



# eNewsletter

National Capital Section

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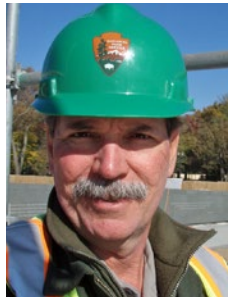
April 2016 Volume 62, Number 7

Visit ASCE-NCS on the web: <http://asce-ncs.org>

## Flood Protection Facilities within the National Mall and Memorial Parks

Presented by Ned Wallace, PE, National Park Service

Join the American Society of Civil Engineers-National Capital Section (ASCE-NCS) at the Hilton Arlington on **Tuesday, April 19**, for an exciting presentation by Ned Wallace on the Washington, DC levee and other flood protection facilities within the National Mall and Memorial Parks (NAMA). As a way of increasing resilience in response to current needs and expected increased severity of storms and rising sea levels due to global climate change, a major portion of the Washington, DC levee system was installed between Constitution and Independence Avenues, and extending into Constitution Gardens and the Washington Monument grounds. The project's goal was to improve the reliability of the river flood protection for the monumental core of Washington, DC and to install levee components consisting of permanent walls on both sides of the street, and a removable barrier system in street, which will allow insertion of post and panel flood



control structure when needed. With the support of the National Park Service Dam Safety Funding, and US Army Corps of Engineers American Recovery and Reinvestment Act of 2009 (ARRA) funding, the 17th Street DC Levee Project was undertaken in 2013. Mr. Wallace joined the National Park Service in 2010 at NAMA, Washington, DC. He was the NAMA on site representative for the construction

of the Martin Luther King Jr. Memorial, which opened in August 2011, and the American Veterans Disabled for Life Memorial, which opened in October of 2014. Mr. Wallace attained Contracting Officer's Representative (COR) Level II Certification on December 16, 2010. He has been the COR on projects at the FDR Memorial, the World War Two Memorial, the Benito Juarez Memorial, Ford's Theater and the African American Civil War Memorial. He currently is the NAMA point of contact for the World War Two Memorial repairs and the certification of the 17th Street Flood Wall.

Please join us for these two Washington, DC-centric fascinating and memorable presentations on **Tuesday, April 19, 2016**, 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 [D. Scott Wolf](#). Please click [HERE](#) to register by **April 14**.

*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.*

## Innovative Stormwater Management Concept for the Washington Monument Grounds

Presented by Karolina Kawiaka, AIA

In addition to our feature presentation on the 17<sup>th</sup> Street Levee, Ms. Karolina Kawiaka, AIA, will also present on an innovative stormwater management concept for the Washington Monument grounds and Constitution Avenue. Her design, entitled *The People's Forum*, restores part of the historic



Washington City Canal and raises grounds around the Washington Monument for stormwater retention. According to Ms. Kawiaka, the original plan for Washington DC "...defined two axes representing presidential leadership and democratic governance. 200 years later that vision is realized by a civic place that tells the story

of the Washington Monument creates a public forum for gatherings and completes a vision of the Mall as America's front lawn." Ms. Kawiaka's design completes this vision while addressing a major stormwater challenge that threatens downtown DC. More information on Ms. Kawiaka's design idea is available at <http://karolina-kawiaka.square-space.com/images-native/2015/7/19/project-summary>. ■

## President's Corner

Along with the arrival of spring, March provided NCS members time to celebrate achievements of civil engineers in the DC area and across the globe. On March 17, members of the NCS Board of Directors attended ASCE's OPAL Awards Gala in Arlington, Virginia, to recognize outstanding civil engineering projects and leaders who made a significant impact on the profession. On March 22, the achievements of civil engineering students from local universities, as well as the contributions of NCS members, were recognized at NCS's Annual Awards Banquet, admittedly my favorite event of the year. Outstanding graduating seniors, members attaining Life Member status in ASCE, and members who make significant contributions to the NCS were all lauded for their achievements. The NCS awarded another \$13,500 in scholarships to deserving students, bringing the total to more than \$380,000 awarded over the past 28 years. Photos and more information on the NCS awardees are available in the banquet recap article.



schools came to compete in the Steel Bridge and Concrete Canoe competitions. NCS members were in attendance to judge the events and to cheer for the competitors.

Our eventful year continues, with several more NCS activities to come. Please

join us on April 16–17 to support our STEM outreach efforts during the USA Science and Engineering Festival at the DC Convention Center. At this month's dinner meeting on April 19, we will learn about the 17<sup>th</sup> Street Levee project as well as an innovative stormwater management concept for the Washington Monument grounds and Constitution Avenue. Keeping our focus on the National Mall, we will learn about the Smithsonian's National Museum of African American History and Culture at the following dinner meeting on May 17.

Our Centennial Committee continues fulfilling their charge to prepare Centennial themed meetings, tours, events, and celebrations.

The excitement continued as we closed out the month at George Washington University for Virginia's Regional Student ASCE Competitions where students from fourteen

■ A riverboat tour to discuss the history and construction of bridges spanning the Potomac and Anacostia Rivers is scheduled for May 1;

- Planning for our Centennial Conference on June 3 at the National Press Club is nearly complete;
- Our Centennial Commemorative Book highlighting over a century of local civil engineering accomplishments is now being printed; and
- Centennial logo shirts and water bottles are now available for purchase to show your Centennial pride.

More information on these items and other opportunities for you to participate are available in the Centennial Committee section of the newsletter.

Again, it is an exciting time to be a civil engineer and a member of the NCS. I look forward to seeing you at upcoming events and your engagement in making this a memorable and successful Centennial year.

D. Scott Wolf, PE, PLS, F.NSPE  
ASCE-NCS President (2015–2016)

## 2016 CENTENNIAL

## Volunteers Needed for USA Science & Engineering Festival

We are seeking volunteers for the [USA Science & Engineering Festival](#) at the Washington Convention Center, Friday, April 15 through Sunday, April 17. The NCS will be hosting several activities including paper bridge building (one eight and half

by eleven inch sheet only!) and other activities associated with EPA's P3 program (People, Planet, Prosperity). Please contact Dean Westman at [dwestman@wrallp.com](mailto:dwestman@wrallp.com) for more information. ■

### Newsletter

Rachel Schneider, Editor

**May 2016 Issue Deadline:** April 15, 2016

**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 click on the Newsletters tab.

**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

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#### Committee Chairs

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

## Centennial Committee: Engineering the Nation's Capital: Outreach – Telling our Story of Engineering the Nation's Capital.

By Victor Crawford, PE, M.ASCE, Centennial Committee Chair, NCS

With our Centennial Celebration in full swing, how are we telling our story? How are we reaching out to students, the public, and our fellow civil engineers? In April, we will be reaching out to over 100,000 students and their parents, along with teachers and the public at the [USA Science & Engineering Festival](#). We will have three booths, one geared for students, one promoting the IMAX Dream Big movie coming out in 2017, and one for Sustainability. To make this event successful we need your help. Please sign up (see Festival article in this Newsletter) so you can have the satisfying experience from showing students how our profession benefits the public and how they can pursue this curriculum to become a civil engineer. As an additional benefit, the Festival provides an excellent opportunity to see new innovative technologies and fascinating exhibits, while learning about other Companies, Government Agencies, and Professional Organizations supporting science and engineering.

**Outreach to students:** In this Newsletter, we have a request for our members to become STEM volunteers. The American Association for the Advancement of Science (AAAS) has been bringing STEM volunteers into the

classrooms for over ten years. Taking advantage of this excellent student outreach program, we are partnering with AAAS. So please consider joining us so we bring our knowledge and experience into the classroom.

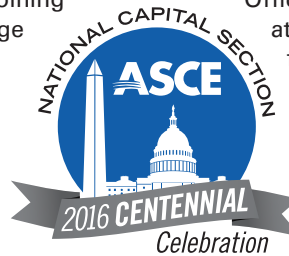
### Public Outreach:

Well, we wrote the Book. Specifically, our Centennial Commemorative Book, *Engineering the Nation's Capital – A Century of Innovation and Promise for the Future*, will go on sale soon so let us know how many copies you need. Then you can do your own outreach to your public (family and friends) by sending them a copy; let them know what you do as a civil engineer. What about the public? We are seeking members to work with local libraries to have our Book shown in the local interest display case. Please let us know if you are interested, our grant form ASCE will pay for the Book but need volunteers to contact their local library.

**Outreach to our fellow civil engineers:** First, we have our excellent series of Centennial Engineer of the

Month articles. This month we honor Engineer Reiss, the proprietor of Reiss & Associates, who was Director of the Office of Design and Construction at the Smithsonian Institution from 1974 to 1989. Second, on May 1, 2016, we will be taking our members and their young students/future civil engineers on a tour by boat to provide a unique perspective that will show our accomplishments in the design and construct of the DC bridges. Third, our Centennial Conference on June 3, 2016, will support your continuing education through our technical sessions and informative talks about the future of our profession. For details, see the Conference's write-up in this Newsletter.

So how do we do outreach? The answer is you. Your NCS represents the ASCE in the Capital Area. We have many activities where your assistance will help make our Centennial Celebration a success. So, whether you are a Young Member, a Life Member, or somewhere in between, we need your help. Please join us by contacting the Centennial Committee at [vicris51@verizon.net](mailto:vicris51@verizon.net). ■



AMERICAN SOCIETY OF CIVIL ENGINEERS

Engineering the Nation's Capital

## Volunteer Opportunity for Supporting Science, Technology, Engineering, and Math (STEM)

The American Association for the Advancement of Science (AAAS) program for STEM has introduced students to the world of engineering and science for more than 10 years (<http://www.aaas.org/senior-scientists-and-engineers/programs-dc>). Recognizing the importance of STEM for the continuance of our civil engineering profession, the NCS has embraced this educational outreach program by working with AAAS in DC metro school districts.

As a volunteer, you will be assisting K-12 teachers by your civil engineering

experience and knowledge to young students. 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. However, there are also many programs at all class levels including Project Lead the Way, which has a civil engineering component. This program works particularly well for retirees that can devote one day a week to volunteering.

We have developed or obtained a number of 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. The AAAS program has a volunteer handbook, provides trainings for STEM volunteers, and has assigned coordinators for each school district to help place the STEM volunteer into the classroom.

If you are interested in giving back to the profession while sharing the joy of engineering with eager young minds, please contact Victor I Crawford at [vicris51@verizon.net](mailto:vicris51@verizon.net). ■

## NCS Centennial Anniversary Conference – National Press Club, June 3, 2016

By Lucy Menon, PE, M.ASCE, Chair, Dream Big Subcommittee, and Education Committee, NCS

The NCS has assembled some of the best and brightest civil engineers of our region to speak on their organizations' achievements and the future of civil engineering. This conference will instill an appreciation of our shared civil engineering heritage and will help prepare you for tomorrow's challenges.

The Conference is a one of a kind opportunity to share ideas and learn from all the major disciplines of civil engineering, including transportation (transit/rail, highways, bridges), water/wastewater utilities, flood control, environmental, water resources, construction, geotechnical, and structural engineering. Presentations from top leaders from government organizations and private industry will demonstrate the ways that civil engineers have affected and improved our world. Having leaders from our multiple sub-disciplines together for the day will provide perspective and viewpoints that attendees can use and leverage in their areas of specialty. Attendees will explore the many facets of the civil engineering profession and how each discipline has and will contribute to the economy, safety, security, and the public good.

Major General Mark Yenter, PE, Deputy Commanding General for Military and International Operations, U.S. Army Corps of Engineers (USACE) will deliver the keynote presentation. MG Yenter is responsible for policy, programming, and technical support in the execution of more than \$18 billion of design, construction, and environmental programs for the U.S. Army, the U.S. Air Force, other Department of Defense and federal agencies, and foreign countries. ASCE National President, Mark Woodson, PE, LS, DWRE, will also present on the state of our profession, including challenges and opportunities for the future.

Thought leaders from the transportation sector include

- Victor Mendez, Deputy Secretary, DOT
- Andrew Off, PE, PMP, Assistant General Manager for WMATA
- Gary Runco, PE, PS, VDOT, Northern District, and Konjit Eskender, PE DDOT, bridge engineers

Leaders from the environmental and water resources sector include

- Liliana Maldonado, PE, BCEE, Director, Engineering and Technical Services, DC Water,
- Dr. Joe Manous, PE, PhD, DWRE for USACE Institute for Water Resources, and
- Jeff Lape, Deputy Director, USEPA Office of Science and Technology, and former Director of the USEPA Chesapeake Bay Program Office.

Now that we have whetted your appetite, we will introduce our Construction, Sustainability, and Report Card speakers in our next Newsletter. Tune in for the latest exciting news on the Centennial Luncheon that will feature a "Dream

Big" trailer with commentary from Bechtel, sponsor of the "Dream Big" movie.

The Centennial Conference is a phenomenal treat not to be missed. Come for the following benefits:

- Learn about projects, latest trends and techniques in our profession
- Interact and network with thought leaders in the industry
- Earn Professional Development Hours while enjoying yourself
- Showcase your organization through sponsorship and exhibits

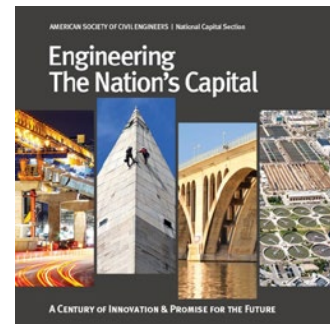
Look in future emails and on our [website](#) for upcoming registration information. ■

## Discover Local Civil Engineering Wonders

Are you interested in uncovering the civil engineering wonders in the metropolitan Washington, DC area? Check out our Centennial coffee-table book. Inside you will find civil engineering projects, both historic and new, that have shaped the region's past and are poised to shape its future. Take the time to browse excerpts on some of the projects it features.

Pre-orders for the book are open at the bargain rate of \$45. We have a limited supply of the book; do not let the opportunity slip you by to own a piece of our region's history and its future and

to cherish it for years to come. Contact [vicris51@verizon.net](mailto:vicris51@verizon.net) to place your pre-order. ■



## Washington, DC Riverboat Tour: History and Construction of DC Bridges

Please join us on Sunday, May 1, 2016, from 6–9 pm this rare close-up boat tour along the Potomac and Anacostia River under all of our major Washington, DC bridges. Seeing the city from this unique vantage and enjoying the lights of the city begin to illuminate as our afternoon tour enters the spring evening will be a delight for the whole family.

Our tour guide, Mr. Don Myer, the retired Assistant Secretary of US Commission of Fine Arts, our will lead

us on this three-hour tour providing a historical context of the design choices and cultural features of all of our major Washington, DC bridges with commentary on how the bridges became vital arteries between our interconnected regional communities.

The tour will start and end at the Alexandria Marina (near the Torpedo Factory at Cameron St and Union St) and is operated by the Potomac Riverboat Company. Contact [Alex Rosenheim](#) for more information. ■

## An Interview with Phil Reiss, PE, F.ASCE, F.NSPE: Centennial Engineer of the Month

*Editor's Note: Beginning October 2015, the NCS began publishing interviews of prominent members of our Section, asking them to reflect on their career and profession. The NCS Centennial Committee, including Dr. Phillip Melville, PE, PhD, F.ASCE, and Ms. Lucy Menon, PE, M.ASCE, of the Dream Big Subcommittee, have organized the interviews. We hope you enjoy reading these interviews and gain insight from these leaders in civil engineering.*

Mr. Reiss is the proprietor of Reiss & Associates, a business engaged in evaluating building failures, including settlements, overturning of walls, collapse of trusses, material shrinkage/expansion causing roof damage, drainage problems, and other adverse conditions affecting structures. Prior to the establishment of his own business in 1998, Phil Reiss was Director of the Office of Design and Construction at the Smithsonian Institution from 1974 to 1989. In this position, he was involved in major facilities design, construction, and maintenance of several Smithsonian museums. In addition to these activities, he was responsible for research programs in and around Washington, DC, as well as Panama and Arizona, Maryland, New York, and Virginia. As Director, he served as chair of the Architectural and Engineering Board for the Smithsonian and the National Zoo.

Before his fifteen years employment with the Smithsonian, Mr. Reiss worked for a number of different government agencies. He was Special Assistant for the Environment in the Economic Development Administration, US Department of Commerce (USDC), General Engineer on the Appalachian Assistance Staff, USDC in the development of the \$24 million Bluestone Park in West Virginia. Mr. Reiss received his BCE from University of Virginia, Master of Engineering Administration from George Washington University, Engineer Officer Career Course at Ft. Belvoir, and Command and General Staff College, at Ft. Leavenworth.

He was past president of the Virginia Society of Professional Engineers, member of the NCS Professional Practice Committee, and has been a member of the Reserve Officer Association (ROA) since 1968. Mr. Reiss holds a current PE license in

DC. Throughout his career, Mr. Reiss was bestowed many awards, including the USDC Bronze Medal, Harry S. Truman Achievement Award (ROA), General Lewis Blaine Hershey Award for Exceptional Service to the Nation's Citizen Warriors (ROA) 2007, and the Bronze Medal, Bradenton-Sarasota Rose Society (American Rose Society).

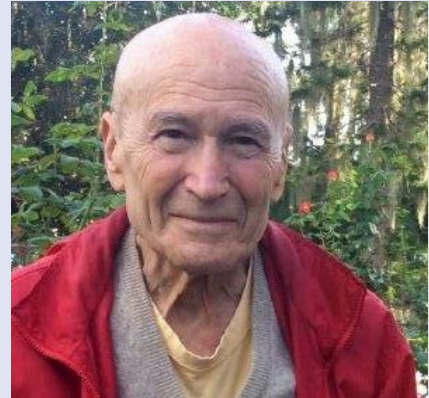
### **What do you consider your major achievements in civil engineering in our Section area?**

Since most of my experience as a professional engineer was spent in the Northern Virginia while employed with governmental organizations, for example, the US Department of Commerce's Economic Development Administration (EDA) and the Smithsonian Institution, a large percentage of my activity, with the exception the Smithsonian, had an impact in communities outside our section area. In the case of EDA, my employment occurred at the time when the National Environmental Policy Act became law, such that it was necessary to develop procedures for local and state governments to analyze the impact of their projects on the environment.

With regard to the Smithsonian as Director of its Office of Design and Construction, we performed in-house design, planning, and construction or acted as the Contracting Officer's Representative on larger projects involving AE selection for the design and construction, serving not only the institution's facilities in the Washington DC Metro area, but also facilities in New York, Arizona, and Panama.

### **Why did you decide on a career in civil engineering?**

I decided on a career in civil engineering as the result of working various



construction jobs digging ditches, hauling lumber, hog carrier and doing other work while going to a trade school and night school at George Washington University and wondering how one could, for example, analyze soil to determine its properties. Enrolling full time at UVA opened what seemed to be a vast new opportunity to combine theory and design with hands on creating and building products that people needed to carry out daily activities.

### **What do you consider the best guidance to young people for a future career in civil engineering?**

To consider a future career as a civil engineer is to familiarize one's self with the evolution of and contribution of civil engineers since Roman times to the expansive growth of modern times and the future. In addition, understanding that civil engineers provide a foundation (such a road or a bridge) that implements scientific endeavors (such as understanding the chemical reaction between water and cement).

### **What do you consider the major challenge to a career in civil engineering?**

Developing a personal commitment to public service wherein the civil engineer's commitment contributes to the public health, safety, and welfare of people and the ecological life on our planet, and perhaps as our endeavors range beyond earth to celestial bodies.

## 2016 NCS Award Winners

The NCS Annual Awards Banquet is an opportunity for the Section to recognize individuals and teams for outstanding achievement. Fifty members, guests, and students converged to network and take part in the Section's signature annual event at the Hilton Arlington on March 22, 2016. This year's keynote topic is "Fostering Creativity in Engineering," was presented by Ranjit Sahai, a past president of the NCS (2013-14). For more information on his topic, please read his book review in the [March issue](#). A special thank you to our photographers Sarah Steele, Rainer Luza, and Dr. Ahmet Zeytinci!



Ranjit Sahai presents the keynote address on Fostering Creativity in Engineering.

### Civil Engineering Student Awards

The NCS awarded **\$13,500** in scholarships to deserving civil engineering students from our five area schools: The Catholic University of America, George Mason University, The George Washington University, Howard University, and the University of the District of Columbia. We also honored the faculty's selection for Outstanding Graduating Senior from all five schools.



CUA Scholarship recipient Caitlin Boyle poses with NCS Past President Bernie Dennis, NCS Vice-President Scott Wolf, and Vice-President Jordan Pitt



CUA Scholarship recipient Nicholas Yager poses with Vice-President Jordan Pitt, NCS Past President Bernie Dennis, and NCS Vice-President Scott Wolf



CUA Outstanding Senior Paul Antonucci poses with Vice President Jordan Pitt and NCS President Scott Wolf



GMU scholarship recipient Alayna Bigalbal poses with Jordan Pitt, Bernie Dennis, and Scott Wolf



GMU scholarship recipient Steve Kloecker poses with Jordan Pitt, Bernie Dennis, and Scott Wolf



Scott Wolf and Jordan Pitt pose with Dr. Liza Durant and GMU Outstanding Senior Whitney Woodcock

#### The Catholic University of America (CUA)

Caitlin R. Boyle	Hummel Memorial
James P. Walsh	ASCE-NCS Scholarship
Nicholas T. Yager	ASCE-NCS Scholarship
Paul Antonucci	Outstanding Graduating Senior

#### George Mason University (GMU)

Alayna R. Bigalbal	Hathaway Memorial
Stephen Kloecker	ASCE-NCS Scholarship
Whitney P. Woodcock	Outstanding Graduating Senior

#### The George Washington University (GWU)

James J. Lafaso	ASCE-NCS Scholarship
Mojolaoluwa A. Ladipo-Obasa	ASCE-NCS Scholarship
Sophie J. Martin	Williams Memorial
Julian Olin	Outstanding Graduating Senior

#### Howard University (HU)

Anna-Kaye C. Barrett	Harland Memorial
Akim T. Mahadiow	ASCE-NCS Scholarship
Olisaemeka Uzundu	Outstanding Graduating Senior

#### University of the District of Columbia (UDC)

Kwame A. Baah	ASCE-NCS Scholarship
Behailu N. Kifle	ASCE-NCS Scholarship
Laura C. Rojas	ASCE-NCS Scholarship
Rainer Luza-Herrera	Outstanding Graduating Senior



Jordan Pitt, Bernie Dennis, and Scott Wolf stand with GWU scholarship winner James Lafaso



Jordan Pitt, Bernie Dennis, and Scott Wolf stand with GWU scholarship winner Moholaoluwa A. Ladipo-Obasa

continued on page 7



Jordan Pitt, Bernie Dennis, and Scott Wolf stand with GWU scholarship winner Sophie Martin



Scott Wolf and Christian Manalo pose with GWU Outstanding Senior Julian Olin and Dr. Samer Hamdar



HU scholarship recipient Anna-Kaye Barrett with Jordan Pitt, Bernie Dennis, and Scott Wolf



Dr. Robert Efimba poses with HU Outstanding Senior Olisaemeka Uzundu, Jordan Pitt, and Scott Wolf



Jordan Pitt, Bernie Dennis, and Scott Wolf pose with UDC scholarship recipient Kwame Baah



Jordan Pitt, Bernie Dennis, and Scott Wolf, pose with UDC scholarship recipient Behailu Kifle



UDC Outstanding Senior Rainer Luza-Herrara (center) poses with Dr. Zeytinci, Dr. Pradeep Behera, Emma Needham, Jordan Pitt, and Scott Wolf

### Life Member Awards

To achieve this status, a member must have reached their 65th birthday, have paid dues in any membership grade except Student Member for at least 35 years, and have had at least 10 years of continuous membership immediately preceding the attainment of Life Member. Congratulations to the following NCS members who were awarded Life Member certificates:

- Michael Bahleda
- Mark Houck
- Eric Bock
- Robert Isenberg
- Laurence Boorstein
- Nathan Kathir
- Connie Bosma
- David W. Lee
- Jose Burgos
- James Mekemson
- Granville Campbell
- Kenneth Opiela
- Peter Carrato
- Robert Peskin
- Lee Ken Choo
- Roger Petzold
- Mark Clabaugh
- Simon Simon
- Robert Forgione
- Narayanan Subramanian
- Chung Fu
- Randy Wood
- Michael Goode
- Glen Yee



Jordan Pitt and Scott Wolf pose with Life Members Nathan Kathir, Robert Forgione, Simon Simon, Robert Peskin, and Narayanan Subramanian

### ASCE-NCS Newsletter Patrons



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## NCS Service Award Recipients

The Meritorious Service Award recognizes individual members of the NCS who have made outstanding contributions to the work of the Section.

**Kelly Cronin, PE**, is the current President of the NCS Younger Member Forum and has been an active member of the NCS since 2009. She is a graduate of Carnegie Mellon University and holds a Master of Engineering Degree in Structural Engineering from the University of California, Berkeley. Kelly currently works as a Senior Associate for Wiss Janney Elstner, in Fairfax, VA. Ms. Cronin was chosen because of her meaningful contributions to the Younger Member Forum and her continued support of the NCS.

Our second Meritorious Service Award recipient this year is **Alex Rosenheim, PE, LEED AP**, is a current Director of the NCS and the Chair of the Sustainability Committee. He is a graduate of the George Washington University. Alex currently works as a Construction Manager for the U.S. Naval Research Laboratory in Washington, DC. Mr. Rosenheim was chosen because of his meaningful contributions to the Sustainability Committee and his continued support of the NCS.



Merit Service Award Winner Kelly Cronin proudly displays plaque with Jordan Pitt and Scott Wolf



Merit Service Award Winner Alex Rosenheim with Jordan Pitt and Scott Wolf

## President's Appreciation Award

NCS Past Presidents **Ranjit Sahai, PE, F.ASCE (Past President 2013–14 NCS)**, and **Christian Manalo, PE, DEE, M.ASCE (Past President 2014–15 NCS)** were bestowed the President's Appreciation Award for outstanding service and leadership on the DC Infrastructure Report Card. Released on January 14, 2016, the inaugural edition of the Report Card for D.C.'s Infrastructure was developed through the work of many ASCE and subject matter experts. Ranjit and Chris managed the development and launch of a successful release.



President's Appreciation Award Winners Christian Manalo and Ranjit Sahai display their awards

***The NCS extends its sincere congratulations to all the 2016 award recipients!***

## Discover Engineering Family Day 2016 – Another Success!

By Dean Westman, PE, M.ASCE, NCS Past President

Volunteers from the NCS, Bechtel, and friends participated in Discover Engineering Family Day (DEFD) at the National Building Museum on Saturday, February 27. This year we renewed our popular "Shaky Ground" activity from 2015. "Shaky Ground" demonstrates loss of soil load bearing capacity as would

occur during seismic events in areas with groundwater saturated soils. Our ground was play water saturated sand in a cup, our structures were salt and pepper shaker Washington Monuments and U.S. Capitols. Our activity visitors caused earthquakes in the cup by rapping the side with ASCE pencils. Following failure of their building, activity participants were invited to learn about earthquake resistance by driving toothpick piles into their soil system so that their building could rest on bedrock.

For our younger DEFD participants, NCS provided a sand box with toy construction vehicles to kick off the 2016 construction season.

As in years past, the ASCE activity was very popular, with hundreds of children, and their parents. The activity would not have been possible without the help



Norma Jean Mattei, ASCE 2016 President-elect, teaches future ASCE presidents about civil engineering.



A future civil engineer learns about designing earthquake resistant buildings.

of numerous ASCE volunteers, including Norma Jean Mattei, ASCE 2016 President-elect, and supporters from ASCE World Headquarters in Reston. Special thanks to DEFD activity and volunteer organizers, Emily Dean, Alison Hroblak, Rob Moeslein, Jeannine Finton, and Dean Westman. ■



## 2016 NCS Annual Awards Banquet Sponsors

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#### ***Get your company in the spotlight!***

Promote your company to the engineering community in the NCS eNewsletter, at NCS monthly dinner meetings, and at special events like the Annual Awards Banquet by becoming an NCS Sponsor. Contact sponsorships chair, [Christian Manalo](#), PE, DEE, to invest in your company's future.

# NCS Committee News and Updates



## Younger Members Forum

By Mike Venezia, PE, M.ASCE, YMF Secretary/Newsletter

**Monthly Happy Hours.** The NCS Younger Members Forum (YMF) holds monthly happy hours in Arlington, VA or Washington, DC. Happy hours are usually the first Wednesday of each month unless a holiday falls during that week. The next monthly happy hours will take place on **April 6**, at **Hard Times Cafe** in Arlington, VA, and **May 4**, at Local 16 in Washington, DC. Join younger members from the area for free appetizers and drink specials. Look for emails with specific locations for future monthly happy hours!

The NCS YMF held their March Happy Hour and Annual St. Patty's Day celebration at Ireland's Four Courts in Arlington, VA on March 2. Approximately 25 members attended the event.



**Stay Connected!** Check out photos and stay up-to-date with YMF events by visiting the new [YMF Facebook page](#). Also, follow us on [Twitter](#) (@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 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](#).

## Construction Committee Update

By Jeff Tan, PE, PMP, LEED AP, Chair, Construction Committee, NCS

### Construction Committee Meeting.

The construction committee meeting was held on March 3, from 5–7 pm at [Cosi](#) in Washington, DC. Committee members in attendance are pictured below (L-R): Jeff Tan, Alice Gustafson, Gerald Himes. Members discussed the updates of the NCS, ideas for future professional development sessions, and scheduled the next meeting.



The next Construction Committee will meet on May 5, at 5pm at [Cosi](#) in Washington, DC. NCS members interested in participating in the Construction Committee are highly encouraged to attend. Please contact [Jeff Tan](#) if you are interested or would like further information.

Lieutenant Colonel Jerry Himes will present how Herman Haupt created a standard-design bridge system that could be rapidly constructed by untrained, unskilled labor during the U.S. Civil War. He will also discuss how the emerging technology of the railroad provided a reliable means of supply for Union forces (*Design and Construction on the U.S. Military Railroads during the Civil War*). LTC Jerry Himes is a transitioning career military engineer that currently works on Strategic Business Intelligence for the U.S. Army Corps of Engineers at the Headquarters based in Washington, D.C. He previously served as the Executive Secretary (SGS) to the Chief of Engineers, LTG Thomas Bostick, from April 2013 to August 2015. He is a Professional Engineer (PA-Civil) with a Master's degree in Civil Engineering from Carnegie Mellon University. He graduated from West Point in 1996 and taught in the Civil and Mechanical



Engineering Department there from 2006–2009.

### Professional Development Session.

The NCS Construction Committee will hold the next education session at 6511 Princess Garden Pkwy, Lanham, MD, 20706 on April 16, 2016, from 10–11:30pm. Chein-Chi Chang, Ph.D., P.E., Senior Engineer, Department of Engineering and Technical Services of DC Water, will discuss *Anacostia River Tunnel Project*. Dr. Chein-Chi Chang is also the adjunct professor of the Civil and Environmental Engineering Department at the University of Maryland. Dr. Chang's specialties include waste management, ecological engineering, operations research, geographical information systems, remote sensing, and civil and structural design for water distribution system, wastewater collection systems, and wastewater treatment systems.

**Survey.** Please take a few minutes and complete this survey to help your Construction Committee plan for 2016: <http://goo.gl/forms/zkt9YrWkzd> Thank you in advance.

### Transportation Committee

By Shri Yamijala, PE, M.ASCE, Co-Chair Transportation Committee, NCS

**Innovations in Airport Pavement Design Recap.** The majority of U.S. airports were built during World War II with concrete runways. Since then, major advancements in pavement engineering have emerged, as these aging runways require rehabilitation or reconstruction. On March 8, at George Washington University's Science and Engineering Hall, Mr. Hugh Weaver, the National Aviation Engineering Practice Leader at HNTB Corporation, discussed the basics and history of airfield pavement design to a group of 10 engineers. Modern airport pavement design

*continued on page 11*



methods, which provide increased safety, longevity, constructability, and sustainability, were also discussed in the presentation. A case study involving pavement design methods to mitigate the punishing effects of one of the most unusual military aircraft, the MV-22 Osprey was something that garnered most interest and follow up questions.

The Transportation Committee holds seminars on transportation related topics every other month. These seminars are free of cost and provide free food. Please visit <http://www.asce-ncs.org/index.php/committees/transportation> for our upcoming meetings. ■



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## **Geotechnical Executive Committee: Geotechnical Symposium Grade Separation & MSE Walls**

Join us on April 20, 2016 at the [Marriott Tysons Corner](#). [Click Here](#) to register. Topics and speakers include:

### **What You Need to Know to Design or Review a Vendor-Designed Column-Supported Embankment**

James G. Collin, PhD, PE, DGE, F.ASCE; The Collin Group

### **Construction Problems, Design Considerations, and Practical Solutions for Phased Construction of MSE Embankments**

James Sullivan, PE; The Reinforced Earth Company

### **A Unique MSE Ramp Widening & Connection Application Franconia-Springfield Parkway Interchange I-95 Express Lanes Segment 3N, Springfield, Fairfax County, VA**

Presented by: Aly F. Soliman, P.E., President, AFS GeoConsultants, LLC, and Eric Hilberath, President, Promo Choice Consulting, LLC

### **Shored Mechanically Stabilized Earth Walls at the NC194 Avery-Watauga project**

Keith Brabant, PE, The Reinforced Earth Company and Harry W. Schnabel, PE, Schnabel Foundation Company

### **When the rains come – two walls collapse on the same day within miles of each**

Keith Moser, PE, President, GeoMo Enterprises, Inc.

### **Gabion Face MSE walls at St. Anthony Falls Bridge: Design and Construction Challenges**

Sachin Mandavkar, Technical Manager, Maccaferri Inc.

### **Challenges in Reinforced Soil Structure Design**

James A. McKelvey, III, PE, DGE, F.ASCE, Director, Geotechnical Design Division; Earth Engineering, Inc.

### **Instrumented Mechanically Stabilized Earth Wall Reinforced with Polyester Straps**

Professor Dov Leshchinsky (retired)

### **Very Long Term Care Of Mechanically Stabilized Earth (MSE) Berms**

R. David Espinoza, PhD, PE, M.ASCE, Geosyntec Consultants & Dr. Jeremy W.F. Morris, PhD, PE, Geosyntec Consultants

### **26th Street Emergency Retaining Wall Replacement, Baltimore, MD**

Joseph K Cavey, PE, Vice President, Hayward Baker, Inc. and James Guinther, PE, Vice President, Whitman, Reardon & Associates

### **Payment**

The \$275 fee includes continental breakfast, lunch, and parking. Make checks payable to “ASCE-NCS GEC” and mail to:

Kellie Owens  
c/o GeoStructures, Inc.  
413 Browning Court  
Purcellville, VA 20132

If you prefer to pay by credit card please email Kellie ([kowens@geostructures.com](mailto:kowens@geostructures.com)).

**Course attendees will be eligible to receive 8 Professional Development Hours and the symposium is approved in the State of New York.**

### **Sponsorship Opportunities Available!**

It is never too late to show your support for your NCS Geotechnical Executive Committee. We have several sponsorship opportunities available. It is a great way to promote your company and support these educational short courses! For more information on sponsorship, [click here](#). ■

## **ASCE-NCS Newsletter Patrons**



## Let's Talk about Engineering Ethics: NCEES Rules of Professional Conduct – Part I

Starting with this issue, we will talk about "Engineering Ethics." Most of you know that ethics is a recent introduction to the FE exams and some may ask why NCEES has decided to include ethics in the exams. The answer is simple: there have been a number of so called "engineering disasters" like Tacoma Narrows Bridge failure (1940), Hyatt Regency Hotel Walkway collapse (1981), Chernobyl disaster (1986) and Space Shuttle Columbia disaster (2003) to name a few and these unfortunate events have increased the public awareness about the importance of engineering in the society.

The ethical principles governing the engineering profession are embodied in codes of ethics and have been adopted by state boards of registration and professional engineering societies such as ASCE, ASME, IEEE, and NSPE. The Rules of Professional Conduct is also included in NCEES Reference Handbook. According to NCEES, the expertise possessed by engineers is vitally important to societal welfare. In order to serve society effectively, engineers must maintain a high level of technical competence. However, a high level of technical expertise without adherence to ethical guidelines is as much a threat to public welfare as is professional incompetence.

As engineers, we are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness, and equity, and must be dedicated to the protection of the public health, safety, and welfare. Engineers must perform under a standard of professional behavior that requires adherence to the highest principles of ethical conduct.

An example of one such code is the NCEES Rules of Professional Conduct, Section 240 of the *Model Rules*. In practice, an engineer is responsible for knowing and abiding by these Model

Rules as part of her/his responsibility to the public. The Model Rules consist of the following three major sections:

- I. Licensee's Obligation to the Public,
- II. Licensee's Obligation to Employers and Clients, and
- III. Licensee's Obligation to Other Licensees.

According to the NCEES, the three principles listed above are important guidelines for professional engineers. In many situations, the application of these codes of ethics is straightforward. However, there may be situations in which applying the code may raise issues that are more difficult. Due to the space limitations, today we will discuss the first item only and we will continue in next two issues:

### I. Licensee's Obligation to the Public

1. Licensees shall be cognizant that their first and foremost responsibility is to safeguard the health, safety, and welfare of the public when performing services for clients and employers.
2. Licensees shall sign and seal only those plans, surveys, and other documents that conform to accepted engineering and surveying standards and that safeguard the health, safety, and welfare of the public.
3. Licensees shall notify their employer or client and such other authority as may be appropriate when their professional judgment is overruled under circumstances in which the health, safety, or welfare of the public is endangered.
4. Licensees shall, to the best of their knowledge, include all relevant and pertinent information in an objective and truthful manner within all professional documents, statements, and testimony.
5. Licensees shall express a professional opinion publicly only when it is founded upon an adequate knowledge of the facts and a

competent evaluation of the subject matter.

6. Licensees shall issue no statements, criticisms, or arguments on engineering and surveying matters that are inspired or paid for by interested parties, unless they explicitly identify the interested parties on whose behalf they are speaking and reveal any interest they have in the matters.
7. Licensees shall not partner, practice, or offer to practice with any person or firm that they know is engaged in fraudulent or dishonest business or professional practices.
8. Licensees who have knowledge or reason to believe that any person or firm has violated any rules or laws applying to the practice of engineering or surveying shall report it to the board, may report it to appropriate legal authorities, and shall cooperate with the board and those authorities as may be requested.
9. Licensees shall not knowingly provide false or incomplete information regarding an applicant in obtaining licensure.
10. Licensees shall comply with the licensing laws and rules governing their professional practice in each of the jurisdictions in which they practice.

As always, we conclude our remarks with important reminder: in both the FE and PE exams, timing and knowledge of the topics listed in the *NCEES – Reference Handbook* is everything. To conquer these exams, speed is crucial, speed can only be attained through practice, and more practice ([visit this month's problem set](#)). Please remember to send us your feedback about this column and our pro-bono Saturday classes.

Until next time,  
Ahmet Zeytinci, PE  
[az@alfam.com](mailto:az@alfam.com)



# ASCE-NCS – Annual Sponsorships Drive

The NCS has planned an extensive program for our centennial year; this may be our busiest year ever! Given the magnitude of our activities, many new opportunities for sponsorship have opened up. This includes our Centennial Anniversary Conference on June 3, at the National Press Club and our Centennial Anniversary Book. Please consider sponsoring these or any of our other activities. The conference and book are rare opportunities for your organization to be recognized that is far-reaching and long lasting. Sponsorship options and details are provided below. For additional information, please contact Sponsorships Chair, Christian Manalo, PE, DEE, at [manalo\\_christian@bah.com](mailto:manalo_christian@bah.com) or (703) 377-1697.

## Gold Sponsor: \$5,000

- Company logo included in Centennial Commemorative Book; plus six copies
- Display and recognition at Centennial Anniversary Conference, including three passes
- Recognition at Annual Awards Banquet, including two passes
- Introduction at Monthly Section Dinner Meeting
- Business card recognition in eNewsletter for 1 year
- Recognition on Section website homepage

## Platinum Sponsor: \$2,500

- Display and recognition at Centennial Anniversary Conference, including two passes
- Recognition at Annual Awards Banquet, including two passes
- Introduction at Monthly Section Dinner Meeting
- Introduction at Committee Event
- Business card recognition in eNewsletter for 1 year
- Recognition on Section website homepage
- Two copies of Centennial Commemorative Book

## Silver Sponsor: \$1,250

- Recognition at Annual Awards Banquet, including two passes
- Introduction at Monthly Section Dinner Meeting
- Business card recognition in eNewsletter for 1 year
- Recognition on Section website homepage
- One copy of Centennial Commemorative Book

## Bronze Sponsor: \$750

- Recognition at Annual Awards Banquet
- eNewsletter recognition for 1 year

## Important Deadlines:

**Inclusion in Book – April 4\***  
**Conference – May 16**

\*Please contact Christian Manalo for additional/alternate sponsorship opportunities.

## Additional Sponsorships

- Centennial Anniversary Conference Display (\$1,500)
- Annual Awards Banquet recognition (\$500)
- Recognition in eNewsletter for 1 year (\$400)
- Scholarship Trust (\$100+)

## Sponsorship Details

Our sponsorship program offers a variety of opportunities for you to meet the needs of your organization. We are happy to work with you to customize a sponsorship package that best meets your organization's preferences.

### Centennial Commemorative Book:

Entitled *Engineering the Nation's Capital – A Century of Innovation and Promise for the Future*, this 120-page hardcover book in coffee-table format includes stories and pictures of some of the most notable infrastructure in the D.C. area.

### Centennial Anniversary

**Conference:** Our full-day conference will be held at the National Press Club

on June 3, 2016. We have a full slate of highly distinguished speakers planned. We will also award outstanding projects of the year. Sponsorship includes recognition and booth space. **Deadline May 16, 2016**

**Annual Awards Banquet:** This evening banquet is held each spring and recognizes members of our Section, including newly installed life members, scholarship recipients, and other outstanding local members. For 2016, projects of the year will not be presented.

### Monthly Section and Committee

**Meetings:** ASCE-NCS hosts dozens of events each year, including our monthly evening section meetings

and committee-organized events. Sponsorship allows you to address attendees at these events.

**Newsletters:** Our eNewsletters are issued throughout the year and are distributed to more than 5,000 individuals.

**Website:** Our Section website was awarded Website of the Year by ASCE in 2014.

**Scholarship Trust:** More than \$330,000 in scholarships have been awarded by our Section since 1988. Your contribution helps support our local students. ■

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

### April 6

**YMF Monthly Happy Hour**, 6–8 pm, at **Hard Times Cafe**, Arlington, VA. Join other younger members from the area for while you enjoy free appetizers, drink specials, and a night of trivia. Watch for upcoming emails for more information

### April 16 and 17 USA Science & Engineering Festival at the DC Convention Center.

NCS and ASCE World Headquarters sponsors a booth. The Festival is held every other year and includes hundreds of sponsors and thousands of visitors of all ages. Contact [Dean Westman](#) for more information.

### April 19

**NCS Section Meeting**, 6:30–8:30 pm, Hilton Arlington. Ned Wallace, PE, from the National Park Service will present on the 17<sup>th</sup> Street Levee Project. Read more in the lead article.

### April 20

**NCS Geotechnical Symposium: Grade Separation and MSE Walls**, all day, **Marriott Tysons Corner**. [Click Here](#) to register. Read more about topics and speakers in the newsletter article.

### April 22

**Nominations for NCS Outstanding Civil Engineering Project of the Year and Sustainability Project of the Year Due!** A description of each

award, the respective requirements, and additional information were presented in the [February Newsletter](#). This year, the awards will be bestowed at the Section's Centennial Conference on June 3, 2016, at the National Press Club. To nominate a project for one of the awards, provide a succinct description of the project or initiative (100 word limit), include the public or private entity responsible for the program (include point of contact information), and describe how the nomination meets the criteria outlined above. Submit your nomination by e-mail or traditional mail to [Chris Manalo](#). The nominating individual must provide his/her name, affiliation, telephone number, and e-mail address.

### May 4

**YMF Monthly Happy Hour** 6–8 pm, at **Local 16**, in Washington, DC. Join other younger members from the area for while you enjoy free appetizers and drink specials. Watch for upcoming emails for more information.

### May 5

**Construction Committee Meeting**, 5pm, at **Cosi**, 1501 K St NW, Washington, DC. Please contact [Jeff Tan](#) if you are interested or would like further information.

### May 16–23

**Celebrate Infrastructure Week**, the 2016 theme, Infrastructure Matters, tells the story of what infrastructure means to Americans. It matters, in big

ways and in small, to our country, our economy, our quality of life, our safety, and our communities. Roads, bridges, rails, ports, airports, pipes, the power grid, broadband... infrastructure matters to the goods we ship and the companies that make and sell them; it matters to our daily commutes and our summer vacations, to drinking water from our faucets, to the lights in our homes, and ultimately to every aspect of our daily lives.

### May 17

**NCS Section Meeting**, 6:30–8:30 pm, Hilton Arlington. Join us for an exciting presentation on the Smithsonian African American History Museum. Look for more information in future emails and on our [website](#).

### June 1

**YMF Monthly Happy Hour** 6–8 pm, at **Carpool** in Arlington, VA. Join other younger members from the area for while you enjoy free appetizers and drink specials. Watch for upcoming emails for more information.

### June 3

**NCS Centennial Conference at the National Press Club, DC**. Mark your calendars for this event! See newsletter article and upcoming emails for more information.

## Employment Clearinghouse

### Employment Available with GeoStructures:

**Summer Internship** for progressing seniors or MSc students in Geotechnical Engineering or Construction managements programs.

**Regional Manager, Northeast:** 8+ years geotechnical experience; preferably in business development or sales representing GeoStructures' systems and ground improvement solutions.

**Project Engineer (EIT):** We are seeking Project Engineers to meet rapidly growing demand for our design-build

Geopier foundation systems, slope reinforcement technology, Rapid Impact Compaction ground improvement system, retaining walls, arch structures, and sound wall applications in the mid-Atlantic states.

### Quality Control Field

**Representative:** Review Geopier and RIC design drawings and calculations, field measurements, surveying, field classification of soils and soil testing, and construction observation and reporting. Applicant must hold a valid driving permit and is required to travel 90% of the time. Qualified individuals should hold a degree in geology,

environmental engineering or WACEL soils certification and a minimum of one year of construction inspection experience.

*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](#).*