

2019 - 2020 Branch Board

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Branch Leadership Opportunities

ASCE North Jersey Branch is seeking volunteers interested in serving on the Board of Directors. If you've been involved and want to step up your participation, or if you want to become more involved in the North Jersey Branch, please contact us to learn more!

Nominations are now open for all positions except President. Available positions include: Director, Secretary, Treasurer, Vice President, and President-Elect. To learn more about what is involved in being on the NJB Board or to express interest, please contact Steve Alpert at president-elect@ascenjrb.org by March 15, 2020.

Ballots will be sent by email in early April and the new Board will be sworn in at the Awards Dinner in September.



Future City Regional Competition Focuses on Clean Water

Despite the threat of an impending snow storm, nearly 80 teams braved the elements and traveled to Rutgers University's Livingston Student Center in Piscataway, NJ to compete in the annual New Jersey Regional Future City Competition. The Future City Competition is a program that works to help educate middle school students on what engineers do and teaches them many of the basic skills that engineers rely on to get the job done. The students in this program design, both virtually and physically, a model of how they think a city of the future would look and function. This year's theme, "Clean Water: Tap into Tomorrow," focused on how the various student teams chose a threat to their city's water supply and designed a resilient system to maintain a reliable supply of clean drinking water.

After months of hard work, Team "Tourmalia" from Frelinghuysen Middle School came out on top and won first place in the New Jersey Region. Not far behind, Team "Lago Paraiso" from Heritage Middle School finished in second place and Team "Cidade Das Maravilhas" from JerseySTEM took home third place.

Members of ASCE in NJ played an integral role as volunteers to help judge, mentor, and run the New Jersey Regional Competition. Thank you to all those who came out and made the event an outstanding success!

photos: left: ASCE volunteers staff the Meet the Professionals table; center: "Eddy," the AWWA Water Drop Mascot made an appearance at the competition; right: Team Tourmalia, 1st place NJ winners

A Message from the President

Fellow North Jersey Branch Members,

I hope everyone had a wonderful holiday season and that the new decade has gotten off to a fantastic start. The North Jersey Branch has been busy with a number of great, well-attended events! On November 21st, the North Jersey Branch welcomed the Utility Engineering and Surveying Institute to NJ for the inaugural event of their New Jersey Chapter, which included a presentation on "Subsurface Utility Engineering" by Ken Kerr of InfraMap. The UESI Chapter is now formally established in New Jersey and plans to host more events this year throughout the state. On December 5th, the Geotechnical Technical Group hosted a presentation on "Scour Evaluation Model for New Jersey Bridges" by Dr. John Schuring of HNTB. On January 9th, the Transportation Technical Group held its annual joint event with ASHE North-Central NJ at Snuffy's. This year's presentation was "Route 1&9T/ New Road" by Tim Severinsen of HNTB, Brian Felber of HNTB, and Pat McHugh of NV5. On February 5th, our Structural Engineering Institute hosted a presentation on "Standard Manufacturable Steel Orthotropic Decks for 100-Year Bridges" by Dr. Sougata Roy of Rutgers University. Thank you to all of our technical group chairs for your continual efforts to bring high-quality technical seminars to our members! We've also had a busy winter with outreach and social events - mostly led by our Younger Member Group. Members of the Branch and YMG volunteered at the New Jersey Region Future City Competition on January 18th. Along with the Met Section, the YMG held their annual Ski Trip to Camelback Mountain on January 25th. Branch and YMG Board members attended ASCE's Multi-Region Leadership Conference in Philadelphia January 30th to February 1st. Congratulations to our YMG for winning an award at the MRLC for Outstanding K-12 Outreach Programs! The YMG has big plans to continue the K-12 outreach into 2020. If you have any interest in participating, please reach out to Jay Rana (jrana@hntb.com) for more information.

As usual, the Branch has a full program scheduled for this spring. With PE License renewals looming, we have several opportunities to get your PDHs! On March 5th, the Coasts, Oceans, Ports, and Rivers Institute will host a 2 PDH dinner seminar on "Coastal & Port Resiliency" with speakers from the US Army Corps of Engineers, presenting "Seven Years Out: Coastal Engineering Successes and Challenges Since Hurricane Sandy" and the Port Authority of NY & NJ, presenting "Port Master Plan Phase I". On March 19th, the Geotechnical Technical Group will be hosting a full-day seminar on "Geocharacterization by Cone Penetration Testing" by Dr. Paul Mayne, PE of Georgia Institute of Technology. Our Water and Environmental Technical Group plans to host a technical dinner on April 1st with a short presentation beforehand by the NJIT Engineers Without Borders students. On April 23rd, the Structural Engineering Institute will be hosting a half-day seminar on a variety of topics, including the Pulaski Skyway project. In May, the Construction Technical Group plans to host a presentation and site tour of a local project. Keep an eye out for more details on all of these events in the coming weeks and months!

Our Branch is run by volunteers who work tirelessly to bring you these professional, networking, and outreach opportunities and we are always looking for more members to get involved. Nominations are now open for all board positions for next year and elections will be held in April. If you have any interest in getting more involved - on the Board, YMG, technical groups, or in any other capacity - please do not hesitate to reach out to me. We welcome any ideas for how to bring more value to our members.

Sincerely,
Laura Hazen, PE
lhazen@hntb.com | 973-434-3120



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Celebrate Engineers Week 2020

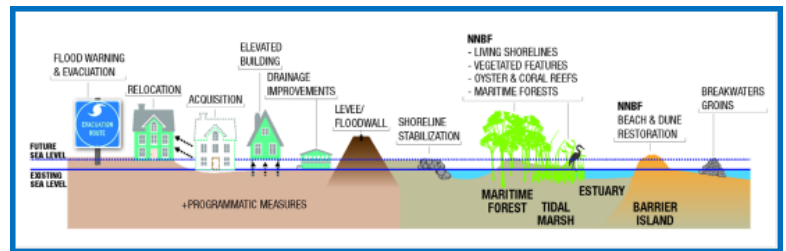
ASCE North Jersey Branch continues to celebrate E-Week with special activities at Liberty Science Center. See page 5 for more details about our activities.

Contact Gabrielle Czernik (gabrielle.czernik@parks.nyc.gov) or Milton Padron (mpadron@torcon.com) for more information

Upcoming Technical Dinners

COPRI Event: March 5

On Thursday, March 5, 2020, the ASCE COPRI North Jersey Chapter will present a 2-hour lecture, currently under review for 2 PDHs, on Coastal & Port Resiliency. Lynn Bocamazo, PE, D.CE Deputy Chief, Engineering Division of the NY District USACE, will present on “Seven Years Out: Coastal Engineering Successes and Challenges Since Hurricane Sandy”. The first half of the evening will focus on the USACE Coastal Storm Risk Management (CSRM) Program, the North Atlantic Coast Comprehensive Study (NACCS), USACE Climate Preparedness and Resilience Program, and other lessons learned by USACE from Hurricane Sandy. Then Sudhir Sheth M.C.E., M.Tech., P.E., Lead Geotechnical Engineer for the PANYNJ, will present on Phase 1 of the PANYNJ Port Master Plan. The PMP establishes a flexible roadmap outlining options for maximizing investments and identifies the next generations of potential planning studies, land use, and infrastructure development projects. The PMP will be implemented in two phases, continuing to invest funding for next fifteen years into ongoing programs such as harbor deepening and raising of the Bayonne Bridge. The implementation of PMP will secure the Port facility’s future in the industry by focusing on safety, sustainability, and resiliency in a manner that benefits all stakeholders for the next 30 years and beyond.



Save the Date!

April 1: Water Environmental Technical Group dinner event, including a special presentation from Engineers Without Borders

Geotechnical Full Day Seminar: March 19 “Geocharacterization by Cone Penetration Testing”

The Geotechnical Technical Group is gearing up to host its Annual Full Day Seminar. This year, the topic will be “Geocharacterization by Cone Penetration Testing,” presented by Dr. Paul. W. Mayne, PE, Ph.D., Professor of Geosystems Engineering at Georgia Institute of Technology.

Complex soil stratigraphy and deposits of soft, sensitive, or liquefiable soils often have significant impacts on the geotechnical design of any project. Where site geology is suitable for cone penetration tests (CPTs), CPTs offer a rapid and economical method of characterizing site soil stratigraphy, soil stress history, and to develop geotechnical parameters for the design of foundations, embankments, and ground improvements. With the addition of specific tooling, CPTs can also be used to perform in-situ tests to assess settlements, dynamic soil properties, soil resistivity, and can even be used to identify unexploded ordinance. Because of these advantages, cone penetration testing has quickly become one of the preferred tools in the geotechnical engineer’s toolbox. This course will include case studies and many of the topics included in FHWA Geotechnical Engineering Circular No. 5 – Evaluation of Soil and Rock Properties. It has been given to many engineering and geologic professionals at seminars around the world.

Registration will be open soon, please watch watch your email for invitations, or visit the ASCE North Jersey Branch website for more details!

Recent Event Highlights



GTG Event: Scour Evaluation Method

On December 5th, the Geotechnical Group hosted Dr. John Schuring of the New Jersey Institute of Technology and HNTB, who presented on the Scour Evaluation Method (SEM) for New Jersey Bridges, which was developed by the Bridge Resource Program in coordination with NJ Department of Transportation, Federal Highway Administration, United States Geological Survey, and private consultants, to provide a practical and observational approach to scour evaluation and risk assessment. Over 60 attendees were introduced to the SEM, including purpose and need for its development, previous research, limitations of HEC-18, and geotechnical and structural risk factors. Dr. Schuring explained the decision trees and alternatives matrices

that are used to incorporate different risk factors and categorize scour risk at critical and non-critical bridges. Several case studies were provided to give attendees a better understanding of how SEM can introduce site and usage factors that can alter the risk category of a bridge.

UESI Inaugural Event: Subsurface Utility Engineering

On Thursday, November 21, 2019, the Utility Engineering and Surveying Institute (UESI) New Jersey Chapter held its inaugural meeting at the DoubleTree by Hilton Hotel in Fairfield, NJ, hosted by the ASCE North Jersey Branch. The event was very well attended as over 70 people registered to support the new chapter and become a part of history. We were honored to have the following guest speakers:

- Ken Kerr, Chair of the UESI New Jersey Chapter, member of the ASCE 38 Standard Committee and Vice Chair of the UESI SUE&I Committee, provided a one-hour technical presentation on Subsurface Utility Engineering (SUE) as well as the future of SUE including GIS integration and 3D CAD technology.
- Drew Markewicz, UESI founding member and Executive Committee member, presented on the Path to the UESI, including how it was formed, Divisions and Committees, and objectives and goals.
- Nick Zembillas, UESI and ASCE 38 Standard Committee member, provided a publications update on the ASCE 38 Standard and the ASCE As-Built STandard and how those standards will be introduced into the engineering and construction industries.
- Rich Danko, Assistant Department Supervisor for the Central Survey Group of the Port Authority of NY and NJ, presented on how SUE is successfully utilized, integrated, and managed in Authority projects.



Nick Zembillas, UESI and ASCE 38 Standard Committee Member.

SEI Technical Dinner: Orthotropic Bridge Deck Design



On Thursday February 6, the SEI Chapter at the North Jersey Branch of ASCE had a dinner seminar featuring the topic of steel orthotropic decks for bridges. Dr. Sougata Roy, Associate Research Professor at Rutgers University, discussed orthotropic steel decks for bridges, and the challenges involved in their design and construction in order to achieve a 100-year bridge. Dr. Roy explained that time dependent deterioration of bridge decks, directly subjected to: repeated abrasive loading from passing vehicles; the elements of weather; and winter

maintenance agents, is the key challenge to achieving a 100 Year Bridge Design. He said that in-service performance and laboratory tests over the past several decades have demonstrated that the steel orthotropic deck is the only system likely to accomplish this goal. The seminar presented a standard deck design that evolved based on the knowledgebase accumulated over the years from research and service performance of this deck around the world, which can be widely implemented as a prefabricated modular system towards durable, sustainable and life-cycle cost-effective design of 100 Year Bridges.

Help ASCE NJB Celebrate E-Week!

When: Monday (President's Day), February 17 & Saturday, February 22 – 10:00AM-4:00PM

Where: Liberty Science Center, Jersey City, NJ
www.lsc.org

What: Hands-on engineering and informative exhibits for all ages!

National Engineers Week is celebrated every February to raise awareness about engineering. The North Jersey Branch of ASCE hosts a two day event at Liberty Science Center to celebrate engineers and showcase the marvels of engineering. Over the course of the two day event, as many as 9,000 children and adults have the chance to try some engineering for themselves with hands-on activities and to learn about the different problems that engineers are solving every day through interactive exhibits. Activities range from roadway building to city planning, and exhibits include everything from circuits to bridges. None of this would be possible without the 200 volunteers from local universities, high schools, and engineering firms who show up to this event.

DiscoverE: Celebrating 30 Years of Engineering Community

In 1990, DiscoverE issued the first-of-its-kind nationwide call asking engineers to volunteer in classrooms.



This Engineers Week, let's celebrate and support the future of our community. Join us.



DiscoverE.org/EngineersWeek
#Eweek2020

REPORT CARD VOLUNTEERS NEEDED!

The ASCE New Jersey Section is looking for volunteers to get involved in researching, promoting, and preparing the next NJ Infrastructure Report Card. The most recent (2016) NJ Infrastructure Report Card is at <https://www.infrastructurereportcard.org/state-item/new-jersey/>. Volunteers can expect biweekly calls and coordination with ASCE and other volunteers/task leaders. Different roles are available. Please contact Joseph Michiels, PE for more information or if you are interested in participating: jmichiels@blcompanies.com, (856) 485-8401.

North Jersey Branch Takes Home K-12 Outreach Award at MRLC in Philadelphia!

Several ASCE North Jersey Branch Board members attended the 2020 Regions 1, 2, 4, and 5 Multi-Region Leadership Conference (MRLC) in Philadelphia this past weekend, including Jay Rana (YMG President), Carlos Lopez (Branch Secretary), and Christopher Hanna (Branch Director). Jay and Chris attended the Eastern Region Younger Member Council (ERYMC) portion, which introduces active members ages 35 and under from across the eastern half of the United States to each other. Carlos attended the Workshop for Section, Branch, and Institute Leaders (WSBIL) portion of the conference, which shares ideas and contacts across the different eastern ASCE sections and branches. The MRLC also includes a component for students, which several students from NJIT attended. Chris had an opportunity to speak at a WSBIL session on Student Transitions. Overall, the conference was a great experience and we brought home some fresh ideas for the Branch -- as well as the award for K-12 Outreach!

North Jersey Branch Scholarship Opportunities!

2020 Family Member Scholarship

The North Jersey Branch will award a scholarship to the child or grandchild of a member of the ASCE North Jersey Branch currently pursuing a Civil Engineering undergraduate degree. The scholarship will be awarded to a college junior who demonstrates strong academic and extracurricular achievement.

2020 Graduate Scholarship

The North Jersey Branch will award a scholarship to a qualified graduate student who demonstrates academic and extracurricular achievement. The scholarship is for a student who is a member of the North Jersey Branch of ASCE and is enrolled in a graduate level civil engineering-related program.

The student must continue in their engineering-related graduate studies for at least one year after being awarded the scholarship. Previous recipients of this scholarship are not eligible.

2020 College Scholarship

The North Jersey Branch has three affiliated colleges/universities in the North Jersey area that have ASCE student chapters or clubs:

- New Jersey Institute of Technology
- Stevens Institute of Technology
- Fairleigh Dickinson University

The North Jersey Branch will award scholarships to qualified students who demonstrate academic and extracurricular achievement. Scholarships are awarded to juniors who attend any of the three affiliated institutions listed above. The junior must be in a civil engineering curriculum and should be in the next to last year of their degree program.

2020 High School Scholarship

The North Jersey Branch will award a scholarship to a high school student who intends to pursue a Bachelor's degree in Civil Engineering or an Associate's degree in Civil Engineering Technology. The student must be a high school senior who resides in the jurisdiction of the North Jersey Branch, namely Sussex, Warren, Morris, Passaic, Bergen, Essex, Union, or Hudson County. The senior must intend to graduate from high school in spring 2020 and must have applied to schools that offer an ABET-accredited Civil Engineering or Civil Engineering Technology program.

**SCHOLARSHIP
APPLICATIONS
DUE MAR. 27**

2020 Branch Award Nominations Open May 15

Shine the spotlight on your colleagues and peers by nominating them for the recognition they deserve. ASCE North Jersey Branch will soon be seeking nominations for its Annual Awards, including:

Civil Engineer of the Year

Government Engineer of the Year

Educator of the Year

Service to the People

Project of the Year

Young Civil Engineer of the Year

Nominations must be submitted by July 1. The nomination form will be available on our website and in the next issue of this newsletter. Awards will be presented at the Annual Awards Dinner in September 2020.



For more information about awards, and to see pictures from last year's Awards Dinner, please visit our website at www.ascenorthjerseybranch.org.

Younger Member Group (YMG) Roundup

Upcoming YMG Events:

- Engineers Week at Liberty Science Center in Jersey City, NJ - February 17, 2020 & February 20, 2020
- Resume Review / Mock Interview at NJIT in Newark, NJ - February 19, 2020
- Resume Review / Mock Interview at Stevens Institute of Technology in Hoboken, NJ - February 20, 2020
- Happy Hour / Networking Event in Montclair, NJ - Date TBD
- Practice PE/FE Exam at NJIT & Stevens Institute of Technology - April 4, 2020



Past YMG Events:

Joint Event at Dave & Busters – November 12, 2019. The NJB YMG teamed up with the CJB YMG to host another Joint Happy Hour / Networking Event. Younger members from all over the region gathered at Dave & Busters in Woodbridge, NJ to share drinks and play arcade games together. The happy hour brought together a lot of new professionals

and introduced them to the opportunities each branch can provide for them

Career Carnival at Parsippany Library – November 21, 2019. The NJB YMG was once again invited to present their “Roadway in a Cup” activity at the Career Carnival in Parsippany Library. Kids of varying ages attended the event where they got to experience various aspects of a career in the field of STEM

Future City Competition - January 18, 2020. The YMG hosted their annual bake sale as students from all over the state competed to take the number one spot at the Future City Competition. In addition to the bake sale, multiple younger members assisted in the coordination efforts required for the day.

K-12 Outreach - December 18, 2019. The YMG attended Ms. Donna Roth’s 7th grade class where they hosted the “marshmallow-toothpick” activity. Students got to learn about the Engineer’s Method and apply it at a real-world like scenario. Students competed against each other to create a stable structure that can hold the most weight while being cost-effective.

Annual Ski Trip - January 25, 2020. The YMG held their annual ski trip at Camelback Mountain in Tannersville, Pa. We had a great attendance that included members from North Jersey, Central Jersey, and the Metropolitan regions. While the weather was rainy, everyone had a great time networking and hitting the slopes.

Student Chapter Outreach - January 29, 2020. The YMG attended NJIT’s student chapter welcome meeting and present to the students of all the opportunities the YMG can offer their group.

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