue Deadline:** December 12, 2017

**To Submit Articles:** [newsletter@asce-ncs.org](mailto:newsletter@asce-ncs.org)

**NCS eNewsletter Archives:** go to [www.asce-ncs.org](http://www.asce-ncs.org) and view along the sidebar.

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

## National Capital Section

### Officers (2017–2018)

**Brian Barna**, President

**Emily Dean**, Vice President

**Piers Causton**, Treasurer

**Kelly Cronin**, Secretary

**Jim Palmer**, Newsletter Editor

**Mike Venezia**, YMF President

**Vic Crawford**, Director

**Rachel Schneider**, Director

**Stuart Crooks**, Director

**Jeff Tan**, Director

**Jordan Pitt**, Past President

**Christian Manalo**, Previous Past President

### Committee Chairs

Please refer to the [NCS website](#) for a current list of NCS committees and chairs.

## Director Letter

### Launch of Region 2 Awards Program

On behalf of the ASCE Region 2 Board of Governors, I am pleased to announce the launch of a new series of awards to highlight and recognize the outstanding service of our Region 2 ASCE members:



- Outstanding ASCE Younger Member Award
- Outstanding ASCE Student Member Award
- Lifetime Achievement Award
- Outstanding ASCE Faculty/Practitioner Advisor Award

All 11,000+ ASCE members from any of our Region 2 Sections, Branches or Student Chapters are eligible. Nominations are due by November 30, 2017. Selection criteria for each award and the nominating process are described on the nomination forms located at: <http://regions.asce.org/region2/awards>. Please help honor a deserving ASCE colleague by nominating them for a Region 2 Award. Thank you!

### ASCE Board Meeting and National Convention

The Oct. 7–8 ASCE Board meeting in New Orleans, LA, was held just before the ASCE 2017 Convention. The weekend began amid the threat of Hurricane Nate. As it turned out, the storm pushed east and mostly missed

New Orleans, but our thoughts were with those on the Gulf Coast who were affected.

The ASCE 2017 Convention on Oct. 9–11 was a tremendous success! All enjoyed networking and learning in 2017 ASCE President Norma Jean Mattei's home town

and Kristina Swallow was inducted as 2018 ASCE President. We look forward to her enthusiastic and insightful leadership in the coming year.

*Editor's note: see Younger Member Liz Wheeler's meditation on the Convention later in the Newsletter!*

### Goals

The Board of Direction approved six goal statements for the Society:

- Civil engineers develop and apply innovative, state-of-the-art practices and technologies
- All infrastructure is safe, efficient, and sustainable
- ASCE advances the educational and professional standards for civil engineers
- The public values civil engineers' essential role in society
- An ever-growing number of civil engineers are members of, and engage in, ASCE
- ASCE excels in strategic and operational effectiveness

Following review of goals and strategies the Board expects to release its new strategic plan next March.

### Policies

The Board adopted the Public Policy Committee's recommendation on two policy statements:

- PS 349 Sediment Management for Erosion Control, Channel Maintenance and Coastal Protection, to support "the beneficial management of sediments and dredged materials,"
- PS 526 Public Private Partnerships (P3), ASCE criteria to assess (P3) project delivery methods.

### Board Structure

After considering recommendations of the Task Committee on Governance Structure for a modified Board structure the ASCE Board of Direction voted to retain the current Board structure.

To share your views or to suggest ways the Society could serve you better please [email John Casana](mailto:John.Casana@asce.org).

Until next time,

John Casana, PE, F. ASCE  
ASCE Director, Region 2

## ASCE-NCS Newsletter Patrons

**Christopher H. Lester, PE**  
Associate Vice President  
Office Sales Manager

**HNTB Corporation**  
2900 South Quincy Street  
Suite 600  
Arlington, VA 22206  
(703) 824-5100  
Direct (703) 253-5951  
Cell (703) 597-3985  
Fax (703) 671-6210  
E-mail [clester@hntb.com](mailto:clester@hntb.com)  
[www.hntb.com](http://www.hntb.com)

The HNTB Companies

**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

## Sensory-Spatial Modeling Enables Design Simulation and Construction Automation

By Ranjit S. Sahai, PE, F.ASCE

Construction is stalled. A change in field conditions necessitates a design update. Engineer conceives a remarkable solution with no impact on project cost or schedule. A sketch communicates the proposed concept but the owner needs to visualize it juxtaposed against surroundings for line-of-sight alignments that can only be assessed in a 3D environment. How can this be done on the spot, while in the field, to eliminate the 2-week visualization effort? Sensory-spatial modeling to the rescue.

The visualization took an hour; not two weeks. The discovery of changed field conditions that necessitated a design update had been resolved without impact to schedule by eliminating the traditional visualization step by simulating the design juxtaposed against its real surroundings.

Let's examine the above scenario in the context of a workflow enabled by sensory-spatial modeling, the emerging revolution in engineering design and construction.

The design to upgrade traffic control signals at an urban street intersection had required the installation of three new traffic signal poles. The location, height, and type of poles were chosen to accommodate the cluster of overhead utility cables.

It had taken two-years for construction funding to come through. When construction started, it was observed that clearance under overhead communication cables at two locations were 2-feet lower than when designed.

The solution requires changes in location of poles based upon their type: standard vs tee. The owner loved the concept but needed verification of under-clearance and driver line-of-sight parameters.

A sensory-spatial modeling enabled workflow eliminates distance measurement and removes the gap in time between concept selection and its visualization. Let's see how.

The act of envisioning possible options and developing a creative solution requires cognitive thought that only a human mind with experience in the field can deliver.

In this instance, the contractor noted that he had already procured the three poles designed; and that it would take four weeks to procure new ones, if called for. Fortunately, the engineer discovered that switching poles between the design locations accommodated the lower utility clearances while satisfying design parameters. This meant that changes to design were limited to changing pole types and concomitant construction notes.



The congestion of overhead utilities in urban street settings poses clearance and driver line-of-sight challenges when traffic signals need modifications for street width and alignment change projects.

With the street intersection in full-view and the overlaid proposed design also visible concurrently as an overlay, through a device such as the Microsoft HoloLens, the engineer is able to use gestures to move proposed design elements – which in turn adjust the design model in real-time.

With the adjustments made, the contractor and the owner can put on the mixed reality modeling glasses and review the design before the field meeting is over. This makes possible significant savings in time from concept to visualization.

Next month we will look at how this and other technologies are leveraging design models to automate construction.

### ASCE-NCS Newsletter Patrons



**PARSONS  
BRINCKERHOFF**

**Ethan Grossman  
Engineering**



## 2017 ASCE Convention

By Liz Wheeler

If I had to describe the 2017 ASCE Convention, all I would need is one word – Wow! What a blast it was! Being held in New Orleans, the food was delicious and the atmosphere was lively. The keynote speakers had energies that matched the city, bringing laughs and smiles to the crowd, for a great way to both begin and end the convention. From learning about the Capital Dome restoration project to learning how managers and millennials can successfully work together, a wide range of topics was covered that met

the different interests of all the attendees at the event. While I enjoyed all the sessions that I attended, I felt the most valuable aspects of the convention were the networking opportunities provided. I was able to connect with a handful of new acquaintances and learn about new ways that I can get involved with the community to further advance the field of civil engineering. Overall, I had a great experience and I encourage everyone to consider attending the 2018 convention in Denver, Colorado! ■



Liz Wheeler (2<sup>nd</sup> from right) enjoys dinner at the 2017 ASCE Convention with Region 2 Director John Casana (center) and other civil engineers

## October Section Meeting Recap: Offshore Wind Production Platforms

By Alex Rosenheim, Chair, Sustainability Committee

Representing the Department of the Interior's Bureau of Ocean Energy Management (BOEM), Darryl K François, Chief of the Engineering and Technical Review Branch of the Office of Renewable Energy Programs, and Daniel P O'Connell, PE, GE, M.ASCE Geotechnical Engineer with the Office of Renewable Energy Programs gave a lively presentation to the NCS membership to discuss the engineering design challenges, energy production technologies and ongoing and planned projects in Maryland, Virginia and beyond throughout the shorelines of the United States. They discussed their agency's mission to manage development of U.S. Outer Continental Shelf energy and mineral resources in an environmentally and economically responsible way.

Mr François discussed the history of the State and Federal involvement and regulatory oversight of the Outer Continental Shelf (OCS) and how the nation's oil, gas, renewable energy and other mineral energy resources have been developed on the OCS. The Outer Continental Shelf Lands Act of 1953 legislatively designated geological and political boundaries. The BOEM's federal jurisdiction is three nautical miles from shore to the outer edge of the OCS (approx. 200 miles). The shore to this three mile limit is governed by the associated State. The Energy Policy Act of 2005 granted the Federal Government a mechanism to grant a lease for energy sources other than oil and gas in a



manner that provides for safety and protection of the environment. Mr. François outlined BOEM's renewable energy process, which ranges from identification of wind energy areas, surveys, site assessment, environmental and technical reviews, design, installation and project completion. Public engagement and feedback and coordination with State and Local governments and affected industries are paramount at each stage of the process. Fourteen intergovernmental task forces have been formed, primarily in the Atlantic but with some development in the Pacific.

Mr O'Connell focused his portion of the discussion on the more technical challenges being addressed by BOEM and its partners. Building on technologies already established in Europe, the United States started in the shores of Rhode Island with turbines in the 2 MW range (about 90 meters tall), and will be continuing to develop projects

throughout the OCS with MW ranges of 6, 8, 10 and beyond (planned to reach up to 300 meters tall). With the increase in capacity, significant dynamic and vibratory issues will become ever more important considerations. BOEM's off-shore energy division is staffed with a team of about 40 engineers and scientists to evaluate such wide ranging issues as structural, geotechnical and ocean engineering, meteorology, oceanography, geophysics, and naval navigation. One challenge faced by this nascent industry is a development and refinement of specific regulations for the unique geological and meteorological conditions surrounding the United States. Hurricanes, seismic risk and seabed stability are factors that are crucial to successful implementation of these systems. Mr O'Connell pointed out that unlike oil or gas platforms, the wind platforms are not manned which reduces the safety issues on the platform itself. However, the wind platforms have direct safety and economic risks associated with populations on land that become dependent on the wind turbines as their power source. This risk becomes a factor in the cost and design decisions of each project.

Mr O'Connell discussed the varied challenges for the differing types of platforms as they are built in shallow water (<30m), transitional water (30m to 60m) and deep water (>60m). Traditional piles, suction bucket foundations and

*continued on page 10*

## Life Members Forum: Reflections

Beginning in 2017, NCS is publishing biographies and interviews to profile members within our civil engineering community. This initiative is organized and coordinated by our Life Members Forum (LMF) President, Mr Phillip Melville, PE, PhD, Fellow ASCE. As appropriate, for this second segment, NCS is excited to present reflections from Life Member, Mr Bob Forgione, PE. Mr Forgione is the Director of Operations and Maintenance at the Upper Occoquan Service Authority in Centreville, Virginia. He holds a Master of Engineering (Environmental) degree from Manhattan College and a Bachelor of Engineering (Civil) degree from the Cooper Union for the Advancement of Science and Art, and is a licensed professional engineer in Virginia. Bob and his wife Victoria reside in Fairfax County.

As did many engineering students of my time more than four decades ago, I had no clue which engineering discipline I should pursue. A Humanities professor referred to Civil Engineers as “salt of the earth,” and I realized this would be a meaningful profession for me.



So far, so good.

I found a job with a small environmental consulting firm where I performed some design work and research, but mostly I wrote reports. I wanted more design work because I liked using my imagination to

create plans for new facilities and for rehabilitating old facilities. So I took a job with another small consulting firm and spent most of my time designing.

While completing my undergraduate civil engineering coursework, I realized, “I don’t know how to earn a living; maybe I should go to graduate school and learn how to earn a living.” My engineering department head knew I wanted a career that would have longevity, and he suggested Environmental Engineering. So off I went to graduate school to learn how to earn a living as an Environmental Engineer. As I completed my graduate coursework, I again thought, “I don’t know how to earn a living.” This time, though, I decided the best way to learn how to earn a living was to go out and get a job.

The funny thing about consulting, especially in small firms, is the need to balance the engineering work with soliciting new projects. I enjoy talking with people, but a salesman I am not! So after almost 22 years in consulting, I decided to transition to a position at a municipal wastewater treatment plant, moving my family from New York to Virginia. I began in engineering and construction, and shortly thereafter switched to maintenance. While my job,

as a whole, is administration and management, I’m happy to say that I draw on what I learned as an engineering student, using not only what I studied in civil and environmental engineering, but also what I studied in chemical, electrical and mechanical engineering.

If I had it to do over, would I do anything differently? First, I would sit for the first part of the PE exam as an undergraduate senior instead of waiting until I was in my first job. Second, I would add classes in psychology and organizational dynamics to my engineering coursework – these are invaluable if you want to become a leader. If I were asked for a bit of advice, I’d say that speaking and writing well, and communicating effectively, are key to career growth. ■

### ASCE-NCS Newsletter Patrons



#### Robert A. Pronier

Senior Vice President / Regional Manager  
Robert.Pronier@cardno.com  
1881 Campus Commons Drive, Suite 103  
Reston, VA; Phone: 703-391-0024  
www.cardno.com

[www.cardnohayneswhaley.com](http://www.cardnohayneswhaley.com)

#### Practicing the Art of Structural Engineering

We provide structural engineering services nationwide and internationally for a broad range of projects, including:

- > Commercial
- > Institutional
- > Public

Booz | Allen | Hamilton

100 YEARS

## A New Record: Columbia University Gives Five Scholarships to One University in the Washington Metro Area

When I remember the 1994 Tom Hanks movie *Forrest Gump*, I always smile. In the movie Tom Hanks said "My mom always said life is like a box of chocolates. You never know what you're gonna get." I think this is very true in academia as well. I've been in academia for more than 40 years and have worked as a project engineer, researcher and professor in Europe and Japan before moving to Washington, DC. Throughout my career, I've consider myself to be a very fortunate college professor since I have been honored by numerous local, regional and national awards from various engineering organizations and universities, including my own institution. While these honors and accolades are meaningful, nothing gives

me more joy than seeing my students achieve significant milestones in their preparation and careers. And today, I've decided to write about some of our students; who they are, what they do and why they are so unique?

Is it possible to inspire, motivate, and transform a sanitary worker from Washington, DC to ultimately become a structural engineer designing the Boeing 787 Dreamliner? Hard to believe, but this was a true story. As many of our readers know, I have been offering pro-bono Saturday classes at UDC that are open to all engineering students and practicing engineers from the DC metro area who may be preparing for their FE and PE exams. These highly-intensive, informal sessions, some call "Boot Camp," present a two-way opportunity to learn from the students about their professional goals, dreams, aspirations and sometimes even their daily struggles and challenges and help them academically and prepare them to be successful and productive engineers and



Scholarship Winners from Columbia University: All of them are Civil Engineering students from UDC. Standing from left: Kwame Baah and Dr. Z. Seated from left: Patricia Wolfbauer, Suraj Narain and Brahim Sidi M'Hamed. Not shown: Andrew Asiimwe

citizens. *Editor's note: find all of Dr Z's practice problem sets, including this month's, [here](#).*

About two years ago an engineering student from my Saturday class told me, "Dr Z, I would not hesitate to tell you that when I'm not at school, I work at a small restaurant on Georgia Avenue. I'm working there as a dishwasher and making minimum wages. It may sound strange to tell others what I do for living, but I am proud. I work very hard to help my family. My father is not working and my mother is sick; therefore I have to work to help them. Washing dishes helps me to go to school, get my education, and take care of my family." And another said that to support myself and pay my tuition, I have to deliver pizza until 4 a.m. Every day I sleep for a few hours and then come to school and study. For us, these are amazing stories of dedication, values, priorities, and grit.

And the great news is, two months ago we were thrilled to learn that five

UDC students, four of them Civil Engineering Students, all from Dr. Z's Saturday classes, have received full scholarships, including tuition and housing, to pursue their graduate studies at Columbia University. This great honor is a testament not only to their extraordinary academic and co-curricular achievements but also to the quality of the engineering education that students receive at the University of the District of Columbia. By the way, the student working at a restaurant and the other delivering pizza until early in the morning were of course among those that received prestigious scholarships from Columbia University.

That reminded me my brief remarks during a national award ceremony back in July 2015 in Seattle. At the podium, speaking to educators and engineers from all over the country and also executives from Microsoft and Boeing:

"UDC is a small university in the nation's capital. This prestigious award is truly a testament that while we often take a different approach, when it comes to inspiring, motivating and most importantly, educating students – our future engineers – The University of the District of Columbia is unquestionably one of the best in the nation. While our program may be small, it is mighty! It is a transformative opportunity to change lives, broaden the field, and help engineering students achieve their dreams. "

Until next time,  
Ahmet Zeytinci, P.E.  
[az@akfen.com](mailto:az@akfen.com)





# ASCE-NCS Committee News and Updates



## Younger Member's Forum

By Haley Carpenter, EIT

The ASCE-NCS Younger Members Forum (YMF) holds monthly happy hours in Arlington, VA or Washington, D.C. Happy hours are typically held the first Wednesday of each month unless a holiday falls during that week.



The ASCE-NCS YMF held our October Happy Hour at Sauf Haus Beir Hall in Washington, DC. Approximately 20 members attended the event.

The next upcoming monthly happy hours will take place in Arlington, VA at Crafhouse on Wednesday, November 1st which will be a joint event with Engineers Without Borders, followed by Front Page in Ballston, VA on Wednesday, December 6. The December Happy Hour will feature our annual holiday gathering where a "Toys for Tots" toy drive will be open for donations.

Stay Connected! Check out photos and stay up-to-date with YMF events by visiting the new YMF Facebook page: <http://www.facebook.com/ASCENationalCapitalYMF>. Also, follow us on Twitter (@asce\_ncsYMF) at [https://twitter.com/asce\\_ncsYMF](https://twitter.com/asce_ncsYMF).

## Reston Committee

By Lisa Anderson, PE, LEED AP, M. ASCE, Reston Committee Chair

On October 10th, Michael L. Scott, Ph.D, P.E., Founder and President of ADOJAM, LLC, presented a "Emerging Airborne Nondestructive Testing Capabilities for Civil Infrastructure Capabilities".

The next meeting of the Reston Committee will be held on November 9th at ASCE Headquarters in Reston, VA starting at 11:45am. Jennifer Kearney, Senior Engineer at Thorton Tomasetti, will present "Changing Reston's Skyline: The Structural Design of Reston Station OB1." One PDH will be awarded to attendees.

In December, the Reston Committee will hold a social holiday happy hour. More details will be forthcoming.

To be added to the Reston Committee distribution list, please contact Lisa Anderson: [lmanders@bechtel.com](mailto:lmanders@bechtel.com) or 703-429-6631.

## Boundary Stones Committee

By Stephen Powers, PE, Boundary Stones Committee Chair

On Saturday September 23, 2017, ASCE-NCS Boundary Stones chairman served as keynote speaker during the rededication ceremony of the 101 year old restored DAR protective fence at the East Cornerstone in Northeast, Washington D.C. (Ward 7) and Seat Pleasant, MD. The event was featured on WUSA9 and in the Washington Post. ASCE-NCS's efforts to reinstall the fence with the help of District Construction, Inc, grade the site, and clean and mulch the trail was instrumental to the preservation of this historic marker and the success of the rededication ceremony. For those that are interested in the ceremony, it can be viewed on Youtube via the following link: <https://www.youtube.com/watch?v=AKnd8jxnJws&feature=share>



Boundary Stones Committee Chair Stephen Powers delivers the keynote speech on behalf of ASCE-NCS.

## Education Committee

By Jameelah M Ingram, PE, M.ASCE and Vic Crawford PE, ASCE-NCS Director

College students in the ASCE-National Capital Section have had full schedules this fall. Aside from mid-term exams, they have been occupied with organizing ASCE activities for their membership. Student Chapter Officers from CUA ASCE (Catholic University of America) and HU ASCE (Howard University) attended the ASCE-NCS October Board Meeting to present their plans for the 2017-2018 school year. This included MaryKate Selgrath (President) and Elizabeth Cossel (Conference Coordinator) of ASCE-CUA. From ASCE-HU, this included Florantine Monica Joseph (President), Laxman Dahal (Secretary/Steel Bridge Team Co-Captain), and Bhawesh Thapa (Steel Bridge Team Co-Captain). Michael O'Connor, P.E., M. ASCE, is the Practitioner Advisor for both chapters and has served as a key resource for the students! GWU ASCE has been quite active this semester and has updates to share as well. Each chapter has expressed ways for professional members of ASCE-NCS to support their endeavors and be involved, as detailed below:

## CUA ASCE

CUA ASCE (Catholic University of America) is pleased to host the 2018 Virginias' Section Regional Student Conference. The conference will be held March 22-24, 2018 and will attract students from fourteen universities in Virginia, West Virginia, and Washington, D.C. The competitions will vary in degree of difficulty and foster community within the section. CUA ASCE is currently seeking sponsorships and volunteers for the conference. Conference events include, Steel Bridge, Concrete Canoe, Steel-Crete Hockey Shootout, Concrete Frisbee, Balsa Wood Bridge, Hardy Cross Presentations, and a t-shirt design competition. We are requesting volunteers to facilitate events, provide assistance with event flow and schedule, and organize meal distribution. We also need one volunteer, who is basic first aid and CPR certified, to be the Safety Coordinator. The Safety Coordinator is a volunteer who, in case of an accident, is able to assist with

*continued on page 9*



immediate first aid until Emergency Services are able to arrive on campus.

Volunteers will receive lunch and a conference t-shirt! If you would like to learn more about the conference, please visit <http://ascecua.wixsite.com/cuaasce/2018-virginia-region-competition> or contact Elizabeth Cossel at [29cossel@cua.edu](mailto:29cossel@cua.edu).

### **HU ASCE**

The ASCE Student Chapter at Howard University is very excited to continue providing a supportive hub for civil engineering students. HU ASCE aims to maximize member participation, facilitate, and encourage academic excellence. It also aims to raise awareness of the ASCE benefits that an active member obtains, and helps create a stronger connection between faculty



Howard University's ASCE Student Chapter

and students. Thus far, HU ASCE has collected donations for hurricane relief, volunteered at the STEM Science Fair, and participated in a site visit with Plaza Construction. This year's plans include increased conference participation, volunteering opportunities, bonding activities such as Karaoke night, FIFA tournament, etc. Most importantly, we plan on taking the steel bridge trophy home! We are gearing toward mobilization of our Steel Bridge team and are requesting sponsorship, both technical and financial. We are seeking support with access to structural software and advisors to consult for engineering advice as well. The president (Florantine Joseph) and Steel Bridge Captains (Laxman Dahal and Bhawesh Thapa) would appreciate any contributions to the organization and/or team. If you'd like to lend a hand, please follow up with us at [Howard.asce@gmail.com](mailto:Howard.asce@gmail.com).

### **GWU ASCE**

This year, GWU ASCE (George Washington University) has set a goal to boost engineering competition participation and is off to a great start. For the

fall semester, GWU ASCE has already won First Place in the Lego Competition hosted by the GWU E-Council. GWU ASCE is preparing for the Steel Bridge Competition as well. In addition to this, GWU ASCE plans to host speakers to talk to undergraduates about their professional career throughout the school year. A speaker from the Chesapeake Water Environment Association imparted knowledge to students during the fall semester. If you are interested in sharing your expertise with GWU ASCE students as a speaker, please contact [asce.gwu@gmail.com](mailto:asce.gwu@gmail.com).

Finally, if you are concerned about our profession's future, then the Educational Committee has a deal for you. The National Capital Section receives more requests for representing our profession at K-12 (Elementary to High School) Science, Technology, Engineering, and Math (STEM) Events than we can support, a true opportunity missed. Therefore, we are developing a roster of volunteers from our Section that can be quickly contacted to represent our profession by sharing their experiences and benefits from being a civil engineer. If you are interested in influencing the next generation, while having a lot of fun working with students excited about science and engineering, please contact [victor.crawford51@gmail.com](mailto:victor.crawford51@gmail.com) to add your name to the roster.

Knowing the importance of our outreach program, we have developed or obtained several tools to support your volunteering, such as Handouts provided by ASCE and a video that shows how recent civil engineering graduates are making the world better. We will also be sending along copies of our excellent and award-winning Book, Engineering the Nation's Capital to donate to the STEM program at the school where you volunteer or make a presentation during a STEM event.

The National Capital Section, in addition to supporting onetime STEM Events, continues to support the American Association for the Advancement of Science (AAAS) program for STEM, which has been bring engineers and scientists into classrooms for over eleven years (<http://www.aaas.org/senior-scientists-and-engineers/programs-dc>). As discussed in previous Newsletter, recognizing the importance of STEM for the continuance of our Civil Engineering profession, we have been embracing

this excellent educational program being conducted through AAAS for many years. This program works particularly well for retirees that can devote one day a week to volunteering. Understanding the needs of the educators, we are focusing on the elementary schools where your expertise in civil engineering would be very welcome by teachers introducing science concepts to young students. Therefore, please consider becoming a AAAS volunteer in supporting STEM in the school districts in the DC metro area, including surrounding counties in both Virginia and Maryland.

If you are interested in giving back to the profession while sharing the joy of engineering to eager young minds, please contact Victor I Crawford at [victor.crawford51@gmail.com](mailto:victor.crawford51@gmail.com).

### **Life Member's Forum**

By Phillip Melville, PE, Life Member's Forum President

Congratulations to you if you are an ASCE Life Member! This happened when you reached the required age and other requirements, and you are now informally called a "Lifer." Although 20% of our Section members are in this very elite group, LMF activities to date have been limited. Many topics of interest have been called to the attention of the Forum. These were either selected by the "Lifers" themselves or suggested by the Section Board. As a starter, LMF is looking at Section participation and support for Engineers Without Borders (EWB) and Community Engineering Corps (CECorps). Another priority activity is in support of STEM (Science Technology, Engineering, and Mathematics) initiatives, which requires interacting at STEM conferences/ events and local schools. Other major challenges have also been assigned to the Forum. Want to participate? We need the active participation of all Life Members to make contributions to our community and our Section. Please review your busy schedule and see if you can make a commitment of a few hours per month, or per year, to help the Life Members Forum fulfill its mission. Contact an NCS Board member or LMF President, Engineer Phillip Melville ([phillipmelville@juno.com](mailto:phillipmelville@juno.com)). Remember there are no dues to belong to the Forum and no charge to participate. ■

## Upcoming Events *(Also available on the NCS website under the Events tab.)*

### November 1

**YMF Happy Hour**, 6:00–8:00 pm, CraftHouse, Arlington VA. Celebrate our monthly happy hour with Engineers without Borders at the YMF monthly happy hour. Look for an email announcement with more details.

### November 4

**Region 2 Assembly**, University of Pittsburgh, PA. All Sections, Branches, Younger Member Forums, Student Chapters, Faculty Advisors and Practitioners Advisors are encouraged to attend the 2017 Region 2 Assembly. There will be professional development opportunities through presentations on current engineering design practices, a chance for interaction between students, professors and practitioners.

### November 5–8

**Emerging Leaders Alliance Conference**, Falls Church, VA. The Emerging Leaders Alliance is a partnership among leading engineering organizations that promotes interdisciplinary leadership training for select professionals.

### November 9

**Reston Committee Meeting**, 11:45 am, ASCE Headquarters, Reston, Va. Jennifer Kearney of Thornton Tomasetti will present “Changing Reston’s Skyline: The Structural Design of Reston Station OB1.” One PDH will be awarded to attendees.

### November 14

**Section Meeting**, 6:30–8:30 pm, Hilton Arlington. The Dinner meeting will highlight ongoing construction at

DC United Stadium by members of the project team.

### December 6

**YMF Happy Hour**, 6:00–8:00 pm, Front Page, Arlington VA. Celebrate our monthly happy hour with Engineers without Borders at the YMF monthly happy hour. This will feature our annual holiday gathering where a “Toys for Tots” toy drive will be open for donations.

### February 9–10

**Regions 1, 2, 4 and 5 Multi-Region Leadership Conference in Buffalo, NY.** The conference includes Workshop for Section and Branch Leaders (WSBL), the Eastern Region Younger Member Council (ERYMC) and the Workshop for Student Chapter Leaders (WSCL). More information will be available in October.

## October Section Meeting Recap: Offshore Wind Production Platforms

*continued from page 5*

anchored floating wind turbines were discussed. The complex load calculations include preventing designs with risk of functioning at the natural frequency of the rotors and dealing with all sorts of environmental factors including soil mechanics and earthquakes, scour, marine growth, buoyancy, ship and ice impacts, extreme waves, tidal and storm surges, turbulent winds, icing of the blades, lightning strikes, wake turbulence and low-level jet wakes. The BOEM has high hopes for meeting the challenges of this growing and critical element of the nation’s energy planning and strategies.

The U.S. Department of Energy (DOE) provides a number of maps showing average wind speed data through its Resource Assessment & Characterization page and through National Renewable Energy Laboratory (NREL). ■

## Employment Clearinghouse

### Booz Allen Hamilton seeks Construction Program Coordinator in Germany

Construction Program Coordinator, Stuttgart, GE: 10+ years of progressively increasing responsibility in construction project/program management. Successful applicant will support a long-term infrastructure recapitalization program for a Department of Defense organization based in Stuttgart, Germany. Qualified applicants should hold a bachelor’s degree in civil, mechanical, electrical engineering, construction management, or facilities management. Professional license, Certified Facility Manager and/or PMP designation preferred. Applicant must hold

a current Department of Defense TS/SCI clearance. Contact Peter C. Charest, [Charest\\_Peter@ne.bah.com](mailto:Charest_Peter@ne.bah.com) for more information and to apply.

*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](#).*