CEE Alumni News

Virginia Tech
College of Engineering

Summer 2015

THE GROVE OF SHARING

Trees have a varying abundance of gifts. Like most any institute of higher learning, the Via Department of Civil and Environmental Engineering largely depends on the gifts we receive from our alumni, students, faculty, and friends. These gifts help us achieve our goals in the areas of undergraduate and graduate teaching, research, and public service.

We have found a way for everyone to grow with us and to recognize those who generously give through our "Grove of Sharing" expandable tree sculpture that is beautifully displayed on the lobby wall of Patton Hall for all to see.

Eventually, each leaf on the tree will recognize every annual gift of $250 or more by engraving the names of individual donors. Every gift makes a difference and enables us to do more, be more and give more to our students, our nation and our world.

Gifts provide critical funding for:

- Teaching
- Student fellowships and scholarships
- A distinguished lecture series and professional seminars
- Faculty and student achievements and awards
- Recruitment support
- Student chapter leadership
- Cooperative education activities
- …and so much more

AS OUR GIFTS AND FAMILY OF ALUMNI GROW, OUR TREE WILL BECOME A GROVE.

Not only does the unique sculpture recognize our donors, but it becomes a part of the heritage of the Via Department of Civil and Environmental Engineering and will remain a centerpiece for many years to come.

Pledge to make an annual gift of $250 or more and we will engrave the inscription of your choice on a leaf on the tree and you will become a part of the Grove of Sharing tree and the department's heritage.

Contact Sam Easterling at seaster@vt.edu to make your pledge today.

CEE

ALUMNI NEWS

Via Department of Civil and Environmental Engineering Annual Newsletter Summer 2015

Department Head
W. Samuel Easterling

Alumni Board Chair, 2015 – 2016
James Carter, Jr.

Editor & Alumni Relations
Courtney Long

Designer
Courtney Long

Note from the Department Head

W. Samuel Easterling

Happy summer, Hokies! Greetings to you from Blacksburg. I recently had the pleasure of presenting diplomas to the most recent group of graduates of the Via Department of Civil and Environmental Engineering. The accomplishments of this class of students are outstanding and I look forward to following their success beyond graduation.

Summer is a wonderful time of the year to be in Blacksburg and a member of the faculty at Virginia Tech! The campus is bustling with summer classes, orientation for new freshman and transfer students, outreach programs such as C-Tech2, and the Student Transition Engineering Program (STEP). This summer is particularly special as we invited department heads from around the country to join us in Blacksburg for the American Society of Civil Engineers National Department Heads Conference. Our students and faculty had the opportunity to interact with the department heads throughout the week.

The Alumni News provides a great way for us each summer to share highlights of student activities and projects from the recently completed academic year, as well as give you just a snapshot of some of the many wonderful things with which your fellow alumni are involved. One of these honors that I would like to point out is John R. Hillman, class of 1990 and member of the department's Alumni Board, who was recently honored by The Virginia Tech Graduate School with the 2015 Distinguished Alumnus Award. John is the founder and president of HC Bridge Company, LLC and is known for his invention of a hybrid composite beam (HCB) that makes bridges safer, stronger and lighter. This is most assuredly a well-deserved honor for John.

We also like to take the opportunity to share a few of the awards and honors that have been bestowed upon some of our faculty. The CEE faculty continues to provide high quality instruction to our students and lead cutting edge research of importance to the profession and society. Virginia Tech students, as well as members of the broader civil engineering profession, benefit from their talents and dedication on a daily basis. I hope you enjoy reading about some of their activities and successes.

I want to take a moment to pay tribute to a colleague that we lost in the past year. Professor Richard D. Walker served in the department of civil and environmental engineering for thirty-five years, including his role as department head from 1970-1982. We will certainly miss him but I know that his legacy and influence will endure for many years to come.

One of the great pleasures I have in my job is being able to interact on a regular basis with some of our over 10,000 living alumni. These interactions range from working closely with members of our Alumni Board, meeting folks at departmental and university events, and having the pleasure each year of being part of recognition dinners for some of our distinguished and young alumni award recipients. I want to call your attention to the updates, awards and news of some of your colleagues – alumni of our department. I hope you enjoy reading about them!

I encourage you to visit our newly designed website (www.cee.vt.edu). You'll find departmental developments on research, awards, student and faculty updates, and alumni highlights updated on a weekly basis.

I hope to see many of you on campus during the coming academic year. Please feel free to stop by the Departmental office when you're on campus or to contact me by phone (540-231-6635) or email (seaster@vt.edu). I welcome the opportunity to catch up with those I know as well as meet those of you I don't know.

ON THE COVER:

Bridges to Prosperity at Virginia Tech traveled to Las Vegas, Guatemala to build a suspended pedestrian bridge. Photo taken by Andrea Ruano Duke.

Charles E. Via, Jr. Department of Civil and Environmental Engineering Alumni Board

Bruce Bates
RISA Technologies

Tom Broderick
Loudoun Water

Jim Carter, Jr.
Norfolk Southern Corp.
Chair

Young Ho Chang
ATCS, P.L.C.
Vice Chair

David Clarke
VDOT

Stephen DeLoach
Retired (U.S. Army Corps of Engineers)

Bernie Deneke
NAVFAC Atlantic

Brian Diefenderfer
VDOT

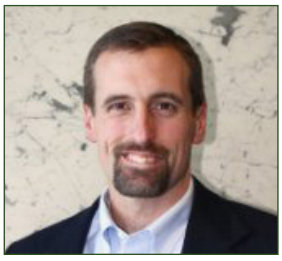
John R. Hillman
HC Bridge Company

Meredith Jones
MJ Services, Inc.

Govi Kannan
Volvo Group N. America

Jeff Lighthiser
Draper Aden Associates

Laura Morillo
Hilti



Aaron Muck
Terracon Consultants

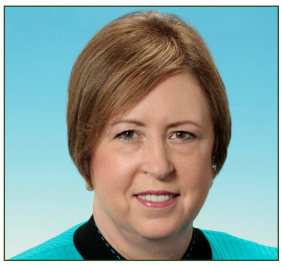
Skip Notte
Dewberry

Ann Piazza
L.A. Fuess Partners

Katherine Plasket
Bechtel Power

Jon Porter
Turner-Fairbank Highway Research Center

Steve Seay
Rinker Design Associates



Beth Turner
Retired
Dupont

Robert Scardina selected for Loganathan Award

"Dr, Scardina has been an excellent role model and mentor for me. I'm thankful that I had the opportunity to be taught by him and to work with him through ASCE," said senior Tyler Crouse.

Student comments grouped around the same sentiments about Robert (Paolo) Scardina, Assistant Professor of Practice for the Via Department of Civil and Environmental Engineering. He is an excellent role model. He is thorough and detailed. His courses are tough, but engaging and lighthearted. Most importantly, he takes an interest in the success of each individual student.

"Dr. Scardina has made an effort to get to know me. He shows that he cares about me as a successful engineer, not just a student," said junior Kristine Mapili. "He makes class enjoyable by engaging students in discussions and centering his answers around the specific interests of each student."

His classes are known for involving current events related to water resources. Groups frequently go on field trips to show students hands-on applications of the material. Some field trip locations are on campus, such as Stroubles Creek, the Duck Pond, the Agriculture Quad, Inn at Virginia Tech, and the campus golf course. He also schedules trips off campus to the drinking water plant, waste water plant, dam and turbine at Claytor Lake, and the retention basin at the Corportate Research Center.

"In addition to going through the calculations, he elaborates in the real-life applications of the material being taught, illustrating scenarios and bringing attention to details needed to design various fluid systems," added Mapili.

Scardina teaches Fluid Mechanics for Civil and Environmental Engineering, Water Resources Engineering, Hydrology, Introduction to Environmental Engineering, and Water and Wastewater Treatment Design. He is also the Director of the Hydraulics Teaching Laboratory in Patton Hall.

In addition to his scheduled class sessions, he voluntarily holds Friday recitations to provide additional help and lecture material for students.

Outside of the classroom, Scardina serves as the faculty advisor for the Virginia Tech Chapter of the American Society of Civil Engineers (ASCE). He works closely with the officers of the organization to instill leadership skills. He also organizes logistics and finances for ASCE's annual Virginias Conference.

Paolo Scardina (right) helps a student analyze a water sample near the duck pond during a class field trip this spring.

Scardina is a three-time alumnus of Virginia Tech, earning his B.S. in Mining and Minerals Engineering, M.S. in Environmental Engineering, and Ph.D. in Civil Engineering.

About the Via Department of Civil and Environmental Engineering

Ranked **9th** undergraduate program and **9th** graduate program by the U.S. News and World Report.

Top 51-100 QS World University Ranking

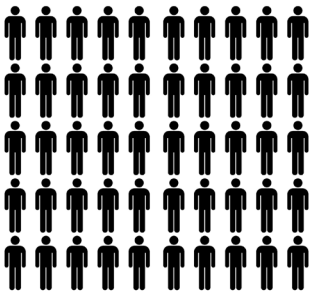
*One icon represents 50 students

Total Undergraduates

In the 2014-2015 school year, there were

503

undergraduate students



Trani receives Alumni Teaching Excellence Award

Antonio A. Trani, professor of civil and environmental engineering, is the 2015 recipient of the CEE Alumni Teaching Excellence Award. The CEE Alumni Board selects the recipient of this award based solely upon nominations received from CEE alumni who have graduated in the past five years.

Trani is a Virginia Tech alumnus, earning his M.S. in Systems Engineering in 1986 and Ph.D. in Transportation Engineering in 1988. He earned his B.S. in Aeronautical Engineering from Embry-Riddle Aeronautical University. He joined the faculty of the Via Department of Civil and Environmental Engineering following his graduation in 1988.

Currently, Trani teaches a wide variety of courses in the department, including Computer Applications in CEE, Introduction to Transportation Engineering, Planning Transportation Facilities, Airport Planning and Design, and Analysis of Air Transportation Systems. The airport planning and design courses he teaches are suitable for civil, mechanical, aerospace, and industrial engineering students.

He serves as the Program Area Coordinator for Transportation Infrastructure and Systems Engineering and also serves as the Co-Director of the National Center of Excellence for Aviation Operations Research (NEXTOR) at Virginia Tech. He conducts research involving airport engineering and planning, aviation simulation and computer modeling, aircraft performance modeling, systems engineering, transportation system analysis and operations, and research applications to transporatation systems.

Dr. Trani is commended by students for being knowledgable and detailed. "Dr. Trani is very passionate about the transportation field and his energy resonates in his students. This made it very easy for me to learn from him," said Nicolas Saavedra ('12).

Other students noted that Trani cares for each of his students, making him a great advisor and resource. In fact, Zhihai Zou ('12) described him as "the best advisor I ever met," adding that he is "very professional in his area and cares about each of his students in his class." He has served as the advisor for over 40 graduate students.

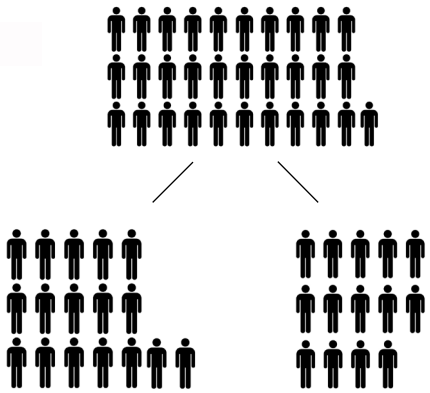
Antonio Trani (left) was presented the Alumni Teaching Excellence Award by CEE Alumni Board Chair Jim Carter, Jr. at the spring board meeting.

He has traveled for three years as part of the CEE in Punta Cana faculty-led study abroad program. In Punta Cana, he taught CEE 4674: Airport Planning and Design, which was described by several students as their favorite course in all four years at Virginia Tech.

Trani was presented with the award during the alumni board meeting in April.

Total Graduates students

In the 2014-2015 school year, there were **306** graduate students, including **170** Master's students and **136** Ph.D. students.



Total Faculty

55

Rebuilding

COMMUNITIES AROUND THE WORLD

By Courtney Long

"Be brave. Take risks. Nothing can substitute experience." Novelist Paulo Coelho spoke those words of advice that many Charles E. Via, Jr. department students and alumni took to heart this year.

The Bridges to Prosperity chapter at Virginia Tech (B2PVT) and Engineers Without Borders (EWB) both traveled to areas of Guatemala to use their expertise to help two communities in the country.

Bridges to Prosperity is an organization that provides isolated communities with access to essential health care, education, and economic opportunities by building footbridges over impassable rivers. B2PVT traveled to Las Vegas, Guatemala, near the larger municipality of Pachalum. The team arrived after the foundation, tiers, and towers had been built and cables had been laid across the river by members of the community. The B2PVT team worked with community members to tension the cables, set the sag, place the decking and fencing, and build the access ramp to complete the 62 meter bridge.

Alumna Ann Jeffers (Ph.D. 2009) had the chance to experience a project similar to this in Bolivia. Jeffers began the Bridges to Prosperity chapter at the University of Michigan after speaking with a colleague in anthropology about a community that needed a pedestrian bridge in Mali, West Africa. Due to safety issues in that country, that project and several that would come to fruition moved out of Africa.

She has focused her research on service learning within the engineering community, specifically abroad.

"The impact of the knowledge that students gain when they actually travel and do the work is huge," Jeffers said. "I think we don't always do a good job in curriculum of giving students the idea of the social side of engineering. I think projects like this with a close infrastructure of the people living in the community helps to cultivate the sensitivity of what the impact of engineering is on society."

Jeffers' research, in a study done alongside Paul A. Beata and Beverly Strassmann titled "Qualitative Assessment of the Learning Outcomes of an International Service Learning Project in Civil Engineering," supports the idea that international experiences promote cultural sensitivity. It also encourages the development of a global perspective, communication skills, problem-solving skills, and the ability to adapt to an unfamiliar environment. In an increasingly globalized world, these are skills that employers are constantly seeking from potential employees.

In fact, in 2014, the department surveyed members of the Virginia Tech Civil Engineering Alumni Board about skills they look for when hiring new graduates. Among the list of answers were civil engineering experience outside the classroom, perspective on the world, life experiences, and volunteer work in the civil engineering field. A few specifically mentioned experience with Bridges to Prosperity and Engineers Without Borders.

Not only do students have the opportunity to learn these skills mentioned, but the international projects can serve as a supplement to skills learned in the classroom.

"The on-the-job experience is huge. The technical math

The Bridges to Prosperity at Virginia Tech team on their completed bridge in Las Vegas, Guatemala. Pictured are team members Gaby Ruano, Spencer Peterson, Jose Alvarez, Sunny Kim, Matt Williams, Ivan Harangozo.

and science behind the design is probably best learned in a classroom. However, learning how to improvise and make gameday decisions is invaluable," said Ivan Harangozo, a junior that served as the project manager for the B2PVT project. "In the United States, you have way more resources at your disposal, but in Guatemala, you have what is in front of you and it is fun to learn how to make it work."

On the B2PVT project, the team showed up in Guatemala to find out that the project, which had been started by local masons, was further behind than they were expecting. On top of that, the wood that was delivered was different from what they had ordered. "We learned to make good out of the bad," Harangozo said.

The Virginia Tech student section of Engineers Without Borders (EWBVT) also encountered unexpected challenges when they traveled to the mountains of Guatemala in January, to the village of Xix, about eight hours from Guatemala City.

"Things won't always go as planned and, as engineers, we have to do our best to solve new problems quickly," said Marvin Merida, a civil engineering student that went on the EWB trip. "In the field, you learn how to really use problem solving skills and how to communicate with other professionals. You also learn great leadership skills because you are in charge of the project."

Engineers Without Borders is a nonprofit humanitarian organization that supports community-driven development programs to design and implement sustainable engineering projects. These projects strive to provide access to basic necessities such as clean drinking water, adequate sanitation, and reliable passage to local markets or schools.

For the EWBVT project in Xix, two mechanical engineering students, one computer engineering student, and one civil engineering student made the trip. Virginia Tech civil engineering alumni Rich Opem, P.E. (M.S. '04) and Rick DiSalvo, P.E. (B.S. '77, M.S. '79) split the mentoring responsibilities. The group worked with a non-profit organization APRODEFI which runs a boarding school in the community. The school teaches children skilled trades and knowledge to become successful entrepreneurs. It currently doesn't have a proper septic system. EWBVT worked with local laborers to design a septic tank that will ultimately replace the cesspits that presently service the school.

All of those skills, partnered with the technical aspects learned in the classroom, made for a highly successful start to the project. The next phase of the project is to finish the design and construct the connecting sewers and the drainfield. The goal is for students to return to Xix and complete the project over spring break in 2016.

The newly gained skills of teamwork, problem-solving, adaptability, communication, and many others reach far beyond the college campuses. In international and domestic civil engineering firms, graduates must be able to communicate with people that are different from them and may even speak a different language.

As Jeffers' paper concluded, international service

YOU CAN LEARN MORE ABOUT THESE STUDENT GROUPS AND UPCOMING TRIPS ABROAD:

Bridges to Prosperity at Virginia Tech: http://b2pvt.weebly.com/
Engineers without Borders: https://sites.google.com/site/vtengineerswb/home

learning projects provide a unique opportunity for the students to develop a range of technical and non-technical skills that are not fully addressed in traditional civil engineering curricula. These experiences can enhance global competency and communication which "instills a great understanding of the social context of engineering work."

When sharing their favorite and most memorable parts of their international trip, it was consistent among students, alumni, and faculty that the relationships they formed had an equally significant impact on their overall experience. Merida said that the most rewarding part was working with and meeting the local community members. "They work hard and take pride in the work that they do. Each person had their own story and I had a pleasure listening to them all," he said.

Civil engineering student Marvin Merida, civil engineering alumnus and Engineers Without Borders mentor Rick DiSalvo, and mechanical engineering student Joe Buellesbach work on hatches for a septic tank in Xix, Guatemala.

The camaraderie formed goes both ways, with the local community always showing appreciation for the work done. "The local community looked out for us," said Harangozo. "They brought us food and gifts, of tamales and chickens, throughout the entire week."

Once these relationships are formed, the motivation to complete the project is increased.

"You spend time with the community and then your perspective becomes more insightful of the issue at hand. You want to use your engineering skills to the best of your abilities because you are not doing the project for a grade. You are doing the project because you believe in the cause and the people who will be affected by it," said Merida.

These projects, that sometimes only take a week or two to complete, can tranform a entire community. Last year's B2PVT team completed a 15 meter footbridge that allowed over 1,000 people to cross the bridge to a nearby community for their children to attend a new school.

Trends extend beyond engineering-related service trips and are a driving force behind the increasingly popular movement of service trips abroad among higher education institutions. The ultimate goal of these programs is to help students gain experience in their field. Projects, from start to finish, allow students to meet with their clients (community members), keep track of budget and expenses, make designs and design adjustments, and solve problems on the job site. As any civil engineer can agree, these are activities that will be completed hundreds or thousands more times throughout their career.

Service-learning brings learning outside of the classroom while helping to tackle a real-world problem, fitting perfectly into the Virginia Tech mission. All Hokies strive to live out the university motto, Ut Prosim, which means "that I may serve." Trips abroad that combine service, learning, and unmatched experience help to fulfill that goal, while preparing students for an increasingly globalized world.

Noah Davis and Marvin Merida hammer holes through cinderblocks to use on the project.

Alumni Achievement Awards Program

The Inductee Class of 2015 Academy of Distinguished Alumni

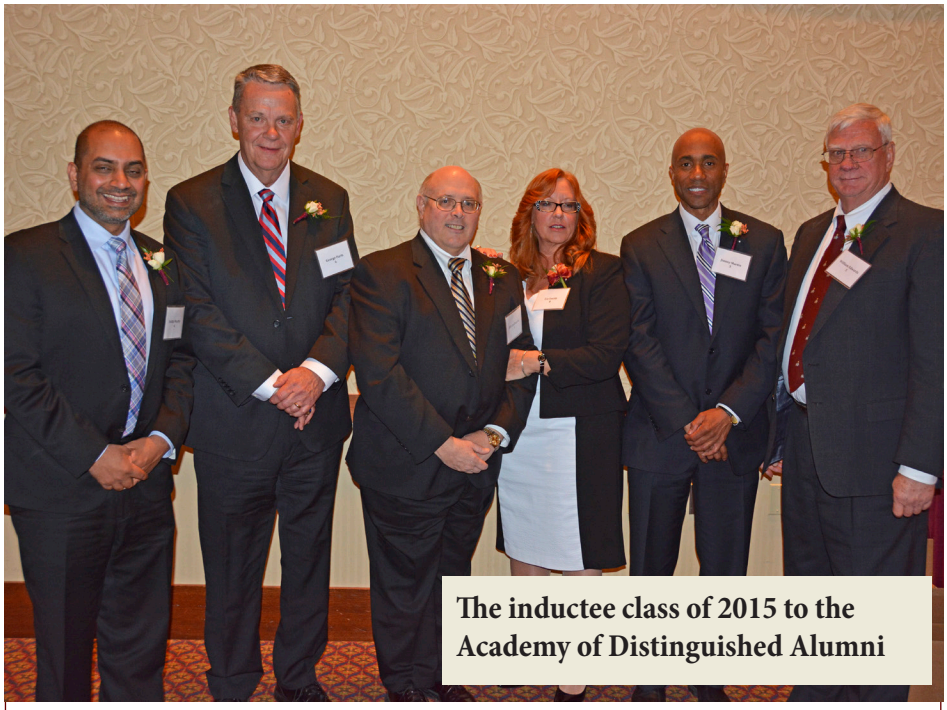
Mr. William L. Coulbourne
B.S. 1969
Mr. William H. Edwards
B.S. 1967, M.S. 1968
Dr. James R. Martin
M.S.1987, Ph.D. 1990
Dr. Sudhir N. Murthy
M.S. 1992, Ph.D. 1998
Mr. George T. Paris
B.S. 1975, M.S. 1977
Ms. Elizabeth M. (Fazzi) Smith
B.S. 1986, M.S. 1988

Outstanding Young Alumni
Mr. Frank Homer
M.S. 2006
Mr. William E. Junda
B.S. 2000
Dr. Krista Rule Wigginton
M.S. 2004, Ph.D. 2008

These awards come from nominations submitted by our alumni. If you are interested in nominating someone for induction into the CEE Academy of Distinguished Alumni or Outstanding Young Alumni Award, please contact Courtney Long, Coordinator of Alumni and External Relations, for the nomination forms.

The form, resume, and cover letter can be completed via email to celong@vt.edu or mailed with supporting documents to:

Via Department of Civil and Environmental Engineering
Virginia Tech
200 Patton Hall
Blacksburg, VA 24061



The inductee class of 2015 to the Academy of Distinguished Alumni

Alumni may be selected for induction into the Academy of Distinguished Alumni based upon a review of overall career accomplishments, contributions to the profession and their community, and service to Virginia Tech. Younger alumni within 15 years of their B.S. degree may be selected for an Outstanding Young Alumni Award. After this year's induction, there are a total of 102 members in the CEE Academy and 47 Outstanding Young Alumni.

2015 Outstanding Young Alumni

Fall 2015 Civil Engineering Career Fair

Tuesday, October 27, 2015
The Inn at Virginia Tech
10:00 a.m - 4:00 p.m.

Employer registration is open at http://www.cf.cee.vt.edu. Interviews will be held at the Inn at Virginia Tech on Wednesday, October 28. Firms interested in interviews must sign up during registration.

Contact Kara Lattimer at karalatt@vt.edu or 540-231-7148 for more information. If there are any job/internship postings you would like us to advertise in advance, please email position descriptions to vtceejobs@gmail.com.

From alumni career networking to CEE Career Network and career fairs, the CEE department provides opportunities for students to network with employers and secure connections for their future. This is a great opportunity as well for alumni to find candidates for their companies.

The department hosts a career fair each semester for employers looking for entry-level and internship/co-op candidates for positions dealing with civil engineering design including:

- Environmental
- Geotechnical
- Land Development
- Structural
- Transportation
- Water Resources

Employers are also offered an optional interview day following the Career Fair to allow for more time to interact and speak with potential employees.

In addition to career fairs, the CEE job board is updated daily to provide a list of employment opportunities that have been provided for current students directly to the CEE department. As alumni, you know first hand that the Hokie Network within Civil and Environmental Engineering is a strong one. The department works hard to continue to contribute to the career success of students and alumni.

CEE graduate is constructing a future for cadets

The new residence hall for the Corps of Cadets, which will be completed and ready for move in August 2015, will house more than 1,000 cadets. Rasche Hall was originally built in 1894 and later expanded in the 1950s, making it home to cadets for more than 100 years. It will now be named Pearson Hall in honor of J. and Renae Pearson. In an article written for Virginia Tech News, it stated that "the new building will offer 21st century housing concepts to meet the needs of students while intentionally maintaining the heritage of the Upper Quad." Following completion of Pearson Hall, construction will immediately begin on Brodie Hall, also on the Upper Quad.

Reagan Limon (BSCE '13) is serving as project manager for Froehling & Robertson and is over the structure materials testing and special inspections for the building.

As project manager for Froehling & Robertson, based in Roanoke, Limon works with a team that is responsible for the construction materials testing. Specifically, she reviews and formalizes observations and tests performed by the on site technicians. She works closely with the on site technicians to help make decisions and remedy challenges that arise. Throughout the process, there have been a number of Virginia Tech Civil and Environmental Engineering students serving as interns and helping on the project.

She attributes her success on all of her projects to the courses and skills she learned just a couple of years ago in college. While she mostly focuses on construction materials testing, Froehling & Robertson also works in environmental engineering and geotechnical engineering. The well-rounded coursework not only helped Limon choose her career, but helps in her day to day operations. As a freshman in college, the thought of choosing one career path was daunting. Civil engineering appealed to her for the variety of career paths that she would be prepared for with a BSCE.

Prior to working on this project, Limon has worked on other prestigious construction projects at Lane Stadium, Radford University Fitness Center, Liberty University Music Building, Celanese, and Franks Theater. This one is special to her because of the opportunity to work at her alma mater.

"It has been great to get back to where I went to school and be able to contribute to the community by changing it for the better," she said. "I am proud to contribute to the construction of campus that future generations of Hokies will be part of."

Reagan Limon

In fact, she was able to do the same thing at the middle school and high school from which she graduated. A new Auburn High School in Riner, Virginia was built in 2013 followed by renovations to the high school to convert it to a middle school.

In addition to the new residence halls, the Upper Quad will host a new corps leadership and military science building, the corps museum, the tailor shop, and the Rice Center for Leader Development. Brodie Hall will be constructed shortly after the completion of Pearson Hall and is planned to be open for corps occupancy by fall of 2016.

"Being able to see something created from the ground up and being able to say I was part of that construction," makes her job an enjoyable one, she noted. It is even more enjoyable to have the chance to do that on the same campus where she graduated from just two years ago.

The new Pearson Hall will be completed and accepting students in Fall 2016

William Burgos leads his students in a project with the Pennsylvania DEP

Many civil engineering programs have design capstone courses that seniors are required to complete. William Burgos, professor of environmental engineering at Pennsylvania State University, takes his capstone course to the next level. Burgos is a three-time Virginia Tech alumnus, graduating with a B.S. in mechanical engineering in 1989, an M.S. in environmental engineering in 1990 and a Ph.D. in environmental engineering in 1995. He has been teaching at Penn State for 20 years and for the last 10 has focused on remediation of coal mine drainage which is a severe regional problem for Pennsylvania, West Virginia and parts of Virginia.

Students in his Environmental Engineering Capstone Design course have the opportunity to work with the Pennsylvania Department of Environmental Protection (PADEP) to provide free consulting services to help remediate and identify worse discharges in particular watersheds. In particular, there are two discharges to the Schuykill River that provide about 90% of the baseflow of the river. Due to the size of enormous underground mines, they collect so much water that discharges at a high velocity low point, which is the river. "The fact that all of the water comes to these centralized locations provides the opportunity to treat it," Burgos noted.

Dr. William Burgos ('89, '90, '95) is with his class at a site near the Pine Knot Tunnel. The class is working on a design project to assist the Pennsylvania Department of Environmental Protection.

Mine drainage problems occur when unseen ground water discharges come up into the upwell of the receiving stream. The challenge is understanding the complicated set of tunnels and air shafts to find a way to get water out of the mines so men can continue to work. By identifying the two points on the Schuykill River, the opportunity arose for his class to take on designing a mine water treatment plant. Although the two discharges are spatially far apart, they actually emerge very close to one another, creating the chance to design one of the largest mine water treatment plant in the state of Pennsylvania.

"We are providing DEP with our opinion and design calculations of what some of the treatment options should be, especially the innovative ones that they haven't thought of that might save them a lot of money," he said.

The way that they provide these treatment options is through a unique class setup where the project was broken into seven component parts. Each team worked on one seventh of the overall project, before being reshuffled into four main design teams, each working with a design firm. This structure allowed students to interact with different peers, and improve their technical writing and presentation skills. Not only do the students improve their technical design skills, Burgos focuses on improving written and oral presentations. In the project, students are required to submit an executive summary, design options and selected configuration, estimation of costs, recommendations, and references. There are strict page restrictions on the design firm report so students learn to condense the material and only report the most important information. "The process of shuffling from a team into a larger design firm forced students to edit, restructure, and interact with different people. That was the best part to witness from a teaching standpoint," he said.

This project is unique among some capstone courses because it was a real project. There were real constraints with respect to the amount of property, available, the grade of the property and identifying the property owners.

Burgos prefers projects that allow the students a hands-on experience with a real-world client.

"A young engineer can see the value of their degree. They can see why they learned what they did in the classroom and can apply it to a civil and environmental engineering problem. Civil engineers serve society. We serve them through infrastructure primarily and this was a perfect example of that," said Burgos.

This water treatment plant is exceptional because it has an extremely high flow. While nobody has built a mine water treatment plant this big, Burgos admits that the processes are relatively straight forward. The goal is to oxidize the iron and physically settle it to eliminate staining of the river and coating stream habitats. PADEP is going to build the plant within the next five years, giving the students the chance to witness and work on the project from start to finish.

Engineering News-Record names two Virginia Tech CEE alumni as Top 25 Newsmakers

Engineering News-Record (ENR) has named the top industry professionals for 2014. Among the Top 25 Newsmakers, recognized for outstanding achievements, are two Via Department of Civil and Environmental Engineering alumni.

Walter Bailey ('72) was inducted into the department's Academy of Distinguished Alumni in 2014. He also earned an M.S. in Environmental Engineering from George Washington University. He is assistant general manager of the District of Columbia Water and Sewer Authority (DC Water). In his 20 years service as the manager of Blue Plains Advanced Wastewater Treatment Facility, he has played an important role in the public utility's decision to implement an innovative system to create a better class of biosolids, making it the largest advanced wastewater treatment facility in the world.

Walter Bailey

Bailey has received a number of professional awards from the Water Environment Federation including the Emerson Medal for contributions to the profession, the Hatfield Award for plant management, the Bedell Award for extraordinary service, the Scroepfer Award for innovation in facility design, the Gasciogne Medal for solution of operational problems, and the Fuhrman Medal for Joint Research with Universities.

Daniel Wade ('92) was also named a top newsmaker for his work priming the pump for water reliability in San Francisco. He is director of the Water System Improvement Program (WSIP) which, according to ENR's January issue, "comprises 83 separate projects throughout the Bay Area to improve seismic and delivery reliability, ensure water quality, and boost supply."

He oversees the entire program, including four geographic regions, with 16 projects under construction. Prior to his position as director, Wade served as the regional project manager for the Sunol Valley projects within WSIP. He serves on the Board of Directors of the US Society on Dams (USSD) and is an active member of American Society of Civil Engineers (ASCE), Association of State Dam Safety Officials (ASDSO), and the Construction Management Association of America (CMAA).

Daniel Wade

CGEP Graduate Education Offerings with CEE

Residents in the Commonwealth of Virginia and DC Metro area can pursue graduate education in CEE through the Commonwealth Graduate Engineering Program (CGEP). The department has offered CGEP courses for over 30 years. They are offered on a one-night-per-week basis and taught "live" through the internet allowing off campus students to participate fully in the classroom experience.

There has traditionally been two disciplinary options for graduate studies through CGEP. In environmental and water resources engineering, students can complete an MS degree in civil engineering or environmental sciences and engineering through courses such as water and wastewater treatment, air pollution control, and water quality management.

Starting in Fall 2015, another option will be in construction engineering and management (CEM), focusing on the lifecycle management of infrastructure projects and systems. Infrastructure development and management are increasingly complex as both performance expectations and resource scarcity rises. Courses taken in this option will examine challenges that decision-makers and managers face during planning, construction, operations, and maintenance of infrastructure through coursework in both project and infrastructure management. Courses offered will range from "Managing Capital Projects" to "Infrastructure Asset Management."

Students can apply for admission into an MS degree program through the Virginia Tech Graduate School or through the Commonwealth Campus Program, a program which allows students to take up to four graduate classes before formally applying for an MS degree. This gives working professionals the option of picking up selected courses for professional improvement and/or the opportunity to "test drive" CGEP to see if it fits well for them. Those interested in more information about the CEE programs through CGEP should contact Dr. Bill Knocke at knocke@vt.edu.

Alumni Updates

1960s

Kamber, Dennis – B.S. '64 – Recgonized as a Distinguished Member of the American Society of Civil Engineers (ASCE) in Panama in October 2014.

Grizzard, Thomas – B.S. '68, M.S. '72, Ph.D. '77 – Honored with emeritus status by the Virginia Tech Board of Visitors after retiring as director of the Occoquan Laboratory in Manassas, Virginia.

1970s

Bailey, Walter – B.S. '72 – Named one of the Top 25 Newsmakers in 2014 for his work to implement an innovative system at Blue Plains advanced wastewater treatment facility.

Marcari, Emir Jose – B.S. '79 – Named dean of engineering at University of New Orleans. He is the former dean of the College of Engineering and Computer Science at California State University, Sacramento.

1980s

Johnson, Pat – B.S. '81 – Featured, along with his brother Chuck Johnson (Psychology '70), in Virginia Tech's *Outreach NOW* magazine, for their company Acrylife and their V2T venting system. This vent is designed to minimize roof damage in hurricane-force wind conditions.

1990s

Wade, Daniel. – B.S. '92 – Named one of the Top 25 Newsmakers in 2014. He is director of the San Francisco Public Utilities Commission.

2000s

Katz, Bryan – B.S. '00, M.S. '01, Ph.D. '07 – Named vice president of engineering of Toxcel Engineering in Blacksburg.

Phipps, Daniel – B.S. '07, M.S. '09 – Recognized as the American Council of Engineering Companies Young Professional of the Year. Phipps works with Kennedy/Jenks consultants in Colorado.

Moore II, Tim – Ph.D. '08 – Honored as one of the State Council of Higher Education for Virginia (SCHEV)'s Outstanding Faculty of 2015. Moore is a faculty member at the Virginia Military Institute.

Pope, Brett – B.S. '08 – Earned the Edmund Friedman Young Engineer Award for Professional Achievement from the American Society of Civil Engineers (ASCE).

Dehghani Sanij, Mohammad Saied– Ph.D.'13 – Won the master's thesis award from the Conference of Southern Graduate Schools for his thesis titled "Optimal Resource Allocation Strategies to Protect Network-structured Systems."

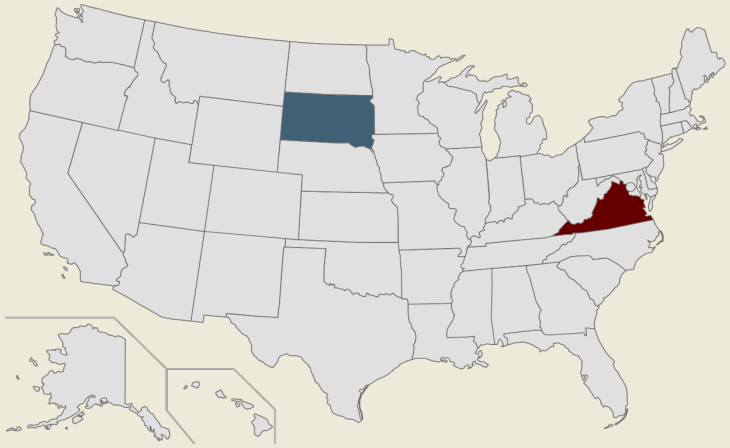
Heffern, Alley– B.S. '13 – Appeared on the ABC Emmy award-winning reality show, Shark Tank, to pitch her company, Taaluma Totes, Taaluma Totes creates backpacks from international fabrics and the proceeds go right back to the country of the fabric's origin.

About Via Department of Civil and Environmental Engineering Alumni

Since 1872, there have been many alumni graduate from the department. Here is a summary of those alumni based on the alumni association records:

More than **9,000** alumni from all **50** states, the District of Columbia, and **59** countries.

Most alumni currently live in **Virginia** and the least amount live in **South Dakota** (only 5 alumni)



Senior Spotlights

Name: Samuel Ferrara
Area of Interest: Construction Engineering & Management

"I enter each and every class at Virginia Tech with a goal of fully learning the presented material. I would rather fully learn the material than earn a high grade," said Sam Ferrara. With that approach, Sam has managed to do both. He has a perfect 4.0 GPA in civil engineering classes. His focus is in construction engineering and management and he will continue at Virginia Tech next year in the CEM master's program.

Sam's experience began as a kid when he built skateboard ramps and was the handyman around his house. He partnered his love of construction with his affinity for math to choose civil engineering as his major. While at Virginia Tech, he has served as a research assistant for Marc Edwards, studying copper and steel pipe corrosion. He has also served as a grading assistant for the Introduction to Environmental Engineering course. In between, he even found time to mountain bike in the national forest just outside of Blacksburg.

Sam has held summer positions with Architect of the Capitol, Patner Construction, Inc. and Grunley Construction Company, Inc. After he graduates with his master's degree, he dreams of becoming a project manager on high rise buildings.

Name: Lee Matheson
Area of Interest: Land Development

Originally from Chesapeake, Virginia, Lee Matheson will return to the beach next year when he relocates to San Diego. As a member of the Corps of Cadets, he will commission in May following graduation from Virginia Tech.

After transferring to Virginia Tech from the University of Florida, Lee took no time getting involved on campus. He is commander of the Armed Forces Special Operations Prep Team and a member of the German Club.

While his original interest was in architecture because of the design aspects, he chose civil engineering when he realized that he wanted a more hands-on career. The idea of working on design, as well as being on job sites, was appealing to him. This past year, he traveled with CEE students and faculty to Punta Cana to take the airport transportation course. Although his area of focus is land development, that Airport Transportation course is one of his favorites, along with Sustainable Land Development.

Even though he has spent much of his life near the beach, Lee is an avid snowboarder and states that his dream job is to be a ski patrol in Colorado. No matter where his career takes him, it is sure to be a bright one.

Senior Spotlights

Name: Eileen Phan
Area of Interest: Structural Engineering and Materials

Eileen Phan, an Alexandria, Virginia native cannot get enough of Blacksburg. After graduating in May, she will stay at Virginia Tech in the structural engineering and materials graduate program.

She aspires to work at an international architecture and engineering firm and would love to travel with her work. Like many civil engineers, she was originally interested in architecture but noted that her brother got the creative genes of the family. However, she is pleased with her choice to become a civil engineer because of the valuable role that structures can play in culture. "Designing a structure that can become iconic and not only impact my generation, but also future generations, is why I chose civil engineering," she said.

Eileen is very involved in CEE, helping to plan and execute the Civil Engineering Career Fair each semester. She is also a member of ASCE, Tau Beta Pi Engineering Honor Society, Vietanamese Student Organization, and Student Government.

Name: Hillary Siegall
Area of Interest: Land Development

While some know from a young age that they want to be a civil engineer, Hillary admits that she arrived at her choice of major after a process of elimination. She was strong in math and physical sciences so she knew that she would like to pursue engineering. After taking a few general engineering courses, she said it was obvious that civil engineering was the best fit. Her favorite class in her CEE experience was Introduction to Land Development, taught by Kevin Young, who described her as a "hard-working, mature student who strives to not only gain competency in applying the engineering concepts being taught, but to also investigate and understand the underlying theories."

Hillary served as the American Society of Civil Engineers (ASCE) president at Virginia Tech in 2014-2015, is a member of the Concrete Canoe team and is also a member of Chi Epsilon. Her dream job is to work with ASCE to influence Congress to fix the country's infrastructure. With a concentration in land development, she will join Dewberry in Richmond as an entry-level land developer.

Although she is excited to start the next chapter of her life in Richmond, she said she will miss Blacksburg, especially the mountains, hiking trails, and meals at Soulvakis.

Senior Spotlights

Name: Ellen Vallerie
Area of Interest: Structural Engineering and Materials

Motorcycles, skiing, and field hockey are just a few of the activities that Ellen Vallerie participates in when she isn't studying. She is an officer in the motorcycle club and a member of the ski team at Virginia Tech. She also plays club field hockey.

Originally from Ellicott City, Maryland, Ellen will move to Greenville, South Carolina following graduation to work in construction estimating for Fluor Corporation. Her dream is to be in a big company working on big projects, which is exactly what she will be doing at Fluor. In her own words, she's already living her dream! Vickie Mouras taught Ellen's two favorite classes, Reinforced Concrete Structures and Design of Steel Structures. She noted that Ellen was a joy to have in class, always paying attention and asking great questions.

Although she admitted that she will miss riding her motorcycle through the mountains, hiking, camping, and the wonderful people that she has met in Blacksburg, she is excited to be involved and visit as an alumna. She has fond memories of attending the dinners and social events to interact with the CEE alumni board and aspires to serve on the board one day.

Name: Jacob Williams
Area of Interest: Environmental and Water Resources

Over spring break, Jacob Williams traveled to Honduras for a church mission trip. His trip aligned well with his interest and future career goals, as he noted that he aspires to dig clean water wells in third world countries to improve the health and happiness of communities around the world.

Community is something that Jacob values. He has served as a resident advisor in New Hall West for three years and is also an active member of New Life Christian Fellowship on campus. While there are many parts of Virginia Tech he will miss next year when he moves to Newport News, Virginia to work for Kimley Horn and Associates, he said the one he will miss the most is the sense of community in Blacksburg.

Being a Virginia native from Hampton, Jacob always wanted to go to Virginia Tech to study engineering. His father was in the construction field so he was exposed to aspects of civil engineering throughout his childhood. Once he got to high school, he knew that he wanted to focus in water treatment. As they say, "the rest is history."

Student Organization Updates 2015

American Society of Civil Engineers (ASCE)

ASCE's schedule was packed with events this academic year. In the fall, the officers and team captains for Steel Bridge and Concrete Canoe attended the Alumni Board meeting for a presentation. They were able to share their progress and preparation, as well as network with board members.

In October, ASCE members participated in the Virginia Science Festival, which was a month-long festival that provided hands-on experiences, live performances, interactive demonstrations and entertainment for all ages. Just a few days after the festival, several students attended the ASCE Global Conference in Panama City.

The group made it a goal to plan local field trips to highlight the various areas of civil engineering. Twenty students traveled to the New River Gorge Bridge and walked across the bridge. The chapter also toured the Virginia Tech football practice facility, following the meeting presentation by David Chinn. In April, members traveled to the Radford University Intramural Field Construction site visit.

In February, members traveled to Roanoke for an ASCE Roanoke Branch meeting. At that meeting, professor emeritus James Mitchell discussed the Apollo Space Program and soils on the moon.

The interest in the chapter was off the charts this year, with 220 students attending the first meeting. There were a wide variety of topics covered including ethics, career tips, and research or project presentations. One of the favorite meetings was doing a hands-on activity relating to natural disasters, hosted by Krista Rand and Mike Walsh from Dewberry.

Each general body meeting hosted speakers, including:

- Jim Hummel, Skanska
- Vickie Mouras, CEE Professor of Practice
- Mike Biscotte
- Dr. Brian Diefenderfer from VDOT
- Krista Rand, Dewberry
- Mike Walsh, Dewberry
- Jim Carter, Norfolk Southern
- David Chinn, football practice facility
- Dr. Easterling, CEE Department Head
- Jeff McInnis

If that didn't cram their calendar, members also made time to participate in a Strouble's Creek Clean Up.

The Concrete Canoe and Steel Bridge teams worked hard to get prepared for the ASCE Virginias Conference. They both had showcases at the Engineering Open Houses and Engineers Week on the drillfield.

The Concrete Canoe team started early in designing, testing, compressing, pouring and decorating. They even fit in a few rowing practices at Claytor Lake.

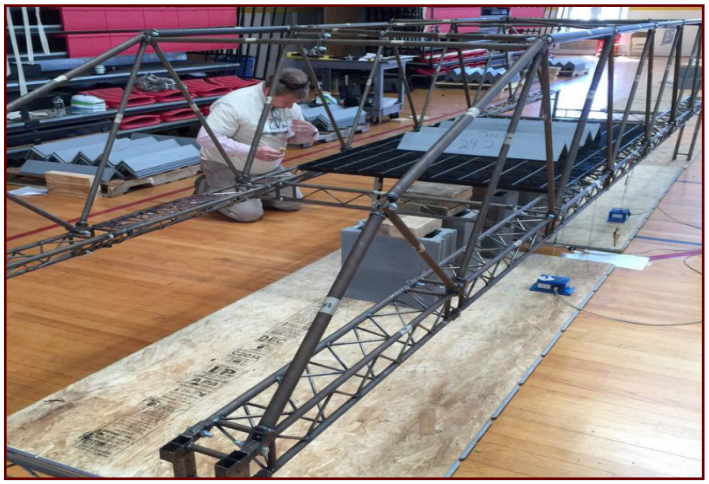
The Steel Bridge Team was hard at work in the Ware Lab. They taught the public about their projects during the Ware Lab open house in the fall. In February, the Steel Bridge bay in the lab became hot work certified.

On April 10-11, Virginia Tech ASCE members, the Concrete Canoe Team and the Steel Bridge Team traveled to Lexington to compete at the Virginias Conference hosted at the Virginia Military Institute. The Steel Bridge Team placed first and is headed to Nationals. Concrete Canoe placed first for presentation, 2nd place for the final product, and 2nd place overall.

The Student Engineers' Council will be contributing $4,000 to buy a new 25 foot enclosed trailer for use by the Concrete Canoe team. The trailer will be available for use by other Ware Lab teams when not in use by Concrete Canoe.

Concrete Canoe members in the Structures Lab

2014-2015 ASCE Officers



The steel bridge during ASCE Virginias' Conference

Student Organization Updates 2015

American Railway Engineering and Maintenance-of-Way Association (AREMA)

The Virginia Tech chapter of the American Railway Engineering and Maintenance-of-Way Association (AREMA) is a student run organization that is working to create a connection between students and professionals in the railroad industry. Nationally, AREMA's mission is to develop and advance both technical and practical knowledge and recommend practice pertaining to the design, construction and maintenance of railway infrastructure.

The Virginia Tech chapter was formed in the spring of 2012. Their mission is to introduce Hokies to the engineering opportunities in the railway industry and teach members the basics of railroading. Members include undergraduate and graduate students in civil engineering and mechanical engineering.

The chapter holds several meetings a semester and hosts speakers to come and talk with students about railway engineering. In previous semesters, AREMA went on a variety of field trips. While they weren't able to schedule any this year, they are hoping to get some planned in the future.

The 2014-2015 officers of AREMA are Margaret King, Jor Carothers, Milad Hosseinipour and Sajjad Meyamand.

Alliance of Transportation Engineering Students (ATES)

The Alliance of Transportation Engineering Students (ATES) is the umbrella under which two student chapters, the Virginia Tech Institute of Transportation Engineers (ITE) and the American Road and Transportation Builders Association (ARTBA) perform. The underlying aim of having both transportation groups is to bring together students with diverse interests and ensure that all students interested in transportation are served in a comprehensive, interdisciplinary manner. ATES activities are able to strike an appropriate balance of those goals.

The group holds many social, academic, and other engagement activities throughout the year, including field trips, paper competitions and conference travel.

This year, the group attended the Traffic Bowl, a jeopardy-style competition sponsored by the ITE. This year's team won the Virginia ITE traffic bowl. They are pictured to the right with faculty advisor, Bryan Katz.

The group is also known to serve lots of great food at potlucks they hold periodically. Sometimes, the group even finds time to do other fun activities such as horseback riding and hold game nights.

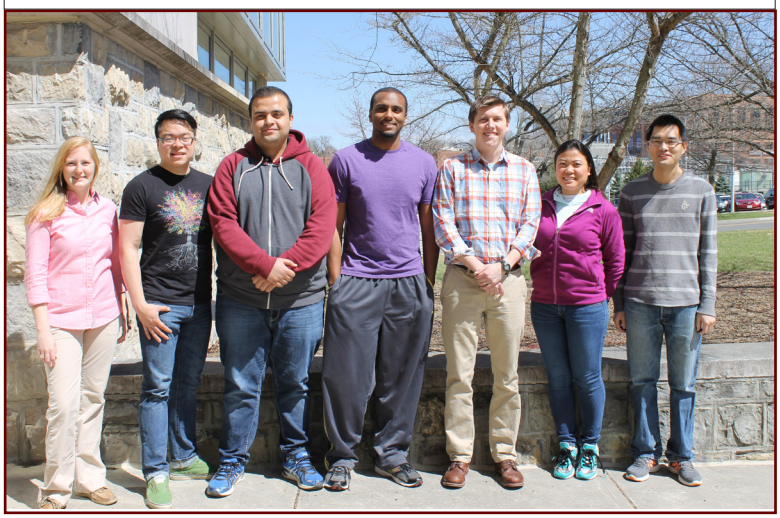
American Water works Association (AWWA) and Virginia Water Environmental Association (VWEA)

This year, the Virginia Tech Chapter of the Virginia Section of the American Water Works Association (VAAWWA) and the Virginia Water Environmental Association (VWEA) had high goals to offer its members a variety of involvement opportunities to develop personally and professionally.

The chapter participated in The Big Event in April which gave members an opportunity to thank the citizens of Blacksburg for their involvement with the Virginia Tech community. In the fall, they participated in a steam clean of Stroubles Creek near campus.

Every year, the student chapter sends student design teams to two conferences. One is by the VAAWWA and one by the VWEA. Each conference has an engineering design competition. Members work many hours outside of class to prepare strong designs and presentations.

AWWA/VWEA past and present officers



WaterJAM is an event hosted by VAAWWA and VWEA. The record-setting conference is hosted in the fall and provides various technical growth opportunities for students by covering the latest industrial trends through workshops, service projects and facility tours. The VWEA design competition in the spring. With a full calendar, members stay busy all year long.

Some of the newer activities that the organization holds are Brown Bag Talks. Presenters are students working on research projects in the water field. The talks give members practice for presenting in different settings and also keeps the other members informed about their peer's challenges and progress.

The organization's officers this year are Ayrton Bryan, Anurag Mantha, Xiaojin (Jim) Li, and Alex Flint. Gregory Boardman serves as the group's faculty advisor.

Student Organization Updates 2015

Bridges to Prosperity Virginia Tech (B2PVT)

Bridges to Prosperity members spent their spring break from March 7-14 in Pachalum, Guatemala. They settled on this site after evaluating a few others that were not adequate due to technical feasibility. When the team arrived, community members in Guatemala had already built the foundation, tiers, and towers. The cables had been strung across the river. The B2PVT team worked with the community members to tension the cables, set the sag, place the decking and fencing, and build the access ramp. They were able to complete the bridge before having to return to Blacksburg at the end of spring break.

The CEE students that were part of the construction were Ivan Harangozo (project manager), Andrea Ruano, Sunny Rim and Matt Williams. Construction Engineering Management students Spencer Peterson and Jose Alvarez also took part in the project. Dr. Christine Fiori, Benjie Hayek and Neil Hayek were construction mentors that helped the students on the trip. Mike Paddock served as the club's design mentor through the process.

The group hopes to find more sites for future projects in Guatemala. For more information about the most recent trip and background information about the organization, see the feature on pages 6-8.

Members of B2PVT on a spring break trip to Guatemala.

Chi Epsilon

Chi Epsilon had a busy calendar in the 2014-2015 academic year. The group organized the senior composite photos for the department. They also continued to offer free tutoring to civil engineering sophomores and juniors.

This year, the chapter made it a goal to get involved in the local community. With the help from over 25 new initiates, they participated in the potato drop contest where volunteers helped bag and organize potatoes to send to food banks. Several members also helped sort food at the local Feeding America food bank. Members and initiates participated in an elementary school outreach program to spur student's interest in civil engineering using a drinking straw bridge activity.

Research Day Undergraduate winners:

1. Zihan Wang
2. Aaron Potkay, Osama Bukhamseen, Cam Buss, Rachel Soper, Bobby Walter
3. Zachary Ostrum

Graduate winners:
1. Melis Sutman
2. William Rhoads
3. Mark Tilashalski

The chapter hosted the 5th annual CEE Research Day. This year the event was held at the Inn at Virginia Tech, on the day of the Alumni Board meeting. Board members had the chance to attend and some served as judges for the event. Approximately 45 graduate and undergraduate researchers showcased poster presentations about their work from the past year.

Two chapter honor members were recognized this year. The first member, Anne Ellis, was the Fall 2014 Chapter Honor Member. She is currently the Vice President of Market Access for Earth Tech Inc.'s Consulting and Engineering Division. She is the company's congressional liaison on the state and federal level and a member of the Virginia Tech College of Engineering Advisory Board and the U.S. Secretary of Commerce's Environmental Technologies Trade Advisory Committee.

The second honor member was Dr. William E. Cox, professor emeritus for the CEE department. His research has been published extensively and has done work for clients such as the United Nations and the World Water Council. He has also served as a chair on the ASCE Division of Water Resources Planning and Management.

Chi Epsilon members at a local food bank, Feeding America, to sort food

Student Organization Updates 2015

Construction Management Association of America (CMAA)

Construction Management Association of America (CMAA) focused the year around three main events. The first event was a LinkedIn workshop taught by students about how to get the most out of their LinkedIn profile. The workshop covered ways to utilize LinkedIn during job searching and the value it can provide in networking.

In October, the current and future officers of the chapter attended the Rising Construction Management Conference in San Francisco, California. Six chapter members had the opportunity to learn about the upcoming trends in the industry while listening to presentations given by a variety of industry representatives.

The third main event was a National Capital Chapter Joint Event. Members of the National Capital Chapter visited Blacksburg for a day. Volunteers presented on current projects to help educate the students and create a good networking environment. Thirty people were in attendance for the event and they hope to hold it again in future years.

CMAA student representatives in San Francisco, California at the National Rising Construction Management Conference in October.

Geotechnical Student Organization (GSO)

The Virginia Tech GSO had a remarkable year thanks to the generosity of our faculty members and inspiration from leaders in the industry.

The chapter continued its mission of promoting the field of geotechnical engineering through participation in outreach activities such as an event with the Chattanooga Girls Leadership Academy to construct small mechanically stabilized earth (MSE) walls.

Through participation in the 2015 International Foundations Congress and Equipment Exposition (IFCEE 2015) in San Antonio, Texas, they continued to foster ties between members and the wider geotechnical community. GSO organized a Virginia Tech Geotechnical Alumni Reception at the conference, with over 45 participants.

The GSO members were also fortunate to hear and help organize lectures by world-class leaders in geotechnical engineering including Dr. James K. Mitchell of Virginia Tech, Dr. Ken Stokoe from the University of Texas-Austin as part of the ASCE Geo-Institute Cross-Country lecture series, and Dr. Faiz Makdisi of SAGE Engineers.

The GSO also coordinated several social functions to encourage faculty-student interaction and to schedule time to escape from the Ozawa library!

EWRI/COPRI

The EWRI/COPRI graduate student group is an organization focused on sharing ideas, networking and socializing within the department to increase awareness of critical issues related to coastal, environmental and water resources engineering.

EWRI/COPRI members on an afternoon cleaning of Stroubles Creek on the Virginia Tech campus

The group hosted a series of seminars throughout the academic year. Speakers included Via Department faculty Dr. Nina Stark and Dr. Kyle Strom. Dr. Tom Burbey from the Geosciences Department at Virginia Tech also spoke about "The Ramifications of Groundwater Pumping in Las Vegas Valley."

A group of members participated in the workshop, "ICHRT and DR-IGEP Disaster Resilience Symposium: Interdisciplinary Perspective on Coastal Resilience," sponsored by the Institute for Critical Technology and Applied Science (ICTAS) at Virginia Tech.

Four conference travel scholarships were awarded to members of the student chapter to financially support the presentation of their work at academic conferences. The selected students participated in the Young Coastal Scientists and Engineers Conference, the ICCE International Symposium on Sediment Dynamics from the Summit to the Sea, and the 2014 AGU Fall Meeting.

The chapter teamed up with the American Society of Civil Engineers (ASCE) and the American Water Works Association/Virginia Water Environment Association for a stream cleaning activity in the fall. The activity focused on reaches of Stroubles Creek, which flows across campus.

Student Organization Updates 2015

North American Society for Trenchless Technology (NASTT)

NASTT is an engineering society of individuals, public organizations and private companies with strong beliefs in the practical, social, and environmental benefits of trenchless technology. The Virginia Tech chapter has been busy with travel in 2015. The annual No-Dig Show was hosted in March in Denver, Colorado.

The group also took field trips to experience the installation of PVC Fold and Form pipe liner and HDD application for a conduit installation (pictured on the right). As many Virginia Tech civil and environmental engineering student organizations did this academic year, NASTT participated in a stream clean up.

For more information about trenchless technology and NASTT at Virginia Tech, visit www.nastt.org.vt.edu.

Structural Engineering Institute (SEI)

The SEI Graduate Student Chapter has been busy, working closely with ASCE and other graduate student chapters like the Earthquake Engineering Research Institute (EERI) Virginia Chapter and the Geotechnical Student Organization (GSO).

The chapter held a variety of invited speakers and webinars. Michael Gustafson of Tekla presented about the BIM software that his company produces. The seminar was scheduled as a result of direct feedback from students and their interests. The chapter hopes to continue focusing on topics that will provide benefit to anyone entering the industry.

Larry Olson, president and principal engineer at Olson Engineering Inc. gave a guest lecture on applications of NFT in forensic engineering. Another popular event was a webinar on the topic of Design Building Structures for Serviceability by Alexander Newman.

One goal of the chapter is to continue collaborations with the department to send students to technical conferences throughout the country. In March, the group organized a trip to the NASCC Steel Conference in Toronto, Canada. In April, they sent eight students to the Structures Congress in Boston, Massachusetts, where four students presented papers.

The chapter took up the initiative to conduct the AISC Night School webinar series on "Fundamentals of Earthquake Engineering" taught by Rafael Sabelli from Walter P. Moore. The night school was an eight-series lecture. GSO and EERI chapters also teamed up to conduct the webinar series.

An exciting event this semester was the chapter's first outreach project, partnering with Christopher Consultants to provide the design recommendations for a school in rural Haiti. Construction is set to start by August.

Sustainable Land Development Club (SLDC)

With the aid of faculty advisor Kevin Young, and working closely with the Land Development Design Initiative (LDDI), the Sustainable Land Development Club (SLDC) brings together students with a common interest in sustainability as it relates to land development design. Graduating senior Michael Roselius served as the club's president this year, and was joined by officers Meghan Hekl who served as vice president and Dylan Hale who served as the club's service project coordinator.

The 2014-15 academic year was a busy one for the SLDC. LDDI and the SLDC continued their tradition of hosting a "Land Development Career Night" on the eve of the Civil & Environmental Engineering career fair. Numerous representatives from multiple engineering firms attended the career nights and, as always, student turnout was exceptional. This event provides an opportunity for students and potential employers to network and connect in advance of the Career Fair. During the fall semester, the SLDC also hosted a football viewing party for its members. The spring semester was particularly eventful for the club. In March, SLDC members participated in LDDI's third annual Design Charrette Competition. Representatives from Dewberry visited campus and introduced a real world site design problem to student teams. The teams were then given one hour to work toward a solution. The submittals were judged by local land development professionals, and prizes were given to the top teams. Six student teams participated. Members were treated to an out-of-town field trip to northern Virginia to tour interesting land development projects hosted by representatives from J2 Engineers and Bowman Consulting. LDDI covered all of the students' expenses. In April, SLDC members provided stakeout surveying of the track for Virginia Tech's annual Relay for Life.

A student team and their design during the third annual LDDI Design Charrette & Competition

The past year also found the SLDC continuing its partnership with the FloydFest music festival. From relatively modest beginnings in 2002, the festival has grown considerably over the past decade. With its rapid growth, festival organizers have encountered challenges, including site layout, shuttling of patrons, and public safety issues. In past years, SLDC members developed a series of site maps to help festival organizers address these issues. In 2015, they helped with the layout of various attractions and public facilities such as vendor tents, food facilities, and parking lots.

Congratulations to the Top 25 Graduates for the 2014-2015 Academic Year

Congratulations to the following students who finished in the Top 25 of all CEE graduates completing their undergraduate degree requirements between Summer I 2014 and Spring 2015.

Samuel Ferrara
Tyler Weiglein
Haseeb Tahir
Zachary Ostrum
Alexandra Boyle
Aaron Potkay
Rachel Wilson
Troy Clayton
Matthew Runion
James Duvall
Mitchell Magee
Paige Emanivon
Nicholas Zinck
Kaitlin Blackwell
Zachary Barlow
Aleksander Chiaia
Connor Maldonato
Andrew Rinella
Eileen Phan
Matthew Madigan
Clinton Martin
Wesley Marsh
Max Grande
Patrick Shurr
Edward Harmon

Stay up-to-date on the latest CEE news and events on social media.

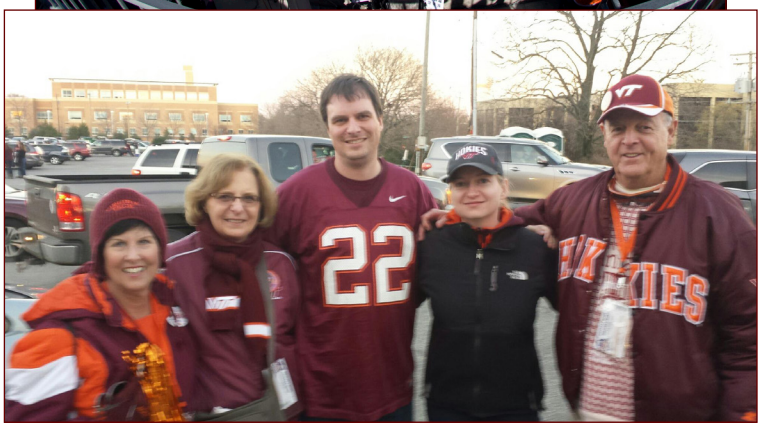
https://www.facebook.com/VTCEE

@VirginiaTechCEE

Virginia Tech Civil & Environmental Engineering

Seventh annual CEE Homecoming Tailgate

Come back to Blacksburg with your fellow CEE alumni to watch the Hokies take on Pittsburgh. Save the date of Oct. 3 for the seventh annual CEE Homecoming. The location, which is still being finalized, will be near the stadium. Stay tuned for more information in the fall.



There is no cost to attend but if you plan to stop by, RSVP to Courtney Long at celong@vt.edu or (540) 231-0981 so we can plan accordingly. We hope to see you in October!

WE WOULD LIKE TO HEAR FROM YOU!

Please send your announcements such as marriage, births, career accomplishments, retirement, awards, and recognitions, by email to **Courtney Long** at **celong@vt.edu** or by mail to the address below:

Via Department of Civil and Environmental Engineering
Virginia Tech, 200 Patton Hall
Blacksburg, VA 24061

Be sure to include the following information: name (and maiden name, if applicable), address, phone number, and email address.

Mailing or email address updates should also be sent to celong@vt.edu.

Show your Virginia Tech CEE pride!

From left to right: Michael Roselius ('15), Casie Venable ('16) and Glenn Cooke ('15)

Complete the form below or call (540) 231-6635 to place your order. Checks should be made payable to "Virginia Tech Foundation, Inc." and mailed along with this form to:

Via Department of Civil and Environmental Engineering
Virginia Tech
200 Patton Hall, Blacksburg Virginia 24061

Name: _____

Street Address: _____

City: _____ State:_____ Zip: _____

Item (circle)	Quantity	Size (S, M, L, XL, XXL)	Color (Maroon or Black)
Baseball Hat ($11.50 each)	Hats: _____	Hats: N/A	Hats: _____
Polo Shirt ($28 each)	Polo shirts: _____	Polo shirts: _____	Polo shirts: _____
Sweatshirt ($25 each)	Sweatshirt: _____	Sweatshirts: _____	Sweatshirt: N/A