

ASCE NCS Annual Awards Celebration Recap!

The 2022 ASCE National Capital Section (NCS) Annual Awards Celebration was held on Tuesday, April 26, 2022, on a beautifully tented lawn at The Catholic University of America. (Thank you to The Catholic University of America for being our gracious host!) The event was an opportunity to celebrate outstanding projects and people in the National Capital Section, either in person or via a livestream. During the celebration, ASCE NCS awarded \$19,000 in scholarships; recognized outstanding graduating seniors and accomplished

professionals; commended excellent projects; and thanked volunteers for their service to the community. The event featured a Keynote Address by Federal Transit Administration (FTA) Administrator Nuria Fernandez. Guests also enjoyed lovely music by violinist Jennifer Jenkins.

Congratulations to all award winners! ASCE NCS also wishes graduating seniors well on their new journey!

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Tent on CUA Campus



Violinist Jennifer Jenkins



FTA Administrator Fernandez



FTA Administrator Fernandez with ASCE NCS President Ingram

ASCE NCS April Section Meeting Recap

Reagan National Airport Project Journey

Project Journey is a \$1 billion investment in passenger safety, security, efficiency and convenience that included two major concurrent construction projects. The New Concourse project replaced an overcrowded gate that busied passengers to 14 remotely parked aircraft with a new 14-gate, 225,000-square-foot full-service concourse. The Secure National Hall project constructed two new 50,000-square-foot security screening checkpoint buildings, serving a wide variety of



gates, to replace three much smaller checkpoints that served separate clusters of gates.

On Thursday, April 28th, Kyle Johnson, CMIT, Construction Project Administrator for the Metropolitan Washington Airports Authority presented to the ASCE NCS on Project Journey. Kyle received his BS from Florida A&M University in 2009 in Construction Engineering Technology. He has worked at MWA since November of 2015. ■



President's Corner

Mothers are highlighted and celebrated during the month of May. I would like to dedicate this President's Corner to my own. My mother is an artist and paints a hybrid of surrealism and abstractionism in her work. She exposed my sister and me to fine art, whether that was through art auctions, art festivals, gallery visits, trips to the museum, or art projects at home. While in grade school, it was even fun to become her model for the day for her oil painting entitled "Dreaming." My mother taught me how to imagine and think without boundaries for my life. Through her



encouragement, I was able to "dream big." Then, she equipped me with the tools to pursue those dreams. I thank her for those wondrous art experiences, love, support, and kind heart!

In May, the ASCE National Capital Section will collaborate with the Architectural Engineering Institute of Washington, D.C. to host a panel that explores art in public transit and in public space. We will feature organizations in the National Capital Area who find ways to incorporate art into the fabric of our environment for passersby to enjoy and contemplate. Our Institutes have

been quite busy this May as well. The Architectural Engineering Institute of Washington, D.C. will also host a walking tour of Penn Quarter. In addition, the May webinar for the Environmental & Water Resources Institute of NCS featured a topic on Lead in Drinking Water Elimination Efforts in Virginia with James Reynolds (Field Director for the Virginia Department of Health Office of Drinking Water's Richmond Field Office).

As you peruse this month's newsletter, you will find an article about the ASCE National Capital Section Annual Awards Celebration held in April 2022. Congratulations to the outstanding ASCE NCS Students, professionals, and project teams honored that evening!

Sincerely,

Jameelah C. Muhammad Ingram,
P.E., M. ASCE
ASCE NCS President



Jameelah with Mother (Middle) and Sister during one October.

Newsletter

Maria Raggousis, Editor

September 2022 Issue Deadline: August 12, 2022

To Submit Articles: newsletter@asce-ncs.org

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

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

National Capital Section

Officers (2021–2022)

Jameelah Muhammad Ingram, President
Elizabeth Wheeler, Vice President
Joseph Whartenby Jr., Treasurer
Norine Walker, Secretary
Kelly Cronin, Past President
Emily Dean, Previous Past President
Maria Raggousis, Newsletter Editor

Ariana White, YMF President
Lisa Anderson, Director
Tricia Wolfbauer, Director
Stephen P. Barna, Director
Shainur Ahsan, Director
Christopher Friend, Reston Branch President

Committee Chairs

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

ASCE NCS Annual Awards Celebration Recap!

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Scholarship Awards

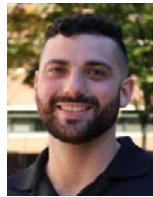
The ASCE Student Chapters in our Section include the Catholic University of America, George Washington University, George Mason University, Howard University, and the University of the District of Columbia. ASCE NCS awarded \$19,000 in scholarships at this year's event! Congratulations to the scholarship award winners:



Scholarship Winners at the Annual Awards Celebration



Nicholo Gadiana
George Mason University
\$1,500



Nikolas Hawley
George Mason University
\$2,500
Padgett Memorial Scholarship



Camila Renjel
George Mason University
\$2,500



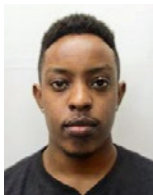
Christopher Lemkan
George Washington University
\$1,000



Audra Foster
George Washington University
\$1,500
Hummel Memorial Scholarship



Kathryn Burkey
George Washington University
\$1,000

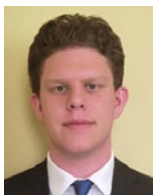


Rutayisire Davis
University of the District of Columbia
\$1,500



Christine G. Hanna
University of the District of Columbia
\$1,500
Hathaway Memorial Scholarship

(Not Pictured)
Joshua Allen
University of the District of Columbia
\$1,000



Vincente Johnson
Catholic University of America
\$2,500
FitzSimons Memorial Scholarship



Isabella Bernard
Catholic University of America
\$2,500
Williams Memorial Scholarship

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Outstanding Graduating Seniors

The Catholic University of America – Faculty Advisors: Dr. Bismark Agbelie & Dr. Jason Davison



Outstanding Graduating Senior:

John Henry Mader

“After graduation, I will be working as a project manager for Whiting Turner. I will be a part of the federal group that works for the various military bases in the Norfolk/Virginia Beach area.”



Outstanding Graduating Senior:

Kimberly McGroary

“Post-graduation, I have decided to stay in Washington, DC and become a part of the Clark Construction Group team in Construction Management.”

George Mason University – Faculty Advisor: Dr. Doaa Bondok



Outstanding Graduating Senior:

Jason Francis Navarrete

“I plan to take time to visit my family in southern Mexico and Guatemala. I’m delighted to have the privilege to travel and celebrate graduation with friends and family back home. Afterwards, I will be working on land development projects with VHB in Richmond, VA as a civil designer.”

George Washington University – Faculty Advisor: Dr. Samer Hamdar



Outstanding Graduating Senior:

Savana Stewart

“After I graduate, I will get my master’s degree in civil engineering with a concentration in structures. I wish to pursue research while in graduate school. Afterwards, I want to work at a structural engineering design firm.”

Howard University – Faculty Advisor: Dr. Hessam Yazdani, P.E.



Outstanding Graduating Senior:

Moriah Brown

“I plan on continuing my education by enrolling in an environmental engineering PhD program in the fall.”

University of the District of Columbia – Faculty Advisor: Dr. Bryan Higgs



Outstanding Graduating Senior:

Richmond Calapano

“My plan after graduation is to acquire a job in civil engineering with a focus on either transportation, structural or geotechnical. I plan to gain as much experience as possible and pass the professional engineering exam. I would also like to come back to UDC to get my master’s degree.”

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ASCE NCS Service Awards

President's Award of Appreciation:

This award is selected by the NCS President to recognize members that have made significant contributions to the Section. Awardees are active members who contributed significant time and talent to the Section and who set a high standard of professionalism through service.



Congratulations to Elizabeth Wheeler, P.E. for receiving the President's Award of Appreciation at the 2022 ASCE National Capital Section Annual Awards Celebration! As Vice President, she received this award for leadership and contribution of talent to plan the ASCE NCS Annual Awards and continuous service to the Section. Thank you, Elizabeth, for your efforts and positivity!



Congratulations also to Maria Raggousis, P.E. for receiving the President's Award of Appreciation at the 2022 ASCE National Capital Section Annual Awards Celebration! As Newsletter Editor, she received this award for leadership in managing the monthly newsletter and involvement in the Architectural Engineering Institute. Thank you, Maria, for getting the work of the Section out to our members and beyond!

Meritorious Service Award: The Meritorious Service Award recognizes individual members of the National Capital Section who have made outstanding contributions to the work of the Section. Awardees must be active

members who contributed significant time and talent to the Section and who set a high standard of professionalism through service.



Congratulations to Shainur Ahsan, P.E. for receiving the Meritorious Service Award at the 2022 ASCE National Capital Section Annual Awards Celebration! Shainur received this award for his outstanding service to the Section through contributions to the online meeting platform and the Reston Branch. He helped take the Section online for virtual meetings at such a critical time!



Congratulations also to J. Kenneth Klewicki, P.E., Ph.D., BCEE for receiving the Meritorious Service Award at the 2022 ASCE National Capital Section Annual Awards Celebration! He received this award for his outstanding service to the Section through contributions to the Environmental & Water Resources Institute. He has planned so many valuable online webinar topics for engineers to learn from!

Lifetime Excellence in Service Award: This award recognizes individual members of the National Capital Section who have made outstanding contributions to the work of the Section over their lifetime. The awardee must be an active member who has contributed significant time and talent to the Section over at least 10 years and who sets a high standard of professionalism through service.



The ASCE National Capital Section presented the Lifetime Excellence in Service Award to Kim Parker Brown, M.S., P.E., F. ASCE at the Annual Awards Celebration on Tuesday evening. She served as the first Black Woman President of the ASCE National Capital Section. She received this award for decades of dedicated service to the Section, including the office of President and continuous leadership in committees across ASCE. Thank you for your grand contribution of time to ASCE, Kim, and for leading the way!

Community Service Award: This award recognizes outstanding contributions by an individual toward community improvement in the Washington metropolitan area. The National Capital Section Board of Directors determines that the awardee must have made, in the opinion of community leaders, an outstanding, selfless contribution of time and talent toward a civil engineering-related activity that has furthered the welfare of the community within a three-year period preceding the award.



Congratulations to Mr. Gordon Meuse for receiving the Community Service Award at the 2022 ASCE National Capital Section Annual Awards Celebration! He received this award for his outstanding, selfless contribution of time and talent toward the joint community project with the Allen Chapel AME Bridge Park Plot in Southeast Washington, DC.

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The project includes a garden that is a key part of the local community, providing fresh food for residents and education on gardening and healthy nutrition. The project aims to increase the capacity of the garden while also making it safer and more accessible for everyone. Please check out Washington DC | Engineers Without Borders – Washington, DC Professional Chapter (ewb-dc.org) for more information. It was a community partnership involving the 11th Street Bridge Project, Building

Bridges Across the River (BBAR), Allen Chapel AME, Engineers Without Borders (EWB) DC, EWB Montgomery College, EWB Howard University, EWB NoVa, NSBE DC, SHPE DC, and ASCE NCS.

We appreciate Nicole Regobert, President of the Engineers Without Borders-Washington DC Professional Chapter, for informing ASCE NCS about Mr. Meuse's great volunteer efforts.

ASCE NCS Project Awards



Outstanding Civil Engineering Project of the Year Award: This award considers a project's contribution to the well-being of individuals; resourcefulness in planning; solution of design problems; pioneering in the use of materials and methods; innovations in construction; Impact on the physical environment; as well as unusual aspects and esthetic values.



Congratulations to the Frederick Douglass Memorial Bridge team, including the District Department of Transportation (DDOT); AECOM (Engineer of Record); HNTB (Program/Construction Manager) and South Capitol Bridgebuilders (Contractor), for

receiving the ASCE National Capital Section Outstanding Civil Engineering Project of the Year Award!

Please visit <https://www.newfrederick-douglassbridge.com/> for more information about this signature structure in Washington, D.C.

Sustainability Award: This award considers a project's innovative design or construction methods used to improve economic, social and environmental sustainability; promise shown by the innovation to extend future developments in sustainability; how the project extends public understanding of sustainability in construction; and how collaboration was an important aspect of the project.



Congratulations to the Co|Lab R&D Space team, including HITT Contracting, Inc. (Owner/Contractor) and William McDonough & Partners (Designer) for receiving the ASCE National Capital Section Innovation in Sustainable Engineering Award!

ASCE NCS Presentation of ASCE Life Members

Life Members: To achieve Life Member status, a member shall have reached the age of 65, shall have paid dues in any membership grade except Student Member for at least 35 years, and shall have had at least 10 years of continuous dues-paying membership immediately preceding the attainment of Life Member. Life Members are exempt from dues and only pay a service fee to receive the Civil Engineering magazine.



Richard A Di Mambro, P.E., M.ASCE (L) & Paul L Shank, P.E., M.ASCE (R)

The National Capital Section offers its sincere congratulations to this year's Life Members:

- Geoffrey S. Baskir, M.ASCE
- James Robert Beall, P.E., M.ASCE
- Margaret M. Bershtein, P.E., M.ASCE
- Gary Phillip Bowman, P.E., M.ASCE
- Paul Laraqe Charles, P.E., L.S., M.ASCE
- Richard A. Di Mambro, P.E., M.ASCE (Pictured, Left)
- Lorraine N. Fleming, F.ASCE
- Stephen Gerard Price, P.E., F.ASCE
- Joseph Andrew Glowitz, Ph.D., P.E., M.ASCE
- Raymond Edward James, Aff.M.ASCE
- Chawn-Yaw Jeng, M.ASCE
- Donald H. Marr, P.E., M.ASCE
- Nasser Massoudi, P.E., M.ASCE
- John Edwin Munson, Jr, Aff.M.ASCE
- Harry Curtis Parrish, Jr, P.E., M.ASCE
- Richard W Petkoff, P.E., M.ASCE
- Paul L Shank, P.E., M.ASCE (Pictured, Right)
- Cary A Skahn, P.E., M.ASCE
- Fredric William Volker, P.E., M.ASCE
- Daniel Patrick Walsh, P.E., M.ASCE

The World's Longest Span Suspension Bridge Opens for Traffic

Two Continents are Connected by 1915 Çanakkale Bridge on March 18, 2022

March 18, 2022 marks a special day for structural engineers designing suspension bridges. The 1915 Çanakkale Bridge in Turkey opened to traffic. The new bridge will carry up to 45,000 vehicles each day and is a mega project to stimulate local and international economic development, logistics and tourism.

"The 1915 Çanakkale Bridge has been a fantastic project to work with," concluded COWI's project director Dr. Inger Birgitte Kroon. COWI A/S of Denmark, has been the consultant firm working with the joint venture consisting of Daelim, Limak, SK and Yapi Merkezi since the start of the project in the Spring of 2017.

The Çanakkale 1915 is a new record-breaking suspension bridge being built over the Dardanelles Strait in the Çanakkale province in Turkey. Located at the western end of the Marmara Sea, the bridge is the **longest** span ($L = 2023$ meters) suspension bridge in the world. The length of the main span of the bridge is 2023 meters (6,637 ft), from tower to tower, and it is 32 meters longer than the current record holder, Akashi Kaikyo Bridge in



Photo: Daelim

Japan. The total length of the bridge is 3,563 m (11,690 ft).

The 2023-meter span refers to the centennial of the Turkish Republic in 2023.

The width of the Çanakkale 1915 bridge deck is 43.06 m (141 ft). The deck carries six lanes (three in each direction) of motorway, together with two walkways on each side for maintenance. It is 72-meter-high (236 ft) from water and has a maximum thickness of 3.5 meters (11.5 ft).

The distinctive 318-meter-high (1043 ft) red towers from which the 1915 Çanakkale Bridge's steel deck is suspended are also the tallest of any suspension bridge in the world, according to COWI. The towers are slightly shorter than the Eiffel Tower.

Ground-breaking for the Çanakkale 1915 project took place in March 2017

and the construction completed in February 2022. The opening ceremony was on March 18, 2022 to celebrate the 100th anniversary of the Republic of Turkey. March 18 marks the 1915 Turkish naval victory against French and British forces in the Dardanelles during World War One.

The scale of the construction is quite large for a single project with a budget of \$3.4 billion dollars.

Total 128,000 metric tons of steel products is used in the Çanakkale 1915 Bridge. For the bridge towers, 35,000 tons of steel plate, for the bridge deck, 52,000 tons and for the wire rods, 41,000 tons of steel is used in main cables and suspenders.



The suspension bridges have higher probability of suffering from wind-induced vibration than other types of structures due to its flexible structural characteristic.

When the span of a bridge is long, the wind load becomes the dominant factor in the bridge design, and the accurate evaluation of wind load and safety from wind induced vibration become essential.

For suspension bridges, the wind tunnel tests are often designed to evaluate girders, pylons, and cables, conducted on girders, pylons and cables, separately or together.

The wind tunnel test of the full bridge aeroelastic model of the 1915 Çanakkale Bridge was carried out at the Wind Engineering Experimental Research Center of the Southwest Jiaotong University in China. The



The aerial view of the Çanakkale 1915 Bridge, KSCE Journal of Civil Engineering

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smooth and turbulent flow, the 20 m/sec (72 per hour), the 45,4 per second (162 per hour) and the 82 m/sec (324 per hour) wind speed and the service conditions of the towers and decks were completed successfully.

The construction of the Canakkale 1915 Bridge was carried out by the consortium of four companies; Daelim and SK E&C of South Korea, along with two major Turkish construction companies, Limak Holding and Yapi Merkezi. The project delivery method was on a Build-Operate and Transfer (BOT) basis.

The consortium will manage and operate the completed bridge for 16 years and two months. The four companies will each have an equal share of 25% in the project. The bridge is handed over to the Turkish Government after the completion of the operation period. Currently there are three bridges and two tunnels in Istanbul connecting the two continents, Europe and Asia.

Mechanics of Suspension Bridges

Suspension bridges get their name from the fact that the roadway is suspended by **cables** from two tall **towers**. Most of the weight is supported by the towers and they pass the compression forces from the **cables** directly into the ground. The two main cables carrying the weight of the bridge are capable of withstanding tension forces but offer no resistance to compression.

Suspension bridges also have smaller **cables** called **suspenders**. These suspenders typically run vertically from the deck up to the main supporting **cables**. The suspenders are also under tension forces and they move the deck's compression forces to the towers through the main supporting **cables**.

Main cables create graceful arcs between the towers and anchorages. Typically, the towers of a suspension bridge are slim. That's because

the compression forces are carefully distributed on each side of the towers. The force of the deck pulls inward on the towers. At the same time, the main support **cables** extend beyond the towers to anchor each end. These anchorages are usually solid rock or heavy concrete blocks secured underground.

The area where the bridge is located is marked by several challenges, such as high winds, high seismic activity and high-stacked container ships all had to be considered. Strong winds are always critical for a long span suspension bridge and to ensure aerodynamic stability a twin-box girder was adopted.

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Dr. Vagelis Plevris, P.E.
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Longest span suspension bridges in the world (top six)

Name	Span	Year Opened or Will Open	Location	Country
1 Canakkale 1915 Koprusu	2,023 m (6,637 ft)	2022	Canakkale Province	Turkiye
2 Akashi Kaikyō Bridge	1,991 m (6,532.2 ft)	1998	Kobe	Japan
3 Yangsigang Yangtze River Bridge	1,700 m (5,577.4 ft)	2019	Wuhan (Hubei)	China
4 Nansha Bridge	1,688 m (5,538.1 ft)	2019	Dongguan (Guangdong)	China
5 Xihoumen Bridge	1,650 m (5,413.4 ft)	2009	Zhoushan (Zhejiang)	China
6 Great Belt Bridge	1,624 m (5,328.1 ft)	1998	Korsør – Sprogø (Region Zealand)	Denmark

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Your Documents as Library: The Tool

The third in a series of four articles for managing with PowerShell your Documents folder as a library by Ranjit Sahai, PE, F.ASCE

When you must quickly locate a file in your Documents – or Projects, or Marketing, or Finance, or other – folder, lean on PowerShell to save the day.

The first article (February edition of this Newsletter) demonstrated how to load the contents of the Documents folder to a PowerShell variable and count in a split second the number of files it contains.

The second article (April edition of this Newsletter) demonstrated how to invoke methods, such as `ToUpper()` from a text string, and to extract properties, such as `DayOfWeek` from a date object.

This third article introduces the PowerShell command syntax and structure by picking apart a simple, yet immensely valuable, file search statement (Fig. 1).

The first statement in Fig. 1 loads file objects (`GetChildItem File`) from the folder `C:\Users\rsaha` and all its subfolders (`Recurse`) to the PowerShell variable `$dal`.

The second statement in Fig. 1 uses the pipeline operator (`|`) to pass the collection of file objects from the variable `$dal` to the `where` cmdlet, which in turn, passes only those file objects that contain the characters `pdh` in their Name (`$.Name match "pdh"`) across the pipeline operator to the `select` cmdlet. The `select` cmdlet selects only the `FullName` property (`Property`

```
PS C:\Users\rsaha> $dal = Get-ChildItem -Path "C:\Users\rsaha" -File -Recurse
PS C:\Users\rsaha> $dal | where {$_.Name -match "pdh"} | select -Property FullName -First 5

FullName
-----
C:\Users\rsaha\OneDrive\Documents\ad\pe license\maryland\maryland pdh requirements.oxps
C:\Users\rsaha\OneDrive\Documents\edu\asce\elelevator-pitch\pdh20141228.pdf
C:\Users\rsaha\OneDrive\Documents\professional\asce\ncs\2013pdhactivities.txt
C:\Users\rsaha\OneDrive\Documents\professional\asce\ncs\committee\transportation\2015-16\2015-11-10_PDH.pdf
C:\Users\rsaha\OneDrive\Documents\professional\asce\ncs\events\ASCE NCS PDH Template.pptx
```

Fig. 1: The simple, yet immensely valuable, file search statement locates all files containing the letters "pdh" (match "pdh") in in their name and lists only the first 5 (-First 5).

`FullName`) from the collection of file objects and lists the `FullName` property (i.e. file name including its directory) for the first five (`-First 5`) files.

Let's focus our attention now on the syntax and structure of PowerShell using the two statements in Fig. 1 as an example.

The PowerShell syntax

PowerShell cmdlets, pronounced command-lets, are lightweight commands that perform an action and typically return an object to the next command in a pipeline.

Cmdlets have a Verb-Noun format, for example `GetChildItem`.

The verbs PowerShell cmdlets use are typically from a standard list of verbs recommended by Microsoft. To display the list of standard verbs, at the PowerShell command prompt, type: `GetVerb`.

Notice that the cmdlet `Get-ChildItem` in Fig. 1 is followed by the `- Path` parameter and its associated value `"C:\Users\rsaha"`. This expression

tells the cmdlet to get files and subdirectories from the specified path.

Notice also that the expression is followed by two other parameters: `- File` and `Recurse`. (Parameters are always preceded by the hyphen character.) However, these parameters are not associated with any values. Such parameters are called *switch parameters* that take no parameter value but turn their presence on or off.

When the `File` parameter is present, it restricts the output of the cmdlet to only file objects by suppressing subdirectory objects; likewise, the switch parameter `Directory` would have suppressed file objects and passed only subdirectory objects across the pipeline operator.

The pipeline operator connects a series of cmdlets. The output of the cmdlet to the left of the pipeline operator serves as input for the cmdlet to the right of the pipeline operator.

You might be wondering, why were `where` and `select` referred to as

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cmdlets when they did not conform to the Verb-Noun format? That's because both are aliases for **WhereObject** and **SelectObject**.

To display the list of aliases in your PowerShell session, at the PowerShell command prompt, type: **Get-Alias**.

Aliases are designed to shorten the amount of text you may otherwise need to type, or to help you ease into PowerShell should you already be familiar with commands such as **dir** or **ls** in other command prompts such as the DOS prompt or the UNIX/Linux Bash prompt.

PowerShell's Help and Resources

PowerShell has an updateable Help system. The latest Help content is online and is continually being updated. To download to your computer the current state of online Help, type: **Update-Help**. To lookup help for the **select** cmdlet, at the PowerShell prompt, type: **GetHelp select**.

If you're looking to learn PowerShell, I'd recommend the book *Learn PowerShell in a Month of Lunches* published by mannings.com.

This series of four articles will conclude next month with a collection

of numerous examples for managing electronic files that you may find invaluable for not only personal productivity but also for GIS-related document management projects.

About the Author

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



The Hills Be Shaken

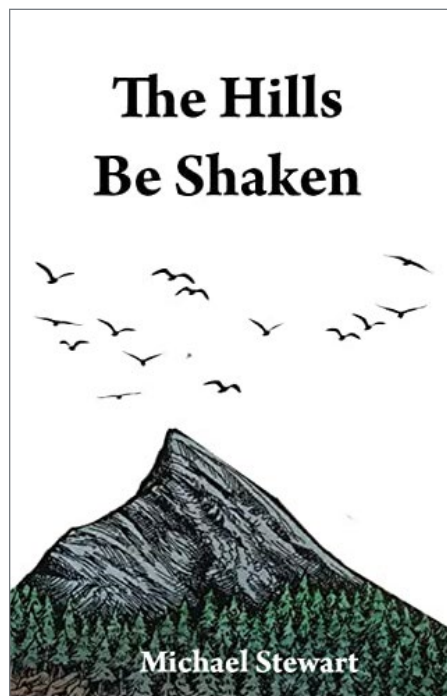
A Novel by Michael Stewart, P.E., former Kansas Section President

Michael Stewart, P.E. is a Project Manager with Alfred Benesch & Company in Topeka Kansas. When he is not a transportation engineer, designing complex urban arterial streets, rural county roads, or high-speed freeways, he is an author and TEDx speaker advocating for engineering and infrastructure across the nation. He is a current member of the ASCE Kansas Section and former Kansas Section President and co-author of the Infrastructure Report Card.

His most recent endeavor is publishing *The Hills Be Shaken*, the world's first engineering thriller. Check out the synopsis:

Mose Haley was an engineer, but in a few short months, he will have his FBI badge... and his revenge.

Two weeks ago, Mose was designing highway curves that safely carry minivans loaded with three kids and a dog doing 70 miles per hour. Now he is standing next to hot ammunition casings holding a standard issue Glock 23



handgun with the slide locked back and the barrel smoking. Two weeks ago – before the people he loved died – was a lifetime ago.

The attack on Manhattan, Kansas, dubbed Little 9/11 was the first. Officer Sam McGuire was there when it happened, shaken like everyone else on that day. The day he witnessed the collapse of a two-mile dam. Also, the day Sam saw the blonde in the park. The fit woman, jogging with an AR-15 and a pistol. He has questioned her and questioned her again. He has gone to ground zero and rummaged through the debris. Sam is a good cop, but he cannot piece it all together. He needs help. He needs an engineer.

Mose wants to believe he has the grit for the job, but he is a rookie. He has never had to face rooftop gunfire or defuse a bomb in a playground with sweaty hands and a paperclip. Mose Haley has never been tested... until now.

The Hills be Shaken is available on Amazon here: <https://www.amazon.com/Hills-Be-Shaken-Michael-Stewart-ebook/dp/B09TK6D7NJ>. ■

ASCE-NCS Committee and Branch News and Updates

Environmental & Water Resources Institute

On May 5th, 2022, EWRI welcomed James Reynolds from the Virginia Department of Health, Office of Drinking Water. He discussed the history of lead in drinking water regulations in Virginia including the Lead and Copper Rule and its recent revisions. He also presented on the Lead Elimination Assistance Program (LEAP) designed to promote the removal of lead in Virginia's drinking water systems.

James Reynolds is the Field Director for the Virginia Department of Health Office of Drinking Water's Richmond Field Office. He started his career in the drinking water industry in 2006 as an operator trainee at a water treatment plant in Suffolk, Virginia and has experience at a water treatment plant, regulatory agency, and consulting firm. James has his B.S. in Biological Systems Engineering and M.S. in Civil Engineering from Virginia Tech and is a licensed professional engineer in Virginia.

Reston Branch

By Michael J. Magyarics, P.E., M. ASCE, Reston Branch Vice President

On April 12, 2022, the Reston Branch hosted David Sarr, PE, Assistant Vice President for WSP USA, for his presentation entitled, "Remedial Evolution – Using Advanced Diagnostic Tools to Accelerate Groundwater Remediation." This was our first hybrid presentation, where all registrants had the option of attending in person or virtually.



ODW Field Offices

- AFO
- CFO
- DFO
- RFO
- LFO
- SEVFO

Office of Drinking Water

www.vdh.virginia.gov/odw

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VDH
VIRGINIA
DEPARTMENT
OF HEALTH
Protecting You and Your Environment

The mission of the Office of Drinking Water is to protect public health by ensuring that all people in Virginia have access to an adequate supply of affordable, safe drinking water that meets federal and state drinking water standards.

**Office of
Drinking
Water**
*Safe Drinking Water for
a Healthy Virginia*

Dave presented in person at the ASCE Headquarters Bechtel Conference Center to several in-person attendees. The presentation was broadcast live to the virtual registrants for the lunchtime event.

Dave's presentation discussed the latest advances being applied to assist in groundwater remediation. The field of groundwater remediation continues to evolve as engineers and scientists develop new tools and methods to investigate and clean up contaminated properties. An early focus on pump



and treat methods has shifted to in situ remediation methods based on detailed chemical, biological and geological characterization of the subsurface. This presentation looked at this evolution through a case study of chlorinated solvent contamination at an industrial site. Groundwater remediation techniques such as a pump and treat system and a permeable reactive barrier reduced migration but residual contamination in groundwater persisted above the treatment goals. Recent work has used advanced diagnostics such as polymerase chain reaction (PCR) analysis and compound specific isotope analysis (CSIA) to develop a cost effective in situ treatment that accelerates naturally occurring processes. Pilot scale testing and full scale application of in situ remediation have demonstrated the sustainable effectiveness of the approach, meeting drinking water standards in the treatment area within 1 year.

David Sarr, PE, has more than 30 years of experience investigating and remediating industrial properties and managing contaminated soil and groundwater during brownfields redevelopment. His fields of technical expertise include environmental characterization, feasibility studies,



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soil and groundwater remediation, contaminant fate and transport, and hazardous building materials. He has designed and implemented remediation projects at Resource Conservation and Recovery Act (RCRA) facilities, Superfund sites, voluntary cleanup program sites, and underground storage tank sites for government and private clients. David has international work experience in Haiti, Honduras, Italy, Nicaragua, and Switzerland.

On May 10, 2022, the Reston Branch hosted Richard Lindenberg, PE, Associate Principal at Wiss, Janney, Elstner Associates (WJE), for his presentation entitled, "Almost Disasters – Structural Analysis and Forensics."

Since joining WJE in 2001, Richard Lindenberg has worked on a variety of projects, using his specialized experience in structural evaluation through structural modeling and instrumentation. Most of his assignments involve bringing an innovative approach to field data collection, data analysis, and visualizations. He also works extensively in the investigation and design of repairs for parking structures, bridges, buildings, and facades. These projects typically include analysis, repair design, development of repair specifications, and construction observation. Prior to joining WJE, Mr. Lindenberg worked as an engineer for Davis, Bowen, and Friedel, Inc., and designed a variety of structures, including water retaining structures, commercial buildings, timber bridges, and shoreline protection. Prior to this, he worked in the oil and gas industry as a facilities engineer supporting production and pipeline services.



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

Education Committee

By Kush Vashee, PE, CAPM, M. ASCE

The ASCE NCS Education Committee is seeking Practitioner Advisors (PA) for student chapters within the section for the 2022 – 2023 School Year. Student chapters include the Catholic University

of America, George Washington University, and the University of the District of Columbia. Looking back, there is information that professional members often wish they knew as students. As a PA, professionals have an opportunity to impart advice and provide students with a head start! It is also a great way for professionals to reminisce about their college days and connect with the next generation.

If you would like to become a PA or just have questions, please contact Kush Vashee, PE, ASCE NCS Education Committee Chair at kvashee@rkk.com.

Congratulations to the students from Catholic University of America, Howard University, George Mason University, George Washington University and University of the District of Columbia who were awarded ASCE NCS Scholarships and named Outstanding Seniors. Look forward to seeing you all at the Awards Banquet on April 26th!

Boundary Stones Committee

The Boundary Stones Committee is looking for volunteers to join the committee and help lead efforts during 2022–2023 and beyond to perform upkeep at the sites where fence painting is required and site work is needed. We do not do work on the stones themselves given the technical processes that are required. A work plan and FY22–23 budget will be needed to be developed for materials to present at the July 2022 Planning Meeting, dates for volunteer events established, and outreach to obtain volunteers during the year to help perform the work are part of the duties as well as working with our jurisdictional partners, DCALs, DAR, DC Office of Planning, and others. Inspired by the Nation's Capital Boundary Stones Committee (NACABOSTCO), ASCE-NCS led the effort from 2010 to 2015 to restore 22 of the 40 sites to ignite the 21st century efforts to preserve and



protect the Stones. It is time to perform maintenance again at many of the sites and we are looking for leaders to help spearhead the effort. For anyone interested in joining this committee, please send an email to Stephen Powers at stephen@designpowers.com. For more information on the Stones please visit www.boundarystones.org or www.DCStones.org.



Younger Members Forum

By Kush Vashee, P.E., CAPM, M. ASCE

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

The group held a virtual happy hour on Wednesday April 6th on Webex! We hope for a bigger turnout at our next in-person happy hour starting at 6PM on May 4th. Look out for some emails soon with registration details and location information. We hope to see you there!

Professional Development:

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

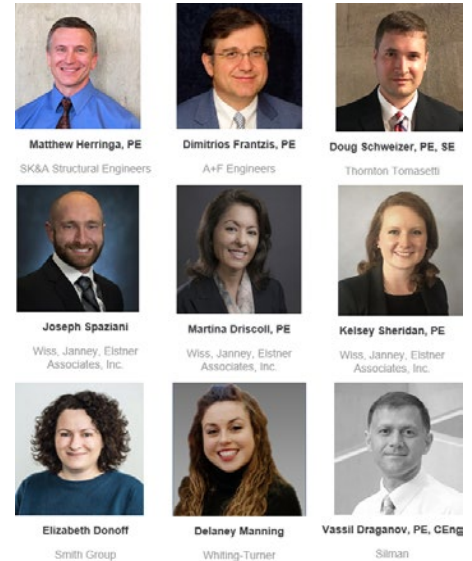
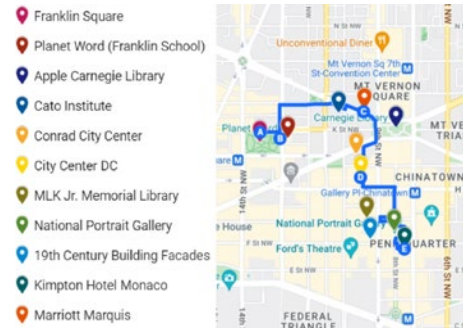
Stay Connected! Check out photos and stay up-to-date with YMF events by visiting the new YMF Facebook page (ASCE National Capital Section Younger Members Forum), following us on Twitter (@ASCE_NCS_YMF), LinkedIn (ASCE National Capital YMF), and Instagram (@asce_ncs_ymf)

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

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Architectural Engineering Institute Committee

AEI DC is hosting an insider's walking tour of Penn Quarter (Part 1) on Thursday May 19th at 6 PM. The group will meet at Franklin Square Park and head on a 1 mile tour of notable buildings and landmarks with guest speakers providing insight and unique information on the architecture, engineering, and construction of notable buildings on the route. We hope to see you there!



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](#).