Program of Events

5:15  Social Hour

6:20  Introduction & Opening Remarks
Patrick Sullivan, P.E.
Civil & Environmental Consultants, Inc.
ASCE Region 2 Governor

President’s Message
Sam Shamsi, P.E., Ph.D., F.ASCE
ALCOSAN
ASCE Pittsburgh Section President-Elect

6:30  Keynote Speaker
Dr. Joe McAllister
Co-Founder of Brew: The Museum of Beer

7:00  Dinner

7:45  Awards Presentation
Patrick Sullivan, P.E.

Recognition of National and Regional Awards
Student Awards Foundation
American Bridge Leadership Award / SAF Italo V. (Ody) Mackin Achievement Award / ASCE Achievement Award
Finalists

---SECTION AWARDS---

2018 Civil Engineering Achievement Award
Liberty Bridge Project

2018 Award of Merit
Route 30 Landslide Remediation

2018 Project Sustainability Award
Centre & Herron Green Stormwater Infrastructure Project

2018 Service to the People Award
Sandie Egley
Beaver County Commissioner

2018 Journalism Award
Ed Blazina
Pittsburgh Post-Gazette
Program of Events

2018 Professor of the Year
Constantine (Costa) Samaras, PhD, LEED, FE
Associate Professor, Dept. of Civil and Environmental Engineering
Carnegie Mellon University

2018 Government Civil Engineer of the Year
George Gardner, P.E.
MSHA

2018 Young Civil Engineer of the Year
Sylvia Yunlin Sun, P.E.
Joseph B. Fay Company

2018 Civil Engineer of the Year
Dr. David A. Dzombak, PhD, PE, BCEE, DWRE, NAE
Carnegie Mellon University

2018 Distinguished Civil Engineer
William Trimbath, P.E.
Collective Efforts, LLC

9:30  Raffle

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Interchanges
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EXCAVATING
Dr. Joe McAllister is the Founder of a project to create the first and only national museum devoted entirely to honoring and exploring the 10,000 year history of beer in our culture, aptly named **Brew: The Museum of Beer**.

Currently the ‘museum’ is presenting *Beer in WWII* at the West Overton Distillery Museum, in conjunction with the traveling exhibition, *We Can Do It! WWII*, the 500-square foot exhibit created by the Senator John Heinz History Center, now through March 26.

Joe also founded The Autism Center at Children’s Hospital of Pittsburgh and developed programs there that were replicated internationally.

He was also the founder of the Advisory Board on Autism and Related Disorders (ABOARD), which today is known as Autism Connection of PA and has 12,000+ members. McAllister established a private business, Services for Children with Autism and Their Families, which was acquired by The Watson Institute.

He was recruited to develop the Department of Psychological Services at Watson, where he served as the Director from 2000 to 2013. In this role, he developed innovative programs, oversaw a $5 million budget, managed a staff of 70+, secured State and County funding, established post-doc training programs and recruited trainees.

In his role at Brew, he aims to create a must-see, bucket list destination for those who are serious about beer by building a 50,000 square foot facility to deliver a unique experience like no other in existence or under development.

*Photo courtesy of Pittsburgh Post-Gazette*
Recognition of National and Regional Awards

ASCE Pittsburgh Section YMF
Received grant from ASCE National to support a YMF Mentorship Program for local collegiate students

Greg Scott, P.E., F. ASCE
Received the President’s Medal, awarded by the Executive Committee of ASCE National, in recognition for accomplishments and contributions of eminent engineers to the profession, the Society or the public, conferred at the initiative of the Kristina Swallow, the President of ASCE.

Coreen Casadei, P.E, M. ASCE
Was recognized at the 2019 Region 1,2, 4 and 5 Multi Regional Leadership Conference (MRLC) in Orlando, FL by the Pittsburgh Section of ASCE for outstanding community volunteerism.

ASCE Pittsburgh Section
Received Letter of Commendation as a Finalist for ASCE Large Section Award

ASCE Pittsburgh Section
Received proclamations from the Office of the Governor, the Allegheny County Executive’s office and from the City of Pittsburgh Mayor’s office in celebration of the 100th Anniversary of the founding of the ASCE Pittsburgh Section, September 2018
Student Awards Foundation

American Bridge Leadership Award

In 1988 members of the ASCE Pittsburgh Section founded the Student Award Foundation (SAF) of the Pittsburgh Section of the American Society of Civil Engineering. Since that time, the SAF has awarded emerging leaders who call the Pittsburgh Section home. In 2007 American Bridge Company provided a donation of $75,000, and since, the primary award is dubbed the American Bridge Leadership Award. The SAF will annually award the American Bridge Leadership Award for the amount of at least of $5,000.

SAF Italo V. (Ody) Mackin Achievement Award and ASCE Achievement Awards

The Student Award Foundation (SAF) of the American Society of Civil Engineers (ASCE), Pittsburgh Section, is proud to announce the naming of one of its ASCE student achievement award. In honor of Italo V. (Ody) Mackin, the Mackin Engineering Company provided a donation of $37,500 to the SAF. This prestigious award will now and perpetually be known as the “SAF Italo V. (Ody) Mackin Achievement Award.” The SAF will annually award the Italo V. (Ody) Mackin Achievement Award for the amount of at least $1,250.

Thanks to the donation by American Bridge, Mackin Engineering Company and all the generous benefactors, this year, the amount of the SAF American Bridge Leadership Award is $6,400, and the amount of the Primary Achievement Award, now known as the “SAF Italo V. (Ody) Mackin Achievement Award,” is $1,600.
Alexa Janikowski is a junior at the University of Pittsburgh at Johnstown obtaining her Bachelor of Science degree in Civil Engineering. Ms. Janikowski is an active member of the ASCE Student Chapter, Captain of the Steel Bridge Team, member of the Concrete Canoe Team, and is a member of the Society of Women Engineers Student Chapter.

Ryan Rusali is a sophomore at Carnegie Mellon University obtaining his Bachelor of Science degree in Civil Engineering and Engineering and Public Policy. Mr. Rusali is an active member of the ASCE Student Chapter and serves as the Student Chapter Communications Director. Additionally, Ryan volunteers as a teaching assistant to introduce STEM topics to elementary and middle school students, serves as a Residential Assistance and Orientation Counselor for CMU, and has earned the Eagle Scout Award and National Park Service Volunteer Award.

Justin Towsey is a senior at the University of Pittsburgh at Johnstown obtaining his Bachelor of Science Degree in Civil Engineering. Mr. Towsey is an active member of the ASCE Student Chapter and has fulfilled several leadership including the Co-Captain of the Concrete Canoe Team and Mold Construction Manager in his sophomore year, Captain of the Concrete Canoe Team in his junior year and is currently serving as the ASCE Student Chapter President. In addition, Justin serves as a member of the ASCE GeoWall Team and Alumni Coordinator. He is also a member of the Annual Report Committee, Facilitating Opportunities for Refugee Growth and Empowerment (FORGE), and serves as an undergraduate Tutor.

Congratulations and keep up the great work!
2018 Civil Engineering Achievement Award

Liberty Bridge Project
Allegheny County, Pennsylvania

The Liberty Bridge has been a landmark structure and Pittsburgh icon since it opened in 1928. It created the modern suburbs, quadrupled property values south of Pittsburgh, and opened with a parade five miles long. However, by 2014, the bridge carrying 55,000 vehicles per day was in poor condition. It could no longer carry trucks and had become a poster-child for America’s infrastructure crisis. Sixty Minutes, profiling America’s neglected infrastructure, highlighted the bridge. Referring to Liberty Bridge and others like it, Ray LaHood, United States Secretary of Transportation, stated plainly: “Our infrastructure is on life support right now.”

PennDOT and HDR responded with a rehabilitation project that preserves the structure and meets current engineering and accessibility standards, using innovations including:

• Accelerated bridge construction techniques to replace a bridge deck the size of three football fields while minimizing traffic impacts
• A new Exodermic deck - the first ever used in Pennsylvania to provide a stiff, lightweight replacement for the failing grid deck

This complex, urban project was made more challenging by an accidental construction fire that heated and buckled a primary truss member, crippling the bridge and requiring immediate closure. Working around the clock, a first-of-its-kind jacking frame was designed, fabricated and installed to straighten the warped member and re-open the bridge in just 24 days.

Thanks to innovative solutions, today Liberty Bridge is off life support. The new bridge will support life in Pittsburgh for generations, with an ADA accessible sidewalk permitting all people to enjoy crossing this historic structure.
Uniqueness and/or Innovative Application of New or Existing Techniques

The first Exodermic deck in Pennsylvania, covers an area the size of three football fields was replaced. Sections of this deck were prefabricated in panels that could be installed over weekend closures and connected together with high early strength concrete. A custom rapid-set concrete mix was created for this project, which allowed traffic to use new deck sections just a few hours after the concrete was placed. The new deck combines the strength of steel T-beams with reinforced concrete on top; making it strong, light and easy to overlay in the future.

HDR served as the lead firm for rehabilitation design, and lead owner’s agent for emergency fire response. Design: responsible for truss repairs, deck replacement design and design-build specifications for maintenance of traffic. For the fire emergency: jacking frame concept development, design reviews, emergency safety assessment (3D modeling), and instrumentation/measurement coordination.

Role of Other Subconsultants

Johnson, Mirmiran & Thompson, Inc. | Structural Engineering
The Markosky Engineering group | Structural Engineering
Monolah Basin Engineers | Survey
Santangelo & Lindsay, Inc. | Lighting & Electrical Design
Lehigh University | Fatigue/Fracture consultation, testing & instrumentation for jacking repair

Future Value to the Engineering Profession and Perception by the Public

The project advanced the profession with several new technical contributions:

• Many large bridges in Pennsylvania have aging grid decks similar to Liberty Bridge. The overlay testing regime used for this project will provide valuable data to the Pennsylvania Department of Transportation (PennDOT) for future grid deck rehabilitation projects.

• With the first Exodermic grid deck in Pennsylvania, this project demonstrates that weight savings and rapid replacement are possible with lightweight, precast Exodermic deck panels. Engineers in Pennsylvania now have another option to meet the growing public demand for rapid bridge construction. Specifications for the deck panels, precast concrete, and rapid-setting concrete have been developed for future use.

• Following the fire, researchers from Purdue, Lehigh, and Carnegie Mellon
Universities, as well as experts from the Federal Highway Administration (FHWA) assisted engineers fixing the bridge. This unprecedented event provides an important example of structural redundancy and load-redistribution after member failure. Extensive material testing performed by Lehigh verified that the load-carrying capacity of the steel was not compromised. This work resulted in a subsequent study on steel surface temperature based on paint discoloration.

Minimizing traffic disruption resulted in positive public perception for the project. When the bridge deck was last replaced in 1982, half the deck was closed, which would have severely impacted weekday commuters. For this project, three lanes of peak weekday traffic were maintained at all times, using quarter-width phasing and the ABC techniques. By precasting deck panels and utilizing high early strength concrete to stitch panels together, engineers showed the public innovations needed to keep traffic flowing. Contract bidding incentives were also used to drive down the time of lane closures and incentivize speed for the contractor.

Social, Economic, and Sustainable Development Considerations

Supports at the bridge joints were extended for this project to meet current seismic requirements. The new deck, joints, and drainage system will protect the steel from road salts and reduce maintenance costs. While the existing bridge did have a pedestrian sidewalk, it terminated in a long staircase on the city side of the bridge, making it inaccessible for those in wheelchairs. By repurposing a portion of the existing roadway along the Boulevard of the Allies and Second Avenue, this project added more than 800 feet of new sidewalk to enhance the pedestrian connection to the city and make the structure ADA compliant.

Improvements to driver safety and experience were also included in the project. A new state-of-the-art electronic lane control system with variable message boards to improve safety and provide better directions for travelers. Solid concrete barriers at the edges of the deck were replaced with open, modern steel rail barriers, which permit much better views of the Monongahela River valley, South Side, and Pittsburgh skyline, improving driver experience of this stunning urban view-shed.

Successful Fulfillment of Client/Owner Needs

The main goals for PennDOT in this rehabilitation were to remove the load posting on the bridge, ensure the bridge was accessible and safe per current codes, and secure 40 more years of use from this historic truss.
By performing hundreds of unique steel repairs on beams, truss members, and connection plates, and by replacing the bridge deck and supporting stringers, trucks can now use the structure. Replacing the bridge deck was crucial in order to preserve the bridge and allow it to function safely. The new deck, with modern bridge joints and drainage, provides a robust and waterproof “roof” to keep the steel below dry and corrosion-free. In addition, replacing the old stringers along with the deck eliminated many poor details that are prone to cracking over time. As years of exposure to traffic mounted, these details were a long-term liability requiring detailed documentation for each inspection. By replacing all stringers with new, properly fabricated beams, this liability was eliminated.

For this major urban project, the owner sought to limit traffic impacts as much as practical and to keep the traveling public informed of the schedule for any closures. The complete closure of Liberty Bridge due to the fire emergency suddenly required 55,000 drivers to find a new route to their destination each day. Opening the bridge as soon as safely possible became a critical goal of the client. Engineering professionals collaborated nearly 24 hours per day for 24 days to coordinate, develop, and review critical design and procedural documents to help fix the structure. This effort led to the bridge’s quick repair, helping those 55,000 drivers return to their usual commute and showing the public PennDOT’s ability to rapidly respond to complex problems.

As a result of the Liberty Bridge Rehabilitation project, traffic is freely flowing on the new deck, guided by modern lane control and ITS systems. The new bridge deck and completely new paint coat system will preserve the bridge for generations to come.
2018 Award of Merit

Route 30 Landslide Remediation
Allegheny County, Pennsylvania

Project Team
The Pennsylvania Department of Transportation (PennDOT), District 11-0, is owner of the project. Gannett Fleming, as prime consultant, provided final design engineering services, design-build review services, review of shop drawings, and consultation during construction operations. A comprehensive landslide remediation bid package was delivered to PennDOT within 10 days from receipt of an emergency authorization. Golden Triangle Construction was the contractor. Monaloh Basin Engineers prepared right-of-way plans.

Project Overview
Decisive action by an engineering team near Pittsburgh likely saved dozens of lives. When subtle slope movement along Route 30 in Allegheny County suddenly accelerated, engineers from Gannett Fleming and PennDOT investigating roadway subsidence warned nearby residents to leave immediately. Just hours after an evacuation, a landslide sent 300 feet of roadway and thousands of tons of soil plummeting 90 feet down a steep hill, destroying a home and two apartment buildings. Fortunately, no one was hurt, but the closure of the roadway threatened to paralyze the region.

After a brief site assessment for continued slope movement, the monumental task of rebuilding Route 30 got underway. Working around the clock, Gannett Fleming delivered a comprehensive landslide remediation design and bid package in just 10 days—when the industry norm is 10 weeks or more, even under emergency conditions. The extraordinary effort kicked off construction operations that continued 7 days a week, 24 hours a day, with no holiday breaks, allowing the highway to reopen in less than three months, instead of a more typical design and construction duration of two years.

In 10 days, the team delivered a comprehensive package that included:

- Details for excavation and benching to remove the landslide material and replace it with durable rock embankment
Final structure plans for construction of a 400-foot-long, 20-foot-high anchored soldier pile and lagging retaining wall to support the new embankment

Design-build roadway plans for roadway surface and drainage repairs

Special provisions needed for PennDOT to advertise the project for bid.

In the days after the landslide, residents across the region were dismayed to learn that large highway projects often take years to get off the ground, and months to construct. A key artery connecting North Versailles, East McKeesport, and North Huntingdon to the Parkway East, Route 30 near East Pittsburgh carries an estimated 30,000 travelers every day—many heading to downtown Pittsburgh for work. Alternate routes could not accommodate the additional vehicles without widespread delays and wear and tear on local roads. Even a year-long closure of Route 30 would have been a distressing hardship for commuters who depend on the highway. The collapse not only severed suburban communities from each other, it cut off convenient access to center city workplaces for tens of thousands of residents.

The reopening of Route 30 just 80 days after the landslide restored mobility to the region as quickly as possible. PennDOT Secretary Leslie S. Richards praised the powerful teamwork and creative engineering that led to the remarkable accomplishment: “The intense dedication shown by everyone assisting those impacted by the slide and reopening this roadway has been astounding.”

The team’s cost estimate for construction was only 1 percent off the accepted bid, more accurate than the 10 percent goal of a typical estimate, and extremely rare for one prepared under such an aggressive schedule. Careful analysis of similar construction projects and knowledge of emergency construction costs allowed the team to provide PennDOT with a precise estimate in 10 days, helping the client plan budget needs accurately.

Contributions to Well-Being of People and Community

By meeting the intense deadline, the team restored mobility to the region within three months, ending the 5-mile-long backups that snarled rush-hour traffic in the days following the closure.
Resourcefulness in Planning and Solution of Design Problems

With debris covering the site, and existing information on the 80-year-old roadway construction almost nonexistent, the team found creative ways to obtain the data it needed to determine proper wall layout.

Pioneering in Use of Materials and Methods

The aggressive schedule called for creative forward thinking. Suspecting that a new retaining wall might be needed, the team began searching for suppliers as it was investigating subsidence before the landslide. Within days of the slide, it identified a supplier that had the 51 steel beams required for the wall already in stock.

Innovations in Construction

The engineers used an unconventional, aggressive approach to design a 400-foot-long retaining wall and 90-foot embankment, working hand-in-hand with PennDOT and emergency excavators as they began removing approximately 35,000 cubic yards of debris from the site.

Consideration of Impact on Environment

To minimize the environmental impact to the small community of East Pittsburgh, the team designed a durable rock embankment supported by an anchored wall to minimize the footprint required to reconstruct the roadway.

Unusual Aspects

Small landslides in hilly Allegheny County are not uncommon after periods of prolonged rain. The Route 30 landslide was much larger than usual for the region and powerful enough to destroy a key travel artery. It also struck residences, not only endangering lives but making remediation design and construction significantly more complicated than usual.

The project was completed on June 27, 2018. The team’s extraordinary efforts to restore mobility to the region by completing its work in a fraction of the time typical of similar projects represents an inspiring example of successful remediation design under emergency conditions.
Centre and Herron Green Stormwater Infrastructure Project
Allegheny County, Pennsylvania

Project Overview
The City of Pittsburgh and The Pittsburgh Water and Sewer Authority (PWSA) completed Phase I of the Green First Plan in 2015, wherein a commitment to utilizing Green Stormwater Infrastructure (GSI) to address localized flooding, CSO abatement, and improve water quality was made. This proactive approach treats multiple stormwater symptoms with one solution which is cost-effective for rate payers and has economic, social, and environmental benefits.

The Centre and Herron Green Stormwater Infrastructure Project was one of PWSA’s first stormwater capital projects and transformed an existing Western Pennsylvania Conservancy community flower garden and a primarily underutilized city-owned parcel into a more sustainable landscape and neighborhood gateway. This project is located within the M-19 Sewershed and redirected stormwater runoff from steep hillside and an adjacent street to mitigate flooding on the streets, erosion, and sedimentation.

The design of the new stormwater systems consists of a 585 linear foot bioretention system with 6,915 cubic feet of storage capacity and additional underground storage via R-Tanks add 7,765 cubic feet of storage. To address the steep nature of the site, there are three depressed curb areas to allow water to enter the site as well as a modified catch basin to redirect flow underneath existing utility conflicts. Two weirs were installed to help slow flow as it moves through the site allowing for more infiltration and an outlet structure regulates flow prior to reentering the combined sewer system. The Centre and Herron GSI Project manages 4.26 acres with 2.99 pervious acres and 1.27 impervious acres of drainage area. The system captures 95% of all rain events and intercepts 1,018,900 gallons annually and have an estimated CSO reduction of 882,800 gallons annually.
Prior to this project, all the stormwater would have gone into the overwhelmed combined sewer and send polluted water to the river. Utilizing the natural retention and infiltration capabilities of plants and soils, this system reduces stormwater runoff, filters and breakdowns pollutants, and increases habitat diversity. It reduces the stormwater volume entering the combined sewer system in the M-19 sewershed, thus improving the water quality in the Monongahela.

**Project Team**
- PWSA Project Manager: Megan Zeigler, Associate Project Manager
- Design Team: The Wood Group, Environmental Planning and Design
- Construction Team: Viglotti Landscapes, AECOM, Collective Efforts, Mott MacDonald, The Western Pennsylvania Conservancy
- Funding: PWSA Capital Funds and ALCOSAN GROW Grant

This project will intercept stormwater runoff prior to entering the combined sewer system and will result in less pollution entering the regions’ rivers during rain events. As part of PWSA’s analysis, AutoCase was used to evaluate the triple bottom line benefits associated with this individual project over its lifecycle.

**Triple Bottom Line Benefits or Triple Bottom Line Reductions**
- Air Pollution Reduction $5,024.63 - $9,059.56
- Carbon Reduction $699.02 - $2,920.65
- Flood Risk Mitigation $232,371.93 - $464,734.87
- Heat Island Effect Reduction $2,962.18 - $6,651.06
- Property Value Increase $37,906.21 - $78,137.87
- Recreational Value Addition $9,772.43 - $15,371.50
- Economic Water Quality Benefits $7,190.90 - $9,654.77
Sandie worked in the Civil Engineering field from 2006-2015 as Director of Business Development for three Pittsburgh firms: Marion Hill Associates, Inc., Michael Baker International, and Lennon, Smith Souleret, Engineering (LSSE). She is a top-performing sales, marketing, and business development professional with proven ability to drive business expansion through aggressive sales initiatives that deliver revenue growth, market share, and market penetration.

Sandie has served the Pittsburgh Civil Engineering community, supporting ASCE-Pittsburgh section in this role through corporate sponsorships and attending events, and most importantly in her recent public service role that has changed the socio-economic face of Beaver County in an environmentally responsible manner. She has dedicated her life to service to people and women empowerment in the industry and spearheaded the “Ladies Luncheon” at the Engineers Society of Western Pennsylvania (ESWP). Ms. Egley is also supporting the effort to Save the Fallston Bridge campaign in Beaver County.

She was Chairman of the Beaver County Board of Commissioners her first two year of office 2016-2017 and is County Commissioner the last two years of her term from 2018-2019. Sandie announced that she would run for County Commissioner and resigned from her position at LSSE in 2015. After more than 65 years of a Democratic Board, Sandie was part of the first Republican team majority for the Beaver County Commissioners and will serve the next four years.

Sandie’s term started in January of 2016 and has been fueled with controversial decisions along with very aggressive moves to reduce the size of government and cutting over 12 million of a 220 million dollar budget that was re-opened two weeks into office. She is a lifelong resident of Beaver County.
Ed Blazina
Pittsburgh Post Gazette

Ed Blazina is a 62-year-old native of Braddock and graduate of Point Park College who has been working as a reporter and editor for newspapers in Oil City, Sharon and Pittsburgh for more than 40 years.

He began working at the Pittsburgh Press as a reporter in 1983 and stayed on as a local news editor when the Pittsburgh Post-Gazette bought the Press in 1992.

In 2015, after 10 years supervising government reporters, he returned to reporting as the paper’s transportation writer. In addition to covering daily stories about public transportation, roads and bridges, and autonomous vehicles, he has been writing a series of occasional stories about the on-going construction of the Southern Beltway, the first completely new highway in western Pennsylvania in a generation.
Constantine (Costa) Samaras, PhD, LEED, FE
Associate Professor Department of Civil and Environmental Engineering
Carnegie Mellon University

Professor Samaras received a BS in Civil Engineering from Bucknell University in 1999, then joined Parsons Brinckerhoff in New York City where he stayed until 2004, advancing from Civil-Environmental Engineer to Sustainable Design Manager.

While working there, he earned a Masters of Public Administration from New York University in 2004. He subsequently earned a PhD in Civil and Environmental Engineering and Engineering and Public Policy in 2008 from Carnegie Mellon, followed by a post-doctoral research appointment in Engineering and Public Policy. He worked at the RAND Corporation (Pittsburgh office) from 2009-2014, rising to the rank of Senior Engineer. He also was appointed as a Professor in the Pardee RAND Graduate School in 2011. Professor Samaras joined Carnegie Mellon as an Assistant Professor in January 2014. He was promoted to Associate Professor in 2018.

Before joining Carnegie Mellon as a faculty member, Professor Samaras co-taught as an adjunct in Engineering and Public Policy, and consistently earned high instructor FCE scores in Innovation in Energy and the Environment, an elective course. After joining CEE at Carnegie Mellon he continued his strong teaching performance in three courses spanning the undergraduate and graduate programs, including: Introduction to Civil and Environmental Engineering, the CEE intro course for first-year students, Energy Demand and Utilization, a core half-semester course in the Energy Science, Technology, and Policy (ESTP) interdisciplinary masters program, and Climate Change Adaptation for Infrastructure, a new half-semester graduate CEE course that he designed.

He received a Wimmer Fellowship from the Carnegie Mellon Eberly Center for Teaching Excellence and Educational Innovation in support of further development of the climate change adaptation course. He also led the development of the CEE MS concentration on Climate Change Adaptation for Infrastructure.

Students describe his personal engagement, preparation and willingness to act as a mentor and advisor among the qualities that have led to his educational success. Professor Samaras is recognized as a thought leader in educating
journalists, stakeholders and the public on transportation, energy, and climate issues via active engagement on Twitter and related social media platforms.

Professor Samaras has built an excellent, impactful, and widely recognized and respected research program. He currently advises or co-advises eight PhD students. He has been advisor or co-advisor of eight completed PhD students at Carnegie Mellon and three at the Pardee RAND Graduate School. He has also supervised five BS and 11 MS student researchers in CEE and ESTP.

He has presented 43 invited talks to academic, research and policy audiences. He has also submitted two invention disclosures while at Carnegie Mellon. His publications represent collaborations with students and a variety of faculty and professionals both at Carnegie Mellon and elsewhere. In his previous position at RAND he authored 10 technical reports.

His work has been cited more than 2,900 times as counted by Google Scholar, with at least six publications having more than 100 citations. His work is widely known and cited in traditional as well as online media such as The New York Times, WIRED and The Energy Collective. The 2016 paper led by his PhD student Corey Harper on estimating potential increases in travel with autonomous vehicles won an Elsevier Atlas best paper award, selected from papers across its many journals.

Professor Samaras has received more than $3.4M in funding as Principal Investigator and $1.8M as co-PI from a diverse mix of federal agencies including National Science Foundation, the US Department of Energy, and the US Department of Transportation, from the Carnegie Mellon Scott Institute for Energy Innovation, and from industry sources.

Professor Samaras is an active member of the American Society of Civil Engineers (ASCE), American Society for Engineering Education (ASEE), Association of Environmental Engineering and Science Professors (AEESP), the American Geophysical Union (AGU), and the Transportation Research Board (TRB). Through ASCE, specifically the Committee on Adaptation to a Changing Climate, and TRB (several committees), he has had leadership roles in organizing various workshops, conferences, and publication efforts.
Congratulations!

David A. Dzombak, PhD, PE, BCCE, DWRE, NAE
Hamerschlag University Professor and Head of the Department of Civil and Environmental Engineering

2018 ASCE Pittsburgh Civil Engineer of the Year

Constantine (Costa) Samaras, PhD, LEED, FE
Associate Professor
Department of Civil and Environmental Engineering

2018 ASCE Pittsburgh Professor of the Year

Ryan Rusali
2018 ASCE Pittsburgh Student Awards Foundation Finalist
George H. Gardner, PE, PLS, MSc, M.ASCE
U.S. Mine Safety and Health Administration (MSHA) - Pittsburgh Safety and Health Technology Center

Mr. Gardner is a Senior Engineer and the Center Chief of the U.S. Mine Safety and Health Administration’s (MSHA) Pittsburgh Safety and Health Technology Center. Mr. Gardner earned his Bachelor of Science and Master of Science in Civil Engineering at the University of Pittsburgh. He has held senior leadership positions within MSHA, serving as the Senior General Engineer and Deputy Director of Technical Support at the agency’s Arlington, VA headquarters.

He has authored or co-authored nine publications related to mine safety, geotechnical, and civil engineering. Mr. Gardner began his career with the federal government as a Civil Engineer in the Mine Waste and Geotechnical Engineering Division in Pittsburgh in 1986, and has become a technical expert on a diverse range of engineering topics.

His career in public service has kept him involved in complex technical projects, which include fatal and other serious accident investigations, conducting ground control evaluations, reviewing of plans for construction of complex impoundments, and leading a wide range of technical investigations related to the mining industry.

Mr. Gardner has served as a Director, Program Chair, and Technical Group Interaction Chairman for the ASCE Pittsburgh Section. He has made significant contributions to the Geotechnical Engineering Group, which was the predecessor for the Pittsburgh Section Geo-Institute Chapter, serving on the board as chairperson, treasurer, member-at-large, and on the planning committee.

In addition to ASCE, he is a member of the International Society of Soil Mechanics and Foundation Engineering, the American Society of Civil Engineers, the Geo-Institute, the Society for Mining, Metallurgy, Exploration, and Toastmasters International.
2018 Young Civil Engineer of the Year

Sylvia Yunlin Sun, P.E.
Infrastructure and Industrial Constructors
USA (i+iconUSA)

Sylvia has been an Estimator/Project Engineer at Fay, an i+iconUSA Company, since 2015. As a registered Professional Engineer, she focuses on heavy highway and heavy civil cost estimation for projects for clients, such as the Pennsylvania Department of Transportation, Pennsylvania Turnpike Commission, Maryland Department of Transportation, West Virginia Division of Highways, as well as for select private sector clients. Sylvia also has onsite experience as a Project Engineer for Fay’s US-219 New Highway Construction Structure Phase in Somerset County, PA from 2015 to 2016.

Sylvia graduated with a Master’s Degree in Civil Engineering from Carnegie Mellon University (CMU) in 2014. After graduation, she worked at the City of Pittsburgh Department of City Planning as an ADA architectural and GIS intern. She also started to attend ASCE Pittsburgh Section Young Member Forum (YMF) General Body Meetings and volunteered as a mentor for civil engineering sessions for the ACE Mentor Program. In 2018, Sylvia was elected as ASCE YMF Treasurer and Fundraising chair. She also leads substantial fundraising efforts for YMF events and operations. As a result, she has successfully expanded new companies’ sponsorship for the YMF December Dinner and raised significant donations for the annual raffle sales of Pittsburgh Penguins Tickets.

Showing recognition of her future leadership potential, Sylvia was identified amongst her peers to be selected to the Leadership Development Initiative program (LDI Class of XXVI), where she has been a member since September 2018. LDI is a creative and innovative leadership training program by Leadership Pittsburgh Inc. for high-potential young professionals, and has served as a model for several others around the country. Sylvia has devoted tremendous effort in Minority Outreach in the Construction Industry throughout the years, leading efforts to support minority, women, and economically disadvantaged individuals to advance highway construction trades. Sylvia also participated in the i+iconUSA relay team for 2018 Pittsburgh Marathon benefiting Cystic Fibrosis charity.
Dr. David A. Dzombak, PhD, PE, BCEE, DWRE, NAE
Carnegie Mellon University

Dr. Dzombak is the Hamerschlag University Professor and Head of the Department of Civil and Environmental Engineering at Carnegie Mellon. The emphasis of his research and teaching is on water quality engineering, water resource sustainability, and energy-environment-issues. At Carnegie Mellon he also has served as Associate Dean for Graduate and Faculty Affairs for the College of Engineering (2006-2010), as Director of the Steinbrenner Institute for Environmental Education and Research (2007-2013), and as Interim Vice Provost of Sponsored Programs (November 2012-August 2013).

Dr. Dzombak received his Ph.D. in Civil Engineering from the Massachusetts Institute of Technology in 1986. He also holds an M.S. in Civil Engineering (1981) and a B.S. in Civil Engineering (1980) from Carnegie Mellon, and a B.A. in Mathematics from Saint Vincent College (1980). He is a registered Professional Engineer in Pennsylvania, a Board Certified Environmental Engineer, a Diplomate Water Resources Engineer, and a member of the National Academy of Engineering.

Dr. Dzombak’s research and professional interests include: aquatic chemistry; fate and transport of chemicals in water, soil, and sediment; water and wastewater treatment; in situ and ex situ soil and sediment treatment; industrial waste management; abandoned mine drainage remediation; climate change adaptation for infrastructure; water resource sustainability; energy and environment; population and environment; and public communication of environmental engineering and science. He has published numerous articles in leading environmental engineering and science journals; book chapters; articles for the popular press; and three books. He also has a wide range of consulting experience.
2018 Civil Engineer of the Year

Dr. Dzombak has won 18 awards his most recent being the distinguished service award from the association of environmental engineering and science professionals. His first award was the presidential young investigators award from the national science foundation in 1991.

Dr. Dzombak has been one of the staunchest supporter’s of our local ASCE chapters, either through helping organizing events, securing attractive and relevant speakers, and encouraging his undergraduate and graduate students to either take on in active participation, or simply attend many of the events in great numbers. Dr. Dzombek is seen at our section events surrounded with his bright students, whether he was there to support them when they were winning the section awards or to support his fellow professionals and colleagues.

2018 Distinguished Civil Engineer

William (Bill) D. Trimbath, P.E.
Collective Efforts, LLC

Mr. Trimbath has more than 40 years of diverse experience in the fields of civil, environmental, geotechnical and municipal engineering. His expertise has been in project and program management, engineering and office management, and in business development to identify, pursue and successfully perform projects for private and public clients.

Bill received his bachelor’s degree from West Virginia University and was elected vice president and president of his fraternity Tau Kappa Epsilon. As an engineering graduate student at the University of Pittsburgh, Bill was asked to step in mid term as a teaching fellow. For the following six years he taught undergraduate courses in statics, dynamics and strength of materials while attending graduate classes and holding down a full-time position at Ackenheil Geo Systems. During his time he was recognized twice by the University for his teaching efforts.

While working at Ackenheil Geo Systems, Bill provided the foundation recommendations for the I 279 and I 579 interchange on the North Shore and service project manager providing open then geotechnical services for Allegheny County Department of veteran area construction bill also served as chairman
of the Pittsburgh chapter of the ASCE geotechnical group working for an US corporation, Bill participated in helping to open the NUS office in Oak Ridge Tennessee and was one of the authors of a comprehensive study of groundwater movement and conditions at the Department of Energy is Savanna River plant he was also heavily involved in the EPA Superfund program, leading a group of civil engineers to address hazardous waste sites and EPA regions two and three.

While working at Michael Baker Jr., Inc., Bill was appointed to fill a vacancy on Pleasant Hills Borough Council. He remained in that position for 23 years serving on many committees and help the borough comply with two consent order in agreement with PA DEP to address sanitary sewer overflow issues, reconstruct miles of sanitary and storm sewers and construct an overflow storage facility. Working with engineers and attorneys, Bill help the borough save more than $4 million in propose construction costs. After his tenure on borough council, he is now serving in his first term as Mayor of Pleasant Hills. He also participated in the Pleasant Hills Athletic Association as a coach a baseball and basketball. He is also a Board Member of the West Jefferson Hills Chamber of Commerce.

While at Baker, Bill managed to Beaver, PA office and became involved with many local service organizations. He served on the Beaver County Salvation Army Advisory Board and was a member of the Beaver County United Way Board of Directors. As an example of community service, following the unexpected devastation of Hurricane Ivan, while at Baker, organized a municipal workshop with stricken Beaver County municipal officials to meet with federal flood relief officials to determine how and where to obtain construction and financial help to remedy the effects of the hurricane-caused flooding.

Bill is currently working with Collective Efforts, LLC as a senior advisor on their water, transportation, and energy markets. Bill resides in Pleasant Hills with his wife for 45 years, and their son lives in Helena, Montana.
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2017 ASCE Award Recipients

Civil Engineering Achievement
I-70 Widening and Route 19 Interchange Project

Award of Merit (Project)
Beechwood Boulevard (Greenfield) Bridge Replacement

Civil Engineering Sustainability Award
Highland Avenue and East Liberty Boulevard Project

Michael A. Gross Meritorious Service to Pittsburgh Section
John F. Oyler, Ph.D., P.E.

Professor of the Year
Mario Berges
Carnegie Mellon School of Engineering
Carnegie Mellon University

Young Civil Engineer of the Year
Michael P. Krepsik, P.E.

Service to People
Karen Mueser, P.E.

Civil Engineer of the Year
Tim Prevost, P.E.
Our Mission

Providing essential value to our members, their careers, our partners, and the public by developing leadership, advancing technology, advocating lifelong learning, and promoting the profession.
Thank you for attending and supporting ASCE!
Diversity Minute:

“Diversity: the art of thinking independently together.”

--Malcolm Forbes