

The 2017 ASCE-NCS Annual Awards Banquet

Celebrate Our Region's Outstanding Projects and People

Join us on March 21 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.

The finalists for the ASCE – NCS 2017 Outstanding Civil Engineering Project are the US Army Corps of Engineers' **17th Street Closure** and the MGM Resorts International's **MGM National Harbor**.



The 17th Street Closure is a removable structure that can be erected in the event of high water. It attaches to the floodwalls on both sides of 17th Street and consists of aluminum panels between steel posts. It replaced the existing levee, in place since the late 1930s, which consisted of an earthen berm that runs parallel to the Lincoln Memorial

Reflecting Pool. It required construction of a temporary closure of sandbags, Jersey barriers, and an earthen dam across 17th Street when river flood conditions were imminent. Post-Katrina federal standards require that a more reliable levee system be in place. Recognizing the need to move quickly, while still successfully meeting engineering and design needs, numerous federal and local agencies collaborated over a two-year period to develop a new approach for the 17th Street Closure. The levee elements are designed to seamlessly blend with the setting of the National Mall.



MGM National Harbor uses timeless design, high-end service, public art and spectacular amenities combine to create a new generation of resort experiences: MGM National Harbor, the first luxury gaming destination in the Capital Region adding an exciting new aspect to the culture of the Capital. A fast track construction process required study of options on how best to accomplish design features within the time and money allotted for construction. 3D modeling was used to create architectural, structural and construction models for coordination. Each sector of the project had a dedicated team consisting of design professionals and contracting team that met weekly and as needed to coordinate and solve any problems that arose.

Please join us on **Tuesday, March 21**, 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 \$55 for those preregistering, \$20 for students, and \$65 for walk-ins, as space allows. One Professional Development Hour is available to attendees. For questions, please contact [Jordan Pitt](#). Please click [here](#) to register by **March 16**.

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.



The finalist for the ASCE – NCS 2017 Sustainable Project of the Year is the **Nutrient Management Facility** (NMF) located in Alexandria, VA. The NMF includes 18 million gallons in tank capacity with associated pumps,

continued on page 3

President's Corner

As I write you, we bring to a close another successful Engineer's Week, and what a week it has been! There was a whirlwind of activity around the region this year, and I would like to thank the many volunteers who spent considerable time and effort over the past several weeks and months to make our E-Week events a great success. I am especially proud of our members who responded overwhelmingly in support of ASCE and Bechtel for the Dream Big IMAX Film World Premiere Event at the National Air & Space Museum to assist with the various activity stations and exhibits that were on display for visitors throughout the evening. Our volunteers had the chance to meet folks like current ASCE President Norma-Jean Mattei and President-Elect Kristina Swallow and also rubbed elbows with the stars of the Dream Big film themselves! What a wonderful experience. I must have heard the word "amazing" at least 50 times that evening.



is possible. It is my hope that younger generations will have the same feeling: that anything is possible when we work hard to make our dreams come true. The Dream Big film was officially released to the public on February 17th and is being shown at the National Air & Space Museums on the National Mall and Steven F. Udvar-Hazy Center in Chantilly, Virginia. Hopefully you have a chance to see it yourself, and I strongly encourage you to do so, again and again!

Another successful event this year was Family Day at the National Building Museum, where countless companies and other engineering organizations came together to provide activity booths for children of all ages. It's such a fun event and I hope you can join us next year if you were unable to make it this year! To add to the E-Week events, the NCS held a very well-attended dinner meeting in February featuring Chuck Gullakson of CSX who shared some of the highlights of the ongoing Virginia Avenue Tunnel Reconstruction Project, which will allow double-stacked rail cars to travel swiftly through the corridor once completed. Just another great example of a local project with a nationwide reach, right here in our own backyard.

In addition to our Annual Awards Banquet coming up on March 21st, the NCS Education Committee has been busy planning Student Outreach Events at several local civil engineering universities scheduled for early March, to inform student members about ASCE and the National Capital

Section, and to network with students and share experiences about our daily jobs as civil engineers. I hope you will consider taking part in these important outreach events as we provide an opportunity for these burgeoning young civil engineers to learn more about the many benefits of ASCE and hear about what to expect when joining the workforce. Please feel free to reach out to me at president@asce-ncs.org if you are interested in participating in one (or more) of these great events.

We are fortunate as a Section to be located nearby to ASCE Headquarters, and that provides us with some outstanding opportunities to become involved in nationwide events such as the Dream Big Film Premiere. I encourage you to reach out to me about becoming involved in our Section and to discuss opportunities where you can share your expertise and inspire others. We all have a great story, much like the stories from the Dream Big film. The only way we can make our dreams a reality is to share our own story, and I look forward to being inspired by yours.

Best regards,



Jordan Pitt
President, ASCE National
Capital Section

Newsletter

Jim Palmer, Editor

March 2017 Issue Deadline: February 22, 2017

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.

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

Director Letter

Dear Region 2 Members,

I hope each of you participated in 2017 Engineers Week events. Please see my perspectives, below.

The world release of ASCE's *Dream Big: Engineering Our World* at the Smithsonian in Washington DC made for an exceptional Engineers Week! The DiscoverE foundation adopted Dream Big as the week's official theme. Region 2 Sections, Branches and Student Chapters also hosted Engineer's week events. Some of the enthusiasm



generated by the Engineer's Week events is captured [here](#).

Key ASCE events and dates in March include:

- Release of America's Infrastructure Report Card – March 9
- Fly-In – March 14
- OPAL – March 16
- Board of Direction Meeting – March 17

ASCE's infrastructure report card is frequently mentioned by the Administration and Congress members. The release event will serve to

increase these leaders' attention on the need to find legislative solutions. I am proud to be associated with an organization that is viewed by all as a source of objective expertise. I hope to see you at the Fly-In or OPAL. My next Letter will summarize BOD meeting action. Until then –

All the best,



John Casana, PE, D WRE, M ASCE
Director, Region 2

The 2017 ASCE-NCS Annual Awards Banquet

continued from page 1

chemical analysis equipment, and an extensive odor control system. It also includes a lit, regulation athletic field located on top of the process tanks, created as a community amenity. The facility was designed to preserve floodplain

functions by avoiding new development within the floodplain. Acres of impervious surface were replaced with vegetated areas to restore infiltration and water quality functions. A fish and sediment barrier was removed, which

improved aquatic habitat connectivity, and a crucial wooded riparian buffer was expanded, enhancing the natural habitat. ■

Attend the Upcoming Engineers Without Borders Gala/Fundraiser!

In the world's toughest places, Engineers Without Borders USA (EWB-USA) is partnering with communities to address infrastructure challenges. EWB-USA's vision is a world in which every community has the capacity to sustainably meet their basic human needs. EWB-USA builds a better world through engineering projects that empower communities to improve their lives and equip leaders to solve the world's most pressing challenges. Each project builds the foundation for a community to thrive for years to come. The organization has over 16,000 volunteer members working on 686 projects in 45 developing countries on 5 continents.

The Washington DC Professional Chapter of EWB-USA (EWB-DC) spreads the vision and mission of EWB-USA by partnering with disadvantaged communities to improve their quality of life through environmentally and economically sustainable engineering projects. We have ongoing projects in Cameroon,

El Salvador, and Panama. Our partnership in El Salvador started in 2006 and our work there has focused on developing a new water system, establishing a local board to oversee the maintenance of the system, and developing new cookstove technologies to reduce exposure to smoke while cooking. Our efforts in Cameroon have been underway since 2012 and include the development of new water and sanitation systems. In Panama, our projects have included new water and sanitation systems, along with a small computer center and library to improve educational opportunities for students in the community.

On March 24th, we will hold our Third Annual Spring Gala. The 21 and over, semi-formal event will be held at the beautiful Josephine Butler Parks Center in

Washington, DC. It will include an open bar with beer and wine, dancing, and a silent auction. This is our largest fundraiser of the year. All proceeds will go towards our projects in Cameroon, El Salvador, and Panama. To join us, you can buy tickets at <https://www.eventbrite.com/e/engineers-without-borders-dc-3rd-annual-spring-gala-tickets-30236216337?aff=es2> ■



Bull Run Branch Re-established

By Victor I. Crawford, P.E., M.ASCE, President-Bull Run Branch

Editor's Note: The Bull Run Branch of the Virginia Section covers the Counties of Frederick, Clarke, Warren, Loudoun, Fauquier, Prince William, Stafford, Spotsylvania, Culpeper and Rappahannock. It was originally established in 1969, and was re-established on October 19, 2017 when the new slate of Officers was sworn in at their first formal meeting. Bull Run Branch President Vic Crawford also serves on the National Capital Section Board of Directors and NCS's Educational Outreach Committee. The NCS would like to congratulate the Bull Run Branch on its re-establishment and looks forward to forging a mutually beneficial relationship to increase opportunities for civil engineers located in the combined geographical area. You may contact Vic at vicris51@verizon.net for more information on the Bull Run Branch.

On behalf of the Bull Run Branch Officers, I want to welcome you to our re-established Branch. We have a lot planned for the Branch over the next several years and want to keep you informed on our progress.

As you know, as an engineer or an associated professional, pursuing a Science, Technology, Engineering, and Math (STEM) curriculum was a challenge compared to other courses of study while in school. This challenge continues today for students in the K-12 grades. Therefore, we will be supporting our educators through several STEM activities. In direct support to teachers, we have partnered with the American Association for the Advancement of

Science (AAAS). Over ten years ago, AAAS established a program for volunteers with a STEM background to assist in the classrooms in the National Capital Area. This program has continued to expand and now includes Prince William and Loudoun County schools, both in the Bull Run Branch. In addition to the classroom, throughout the year there will be numerous opportunities to participate in Career Days, STEM Events, and similar activities where we can show how civil engineering benefits the public while sharing our experiences with students to motivate them to become a civil engineer.

We will have quarterly Branch meetings which will provide opportunities to network with your fellow professionals while learning about upcoming engineering events. We are planning to establish technical committees to go along with our Young Members Forum. In addition, we will be joining other engineering organizations holding field trips and educational events and in the future, we plan to host our own events. In addition to our ongoing educational program, we will be working to show the public how civil engineering benefits their welfare. This includes serving on advisory boards and committees to put forth the ASCE Initiatives such as Sustainable Infrastructure and Grand Challenge at the local level. Thanks to support from the National Capital Section, we have placed *Engineering the Nation's Capital*, a book published by NCS last year focused on civil engineering landmarks in the Greater Washington, DC Area, in both Loudoun

and Prince William County Libraries to educate the public on how Civil Engineers have been supporting the public for one-hundred years in the Region.

There are two upcoming activities that will be of interest to our members. As reported in the Civil Engineering magazine, ASCE in partnership with other professional organizations has developed an IMAX movie, *Dream Big*, which will be used to educate the public on engineering. We have been asked to participate in a Girl Day event at the Udvar-Hazy Air and Space Museum near Dulles Airport for a showing of the Dream Big IMAX movie combined with engineering activities to promote STEM for female students. In addition, our Young Members are hosting a tour of a Water Reclamation Facility on March 2, 2017.

We are asking for volunteers and for your input on how the Branch can support civil engineering in your County. This includes our school outreach, support to our communities, and supporting you, the professional. Please let me know what areas you would like to have the Branch pursue, your suggestions on how to increase our student and public outreach, and most importantly where you would like to work with us in supporting Branch functions. I can be reached at vicris51@verizon.net and am looking forward to your input. ■

ASCE-NCS Newsletter Patrons



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Another Successful Discover Engineering Family Day!

Volunteers from the National Capital Section, Bechtel Corporation and ASCE World Headquarters helped to foster hundreds of budding engineers at the National Building Museum on Discover Engineering Family Day, Saturday, February 18, 2017.



Engineering societies and organizations from throughout the Metropolitan Washington area participated in the event. As in past years, the NCS event was very popular with kids and their parents, friends and family members. The NCS activities are popular at DEFD because of their “hands on” nature.



This year's activity was Windy City Tower a *Dream Big* related project. Participants constructed a tower out of 4 sheets of paper and two yards of masking tape. The tower was tested by imposing a fan driven wind load and a dead load from a large metal washer.

Thanks to all of our volunteers as well as Emily Dean and Dean Westman for leadership. Thanks to Jeannine Finton at ASCE World Headquarters for supplies and leadership. Thanks to Bechtel Corporation for leadership, supplies and volunteers.

As in past years, Bechtel sponsored a Happy Hour after the event attended by Kristina Swallow, ASCE President Elect and Menzer Pehlivan, one of the stars of the new ASCE film *Dream Big*. ■

February Section Meeting Recap: The Virginia Avenue Tunnel

The expansion of the Virginia Avenue Tunnel in Washington, D.C. is just one of 61 CSX projects from the Midwest to the East Coast in which clearance is being made for double-stacked trains. Chuck Gullakson, CSX chief engineer for the Virginia Avenue Tunnel Project in Washington, DC, began his presentation on Tuesday, February 21 describing that other projects involve tunnel elimination, roof mining, lowering railroad tracks, and replacing highway bridges to accomplish this task. Located five blocks from Capitol Hill, three blocks from the Navy Yard, proximate to the USDOT headquarters and the Nationals Stadium, a joint venture of Clark Construction and Parsons Transportation Group (PTG) have partnered with CSX to build this project. The dense residential neighborhood, with homes within 65 feet of construction, includes commercial businesses supporting the Navy Yard and other large government buildings.

The construction itself involves the original two-track tunnel built in 1904, which was constructed using cut and cover masonry by the Pennsylvania Railroad at a height required for the electric railroad. The first new 4,100-foot tunnel required demolishing a portion of the old tunnel, building a new secant wall system with drilled shafts between

the two tracks, using a concrete form traveler mounted on temporary tracks in multiple 48-foot sections, ending up with a 27-inch thick roof section. The 36-foot-deep floor section began with waterproofing to which was added a rubber mat beneath the concrete ties to help with vibration and topped with granite ballast.

Mr. Gullakson discussed the importance of safety on the project by sharing that “every employee receives extensive safety training” when they are on the project. The safety theme is paired with an extensive community outreach and mitigation program so that expectations can be managed during the continuing operation of 20–25 trains every 24

hours. The Design-Build project delivery was key to developing creative ways to execute the project which included communicating with the modern residential and commercial community. Continuous automated air, noise and vibration monitoring was a requirement as was replacing the 160 removed trees at 1:2½, upgrading landscaping and maintaining historic lighting and brick sidewalks. While initially estimated at 4,000, over 14,000 original stone pavers have been removed and used in nearby Garfield Park and throughout the city.

The \$304 Million project is a Public/Private partnership between the Commonwealth of Virginia and CSX, not because this tunnel serves passen-

gers but because the Commonwealth values that double stacked trains provide fluidity of the rail system. No Federal funds are involved. After a five year NEPA process, construction is on schedule. The first tunnel was completed in December 2016 and the second tunnel is due to be completed in mid-2018. ■



Chuck described the features of the project in terms of numbers and quantities

NOTE DEADLINE:
'17 Banquet – Mar. 16



**ASCE National Capital Section
Service, Achievement, & Excellence
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- Recognition at Annual Awards Banquet, including two passes
- Business card recognition in eNewsletter for 1 year
- Recognition on Section website homepage
- Five copies of Centennial Commemorative Book
- Introduction and Exhibit Space at Monthly Section Meeting
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\$750

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ADDTL. SPONSORSHIPS

- Recognition in eNewsletter for 1 year (\$350)
- Annual Awards Banquet recognition incl. one pass (\$300)
- Exhibit space at Monthly Section Meeting (\$150)
- Scholarship Trust (\$100+)

As a volunteer-run Section of ASCE, your sponsorships allow NCS to promote our profession with public outreach efforts and support the professional and personal growth of our members. NCS is also committed to assisting civil engineering students through its Scholarship Trust. Surplus funds from the Section add to the Trust, subsidize the fees that we charge our members for educational meetings, and help us promote civic participation and leadership. Visible recognition for your support is a key part of the program. We have outlined specific sponsorship opportunities below.

eNewsletter Sponsor/Website Recognition: Our eNewsletters are issued throughout the year and distributed to more than 5,000 individuals.

Annual Awards Banquet: The NCS Annual Awards Banquet will be Tuesday, March 21, 2017 in Arlington. With attendance typically exceeding 100, we must rely on the generosity of others to support a quality event to honor deserving individuals and projects. As a sponsor, your firm will be recognized in the event program, on a display board located within the banquet hall, on our website, and in our eNewsletter.

NCS Meeting Benefit: Meeting sponsorship entitles your organization the opportunity to exhibit promotional materials at a monthly Section dinner meeting or select other meetings/events. Platinum sponsors also receive an opportunity to present their firm from the podium before the meeting's keynote speaker. Meetings are held throughout the year, typically several times per month. Platinum sponsors also receive a "Platinum Section Meeting Pass" that allows them to send one attendee at no cost to any or all monthly Section dinner meetings (Annual Banquet excluded).

Scholarship Fund, Direct Contribution: More than \$340,000 in scholarships have been awarded to local students since 1988. As in previous years, recipients will be announced at the Annual Awards Banquet.

Sponsorship demonstrates your commitment to those who serve in developing and sustaining our built and natural environment. ASCE-NCS provides a unique platform to showcase your partnership in promoting the civil engineering profession, honoring the past, and improving our future. For further information, contact Sponsorships Committee Chair Mr. Christian Manalo at (703)377-1697 or via email at Manalo_Christian@bah.com

Engineers Week 2017: The Good News is Female Engineers are in Charge!

I am pleased to tell my readers that we've just celebrated one of the most memorable Engineers Weeks in recent memory. We've been invited to several award banquets and proclamation lunches with colleagues from ASCE-NCS, including the president and my good friend Jordan Pitt. We were delighted to see that all keynote speakers and many awardees were women engineers. That is why this month, I've decided to write about women engineers. Especially two extraordinary women engineers, Dr. Ericsson and Dr. Pehlivan. You may already know them since they are celebrities. But first, a brief background and some statistics:

Who was the first woman to receive a degree in engineering? Elizabeth Cady Stanton received her civil engineering degree from Cornell University in 1905. Over the past few decades a growing number of women have been entering the field of engineering, but many believe this good news doesn't have a rosy ending. As recent coverage in the media, including National Public Radio, details, many female engineers are leaving their positions and some are hesitant to enter the profession at all. For the civil engineering community, the statistics demonstrate that we are doing better than most, yet we have much more work to do.

Statistics show that women represent 12.1% of the civil engineering workforce and 14% of the total workforce. And according to the Engineering Workforce Commission (EWC), over the past five years, civil engineering has consistently outpaced all other engineering disciplines in the awarding of Master's and Doctoral degrees to women.

Aprille Joy Ericsson, PhD:

Dr. Aprille Joy Ericsson is the New Business Lead for the NASA GSFC Instrument Systems and Technology Division at NASA Goddard Space Flight Center.

Most recently, she served as the Capture (Mission) Manager for a proposed Astrophysics Mid-sized Class Explorer of \$250M, called

STAR-X. Prior to that proposal development, she served as the NASA GSFC Program Manager for Small Business Innovative Research/ Small Business Technology Transfer Research. Formerly, she has served as the Deputy to the Chief Technologist for the Applied Engineering and Technology Directorate at the NASA Goddard Space Flight Center (GSFC) with a primary focus as a Technologist for Advanced Manufacturing, Applied Nanotechnology, miniaturization of Technology for CubeSat and SmaliSat space platforms.

During her 25+ year tenure with NASA, she has held numerous positions. She was an Attitude Control Systems analyst developing practical control methods and analyzing structural dynamics for X-Ray Timing Explorer, Tropical Rain Forest Measurement Mission, Transition Region & Coronal Explorer, and Wilkerson Microwave Anisotropy Probe. As a NASA HQs Program Executive for Earth Science, and a Business Executive for Space Science, she supported the *SORCE* and *ICESat* missions. She was an Instrument Project Manager leading spaceflight instrument teams and proposal development. Also, her aerospace research at Howard University was developing control methods for orbiting large space platforms like *ISS*.

Dr. Ericsson has also served as an Adjunct Faculty member at several Washington DC Area Universities. She sits on several Technical Academic boards at the National Academies, MIT and previously Howard University where she also served as a member of the Board of Trustees.

Of her numerous awards and recognitions received over the years, the most prestigious was "The 2016 Washington Award" from the Western Society of Engineers. She is the first female (and the first African-American female) to receive a PhD in Mechanical Engineering from Howard University, and the first African – American female to receive a PhD in Engineering at NASA GSFC. She received her BS in Aeronautical/Astronautical

Engineering from MIT. She grew up in Brooklyn, NY and has one daughter, Arielle Ericsson-White.

Menzer Pehlivan, PhD, PE:

Dr. Menzer Pehlivan is a well-known PE, featured in ASCE's "Dream Big" IMAX movie. *Dream Big: Engineering Our World* debuts in museums and theaters around North America during the Engineers Week.

Dr. Menzer Pehlivan is a geotechnical engineer specializing in earthquake engineering. She is currently working at CH2M in Seattle, WA. She is an expert in the analysis of seismic site response, liquefaction and other natural hazards, soil-foundation-structure interaction, probabilistic seismic hazard analysis (PSHA), and the seismic design of foundation of structures. She was inspired to build more resilient communities and reduce the risk associated with the earthquakes following the 1999 Kocaeli Earthquake that hit Turkey.

Upon completing her undergraduate degree in Civil Engineering, she pursued graduate studies specializing in geotechnical earthquake engineering. She obtained her doctorate from The University of Texas at Austin in 2013 and started working as a consulting engineer in New York City, where she had opportunity to work on seismic design of projects in the US, Mexico, and Canada. During this time she also served as an Adjunct Professor at Manhattan College where she developed and taught the seismic portion of a graduate course for practicing engineers on fundamentals of foundation design.

She has been actively involved with pioneering research projects advancing the state-of-art and state-of-practice of geotechnical earthquake engineering. She led a part of NGA-EAST research effort regarding the modelling of the uncertainty in regional soil effects of Eastern-North America. Following the 2015 Nepal Earthquake, she was one of the appointed members of

continued on page 8

Dr. Z's Corner

the Geotechnical Extreme Events Reconnaissance (GEER) team to travel to Nepal and perform post-earthquake reconnaissance. Dr. Pehlivan published several journal and conference

papers and serves as reviewer for Earthquake Spectra.

Next month we will talk about "Ten Reasons to Love Engineering."

Until next time,
Ahmet Zeytinci (Dr Z)
alfa@alfam.com



PostScript: Dr Z's Corner; More Popular than Ever and Getting Stronger

Quite often we get emails from our readers, students and engineers about Dr Z's Corner and they tell us how pleased they are to have such a free resource. For the last three years, Dr Z has been preparing the articles and problems (about three or four dozen problems each month) by himself and Dr Vagelis Plevris. We are pleased to announce that, starting this month, two new world-class researchers joined Dr Z's team and they are ready to contribute in their respective areas. We should also include Professor Vagelis Plevris, PhD, PE from Oslo, Norway who has been contributing in structures and computer applications. Please read about our new contributors:

Dr Lei Wang, PE

Dr Wang recently moved to Washington, DC to join UDC. He is a registered professional Engineer from California and received his BS degree in Civil Engineering from China University of Geosciences in 2008, a MS degree in Geotechnical Engineering from Tongji University in 2010, and a PhD in Civil Engineering with a geotechnical emphasis from Clemson University in 2013. Prior to his current position, he worked as a Post-Doctoral Fellow at Clemson



University as a Geotechnical Engineer at Geotechnical and Tunneling Technical Excellence Center of Parsons Brinckerhoff and as an Assistant Professor of Civil Engineering at Montana Tech of the University of Montana.

Dr Wang has extensive research and practical experience in geotechnical engineering, including underground excavation and tunneling, soil/rock-structure interaction, numerical and centrifuge modeling, earth dams and levees, foundation engineering, and geotechnical earthquake engineering. He has published over 35 refereed journal and conference papers with a Google Scholar Citation of over 400. He was a recipient of many honors and awards, including the Best Paper Award by Taiwan Geotechnical Society

(2013) and the Outstanding Graduate Researcher Award at Clemson University (2013). He is a professional civil engineer in California.

Dr. Bryan Higgs

Dr. Bryan Higgs recently moved to Washington, DC area to join UDC. All his degrees are from Virginia Tech, including his PhD in transportation engineering. Prior to taking this position, he was an Intelligence Community Postdoctoral Research Fellow at the University of Memphis.

Bryan's research and teaching interests range from network design to human factors in transportation including: multi-level multi-objective game theory, network vulnerability, network optimization, psychophysiological driver behavior, driving simulators, road rage, aggressive driving behavior, and traffic flow theory.

Dr. Higgs has published in top-tier journals and is a member of several national professional organizations. In addition to his national and international service, he enjoys participating in outreach activities for fostering interest in transportation in middle and high school students.

ASCE-NCS Newsletter Patrons



Robert A. Pronier

Senior Vice President / Regional Manager
Robert.Pronier@cardno.com
1881 Campus Commons Drive, Suite 103
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ASCE-NCS Committee News & Updates



Younger Members Forum

Happy Hours. 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 their February Happy Hour at Bluejacket on February 1st. Approximately 20 members attended the event.



The next monthly happy hour will take place at *Ireland's Four Courts* in the Arlington, VA at 6pm on Wednesday, March 1st. Look out for emails with specific locations for future monthly happy hours!

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.

Get Involved! Are you interested in getting involved with more Younger Members activities? Do you have ideas for social events or volunteering activities? Would you like to be a board member? The ASCE 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 contact the YMF President (ncsymfpresident@gmail.com).

Transportation Committee

Our next presentation will be an Ethics 101 session on March 14th, 2017 by Mr. Ranjit Sahai, PE, F.ASCE, the 2013–14 ASCE-NCS Past President. He is an author and principal at RAM Corporation, a consulting engineering firm focused on traffic engineering, storm water management, and technology projects. He has a keen interest in philosophy and has completed several online courses on the topic. Please look forward to registration emails that are sent out periodically. Remember, the attendance is at no cost and free food and beverages will be served.

Find Mr. Sahai's program description below:

Ethics 101

For those of you registered in the State of Maryland, be sure to take advantage of this session. It will help you fulfill the 1 PDH requirement on ethics. For those of you registered in the Commonwealth of Virginia and/or the District of Columbia, this session also helps you add 1 PDH toward your license renewal.

And if none of the above scenarios applies, discover how to assess if situations that make you queasy have ethical implications. Ethics It is a vital topic; it is concerned with how you evaluate choices to determine which is good or evil, right or wrong, desirable or undesirable. Ethics is a human necessity.



During this session, you will:

- Learn about the three foundational principles of ethics
- Relate these principles to those in the ASCE Code of Ethics
- Review the application of these principles in ethical cases, both professional and personal

This educational session will be held on Tuesday, March 14, 2017, starting at 11:45 am at GWU Campus. To register for this free event, email Stuart Crooks: scrooks@hntb.com.

Education Committee: Bonding Over the Dream Big Date

By Ranjit S. Sahai, PE, F.ASCE; NCS Past President (2013–14)

It's dating time! The National Capital Section's Education Committee has secured dates with each of the ASCE Student Chapters at our five affiliate universities. The dates are as follows:

continued on page 10

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Christopher H. Lester, PE
Associate Vice President
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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
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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Catholic University of Americas cua.edu	Date TBD	Alejandra Martinez almartinez@dewberry.com
George Mason University gmu.edu	March 9, 2017 6 – 8 pm	Shainur Ahsan sahsan@bechtel.com
George Washington University gwu.edu	March 23, 2017 6 – 8 pm	Shainur Ahsan sahsan@bechtel.com
Howard University howard.edu	March 7, 2017 6:30 – 8:30 pm	Jameelah Muhammad Ingram muhammadjc@pbworld.com
University of District of Columbia udc.edu	February 22, 2017 6 – 8 pm	Jameelah Muhammad Ingram muhammadjc@pbworld.com

The purpose of NCS engaging with university Student Chapters is to strengthen bonds between the two: NCS and Student Chapters. Both bring a lot to the table. On the one hand we have ASCE's National Capital Section with over 3,000 members with vital industry experience and its younger members who have amassed stellar credentials within the short time, under ten years, since graduation. On the other hand we have five Student Chapters with about 100 members each who would love to hang out with the younger members and learn what it takes to act grown up in the workplace. A perfect match, wouldn't you say!

Toward that end, we've put together the following Agenda so they can get to know each other better, and perhaps secure a touchdown, a home run, or a similar moment of sheer joy. See below for what they get to do together:

As an NCS younger member, if you'd like to volunteer to be a member of the YMF panel during the Q&A, thus playing a part in the dating game, we'll give you a couple of tickets to the Dream Big film at the Smithsonian IMAX theater of your choice, in DC or in Dulles, so you can take your own date to the Dream Big film too!

ASCE-NCS Reston Committee

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

On March 9th, a joint meeting will be held with the Construction Committee. Michael O'Connor, P.E., Vice President of the Frederick and Pennsylvania Line Railroad Museum will present a "Construction Program Management Workshop". The meeting will be held at Bechtel in Reston, VA, starting at 4:45pm. One PDH will be awarded to attendees.

On April 26th, Andrew Whittaker, Ph.D., S.E., F. ASCE, Professor at the University at Buffalo Department of Civil, Structural, and Environmental Engineering and Director of the Multidisciplinary Center for Earthquake Engineering Research will present a seismic-related topic. The meeting will be held at ASCE Headquarters in Reston, VA starting at 11:45am. One PDH will be awarded to attendees.

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

EWRI Chapter

By Sara DeGroot P.E., CFM, EWRI Chapter Chair

The National Capital Chapter of EWRI was represented at the 2017 Council Weekend in February. EWRI technical councils, including the Local Chapter Council, meet annually at Council Weekend. Councils and committees are an excellent way for members to become more involved with EWRI at a national level. EWRI members can also connect and engage with other EWRI members in an online forum called EWRI Collaborate. This forum is similar to ASCE Collaborate, and if you are already an EWRI member you already have an account and can log in using your ASCE log in information. Please visit <http://collaborate.ewrinstitute.org/home> to access Collaborate. ■

Time (Estimate)	Item
6:00 – 6:15 pm	Welcome – Check In and time to grab free food
6:15 – 6:30 pm	Ice Breaker/ Game
6:30 – 6:50 pm	Introduction to ASCE, its Sections, Branches, Chapters, and the invaluable resources the Society offers members from student life, through professional career, and after.
6:50 – 7:00 pm	University ASCE Student Chapter summary of activities and plans presented by Chapter leadership.
7:00 – 7:15 pm	Q & A: Each NCS member introduces themselves and narrates stories of personal experiences with ASCE and NCS. Panel addresses student questions related to: (i) Their transition from student to work life; (ii) ASCE, NCS.
7:15 – 7:30 pm	Watch Dream Big film trailer. Presentation of IMAX film tickets to Student Chapter by NCS.
7:30 – 8:00 pm	Open Networking

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

March 9

Joint Construction/Reston Committees Professional Development Meeting, 5:00–6:00 pm, Bechtel, 12011 Sunset Hills Rd #110, Reston, Va 20190. An agent of the Federal Transit Administration discusses program reviews of large projects from 2006–2010.

March 14

Transportation Committee, beginning 11:45 am, GWU Campus. Ranjit Sahai will present on **Ethics 101**. Refer to the Transportation Committee article in the Newsletter for further information.

March 15

Geotechnical Executive Committee Meeting, [Maggianos](#) at Tysons Corner, VA. Chuck Bailey will present on Local Engineering Geology. Email Ed O'Malley (eomalley@geostructures.com) for further information.

March 21

NCS Annual Awards Banquet, 6:30–8:30 pm, Hilton Arlington. See this month's teaser article for more information.

March 24

Engineers Without Borders 3rd Annual Spring Gala, 8:00 pm–12m, Josephine Butler Parks Center, 2437 15th St NW, Washington, DC. Additional Information and tickets available: <https://www.eventbrite.com/e/engineers-without-borders-dc-3rd-annual-spring-gala-tickets-30236216337>

April 5

YMF Happy Hour, 6:00–8:00 pm, [RFD Washington](#) (810 7th St. NW, Washington, DC 20001). Join younger members from the area for free appetizers and drink specials. Look for an email announcement with more details.

April 19

Geotechnical Executive Committee Slope Stability Symposium, Tysons Corner, VA [Marriot](#). Email Ed O'Malley (eomalley@geostructures.com) for further information.

April 26

Reston Committee Professional Development Meeting, 11:45 am – 1:00 pm, ASCE Headquarters, Reston,

Va. Andrew Whittaker, Ph.D., S.E., F. ASCE, Professor at the University at Buffalo Department of Civil, Structural, and Environmental Engineering and Director of the Multidisciplinary Center for Earthquake Engineering Research will present a seismic-related topic.

May 3

YMF Happy Hour, 6:00–8:00 pm, [Courthaus Social](#), Arlington, Va. Join younger members from the area for free appetizers and drink specials. Look for an email announcement with more details.

June 4–7

Geo-Risk 2017: Denver, Colorado. Geotechnical Risk from Theory to Practice will feature the latest research advances and engineering-practice innovations with a focus on the use of probabilistic and risk methodologies in geotechnical engineering. The conference will include a wide range of knowledge-enhancing keynote, panel and technical sessions, as well as short courses. View the [Preliminary Program](#) for program details.

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](#).