Champions of Change:
CEE Alumnus and Faculty Member recognized by the White House

Business & Engineering:
Dual Degree Program now offering engineering students the best of both worlds
ON THE COVER:

CEE is home to Environmental and Water Resources Engineering. Pictured is a cross section of a copper drinking water pipe. Our water resources engineering labs study the effects of drinking water on pipes and how pipes degrade the quality of the drinking water.
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We found a way for everyone to grow with us, and a way to recognize everyone who gives so generously...

Trees have a varying abundance of gifts. And, 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, as well as a way to recognize those who generously give through our “Grove of Sharing” expandable tree sculpture 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 name 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 all to see 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.
Note from the Department Head

Greetings from Blacksburg!! I hope that your summer is going well. This is a wonderful time of the year to be in Blacksburg and a member of the faculty at Virginia Tech! One activity that gives me some of my greatest job satisfaction is participating in commencement each spring. Having the privilege of presenting diplomas to the most recent graduates of our program is something that I cherish very highly. The clear sense of pride and accomplishment that students exhibit as they walk across the stage in Cassell Coliseum is great to see. The ceremony this year was certainly bittersweet as we presented a posthumous degree to the family of Mr. Quinn Asher. Quinn lost his life as a result of automobile accident during his senior year. It is a reminder for us all that life is precious and to be enjoyed each and every day.

As you know, the summer newsletter provides a great way for us 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. 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 and staff. As you’ll appreciate when you read about these awards, our department is blessed with many dedicated and talented faculty members. 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 call your attention to the updates, awards and news of some of your colleagues – Alumni of our department. 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 hope you enjoy reading about some of them as well!

We are in the midst of a very busy stretch of activities within the department. During the first part of the year, a very successful review of our graduate program was completed. The preparation culminated in a three-day site visit by a team of five distinguished members of the civil and environmental academic community. The group was uniformly impressed with our program, students, faculty, and staff. As in any activity of this type, we have a few things to work on between now and our next review in five years. However, you should know that we continue to offer a highly respected graduate program. As timing has it, we are also right in the middle of our every six-year accreditation cycle for our undergraduate program. Most of you will recognize the letters ABET as the entity that oversees the process and accredits the program. A critical point in the process was reached in mid-June when our program self-study was completed and submitted. We are now preparing for a three-day on-site visit, which will occur in early October. I’ll keep you posted on our progress in future correspondence.

Finally, I want to both introduce and thank Ms. Allison Rubio. Allie joined the CEE Department last fall as the Coordinator of Alumni and External Relations. For many of you, she will be your first and most frequent point of contact with the CEE Department. You’ll be hearing from Allie through email and departmental mailings. I hope you’ll take the time to introduce yourself, either on the phone, by email or face-to-face when you have the opportunity. One of Allie’s responsibilities is the development of the summer newsletter. I hope you’ll agree with me that she’s done a wonderful job with the 2013 edition!

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.
Bridging the gap:

Dual degree program bringing business and engineering together

By Allison Rubio

We are in the business of engineering, but what happens when engineering and business intersect? The Via Department of Civil & Environmental Engineering is full of successful alumni, some of whom are entrepreneurs.

One such alum is Bill Aden class of ’67; and one of the founders of Draper Aden Associates, a consulting engineering firm with offices throughout Virginia. Recently, Aden became interested in the juncture of engineering and business, asking questions such as, how do we prepare engineering students to take on business responsibilities?

After graduating with his Masters in 1972, Aden began working with Joseph Draper (’52) doing land development projects around Blacksburg in the seventies — a time when Virginia Tech was growing at a relentless pace. Draper Aden grew and advanced from there becoming the engineering consulting business that it is today, a member of the Engineering News Record (ENR) Top 500 consulting engineering firms.

When asked about how they were able to become successful and sustain their growth, Aden attributes it not to his leadership skills, but to “the people that we brought together into a cohesive culture, grew a good business.”

Aden refers to a quote from Peter Drucker, a well-known trailblazer in management consulting, “a leader doesn’t build a business, a leader builds an organization that builds a business,” a concept that Aden understands and respects after seeing it work first hand at Draper Aden Associates.

While working to build their business Draper and Aden both played an integral role in the business management and marketing aspects of entrepreneurship. Though their endeavor has been successful, Aden admits that “[he] had no training in the business side of civil engineering and had a difficult time picking up on many of the day-to-day operational issues that are so important for the running of a business,” which Aden improved by teaching himself through seminars, reading and many 18 hour days.

A dual degree program such as the simultaneous degree option offered by Virginia Tech would have been ideal for Aden, or any other engineer wanting to excel in business and seeking a graduate degree.

The Virginia Tech MBA simultaneous degree program is new, graduating its second class this May 2013. The program started in 2010 when after working in the construction field for seven years, Martha Gross wanted to pursue her graduate degree but was torn between engineering and an MBA. Virginia Tech figured out a way to offer her both.

Gross worked closely with Associate Dean of Graduate programs in the Pamplin College of Business, Stephen Skripak to develop a curriculum that would allow interested engineering students to get both their respective masters in engineering with an MBA in the same amount of time it would take to complete one degree.

“aragraphic for the day Martha first proposed this idea”, said Skripak. “Once we figured things out for her, the next natural question for me was ‘how many more are out there like her?’ It turned out to be quite a few, which launched us in a totally new direction.”

The program currently offers the following tracks: M.S. in building construction, M.S. in civil engineering, M.S. in industrial systems engineering and even an option for medical students. Students in the program usually start by taking one full year of core MBA courses and then follow with their engineering courses and research in the second year.

Over the past two years the interest in the simultaneous degree program has grown with applications seeing a staggering 200% increase, and with 36% of all MBA applicants also pursuing engineering degrees, a true testament to the developing importance of combining engineering and business skills in industry.

Current simultaneous degree student and civil engineering undergraduate alum, Edward Halley (’14), chose the dual degree program after spending time working as a project manager for Hazen & Sawyer in Baltimore. Halley said that he “realized that to further my education would be best to prepare me for full time work as a project manager, which is my eventual goal.”

Personal experiences interested both Halley and Aden in the simultaneous degree program, and Aden believes that, “it will give graduates the opportunity to easily advance into management positions within their organizations.”

The Virginia Tech MBA simultaneous degree program grooms students to bridge the gap between engineering and business, offering alumni an interesting set of skills above and beyond that of their peers and preparing them for successful futures full of leadership, management and even entrepreneurship.
The academic year has been full of accomplishments for faculty and students alike. Both undergraduate and graduate students are excelling in their programs and are piling up the recognition to prove it.

In the geotechnical area, three students won awards at the annual meeting of the Eastern Section of the Seismological Society of America. Ph.D. candidate Brett Maurer won first place in the student poster competition with “Evaluation of Liquefaction Potential Index (LPI) for Assessing Liquefaction Hazard: A Case Study in Christchurch, New Zealand,” and fellow Ph.D. candidate Beena Ajmera won third place. Kevin Foster, also a Ph.D. candidate, took first place for his poster, “Dynamic Characterization Program for Coal Combustion Products.”

Another notable student achievement was that two scholarships were awarded to civil engineering juniors Robin Willis and Gregory Pope by the Virginia section of the American Society of Civil Engineers (ASCE). Willis and Pope were selected for their achievements in academic performance, employment experience, extracurricular activities and professor recommendations. Both Willis and Pope received a $2,000 scholarship to use toward their education; the funds are direct contributions from ASCE members as well as from ASCE Virginia sections and branches.

Another professional organization, the International Road Federation, recognized Daniel Mogrovejo’s essay, “Effect of Air Temperature and Vehicle Speed on Tire/Pavement Noise Measured with On-Board Sound Intensity Methodology” as the winner of the 2012 IRF Student Essay Competition at their annual luncheon in Washington, D.C. this past January.

Undergraduate student Elizabeth Godfrey was also recognized at the capital this year. Godfrey was selected to present her undergraduate research project, “Site amplification in the Washington, D.C. area during the 2011 Virginia earthquake” at the annual Council on Undergraduate Research poster session. She was one of 60 selected to present out of 800 applicants.

The civil engineering department is proud to share in the accomplishments of all our students and there are many more awards to share. Scholarships, fellowships and awards offer our students the opportunity to excel in their fields here at Virginia Tech and beyond.
Young selected for Loganathan Award

“Ideal teachers are those who use themselves as bridges over which they invite their students to cross, then having facilitated their crossing, joyfully collapse, encouraging them to create bridges of their own.” ~ Nikos Kazantzakis

Great teachers are those that leave students with something that goes beyond the classroom, textbooks and problems of the day. A teacher can be a mentor, friend and guide to awareness that a student never knew possible.

The Via Department of Civil and Environmental Engineering was especially privileged to have an exceptional teacher, Dr. G.V. Loganathan, who inspired countless students during his career at Virginia Tech.

The G.V. Loganathan Faculty Achievement Award was formally known as the CEE Faculty Achievement Award before being renamed in 2007, an honor Loganathan received five times; 1995, 2001, 2003, 2005 and 2007. The award serves as a true testament to Dr. Loganathan’s passion for inspiring others to learn and is a reflection of the fact that students were his top priority.

The award is given annually based upon the voting of current undergraduate and graduate students in the CEE department.

This year the prestigious award goes to one of Dr. Loganathan’s former students, Assistant Professor of Practice, Kevin Young. Young worked closely with Dr. Loganathan during pursuit of his master’s degree.

During this time, Loganathan introduced Young to the Analytic Hierarchy Process (AHP) decision support algorithm. Under Loganathan’s tutelage, Young adapted the AHP to assist in the selection of stormwater best management practices. Following his master’s, the AHP algorithm formed the basis for three sponsored research efforts, including one currently underway with VDOT.

When asked about being chosen Young stated that, “it is an incredibly humbling experience. To be mentioned in the same breath as Dr. Loganathan is something I am very proud of.”

Young has grown tremendously in his teaching and research while working within the department. Young’s first assignment within the department was as a Research Associate working on urban stormwater issues with Professor Emeritus Dr. David Kibler. His first teaching experience came in the spring 2007 semester when he taught CEE 4274 – Land Development Design.

Kevin Young

It was also during this time that Young began working with Dr. Randy Dymond and the Land Development Design Initiative (LDDI) where he has served as the assistant coordinator since 2007.

LDDI is a unique program that brings professional industry together with academia to better prepare students for a career in land development design. Since the program’s beginnings, and with substantial input from industry professionals, Young and Dymond have grown the program from a single course offered only once each academic year to a comprehensive curriculum comprised of six individual courses. Among these courses is CEE 3274 – Introduction to Land Development Design.

Young taught the inaugural offering of this course in the fall 2009 semester, and the course had an enrollment of 15 students. Young now routinely teaches the course with as many as 120 students!

In addition to teaching land development courses, in the fall 2012 semester Young took over teaching duties for CEE 2814 – CEE Measurements, a course required of all Virginia Tech CEE students.

When students are asked about Young many of them respond by saying that he is organized and always prepared. That he helps students understand material and he goes out of his way to make sure everyone is treated with respect and care.

One student states, “He has a passion for what he teaches, every single one of his students loves him and he’s invaluable to Virginia Tech Civil Engineering.”

The student nominations were full of stories on how Young and the LDDI program offered amazing opportunities inside and outside of the classroom.

On top of a substantial teaching load Young remains actively involved in a number of urban stormwater research efforts, and he is also working toward a Ph.D. in the Geospatial program.
Every spring is full of award ceremonies as that academic year comes to a close. At the sixteenth annual engineering faculty reception, two-dozen faculty, were honored for various research awards in teaching, research, service, and outreach. This year three faculty members from the Via Department of Civil and Environmental Engineering were honored at the ceremony and two faculty members were also honored with university level awards.

Vickie Mouras (B.S. '78, M.S. '97), assistant professor of practice, was awarded the College of Engineering Certificate of Teaching Excellence. Mouras is one of only four such award recipients. Professor Mouras is a proud Hokie and has been affiliated with the department for over 30 years. She is a retired US Army Engineering Officer with over 20 years of active duty and reserve service. Mouras has experience in construction project programming, design, and management. When asked about her job she states she “enjoys being surrounded by bright and talented individuals because it continually challenges me to be better.” Mouras brings years of undergraduate teaching experience in fundamental engineering mechanics, structural design, construction engineering and management along with professional practice issues. Mouras recently assumed responsibility for the required senior class Professional and Legal Issues in which she teaches on topics such as leadership and business etiquette, as well as legal issues in the design and construction industry.

Dr. Matthew Eatherton, assistant professor focusing in structural engineering and materials was awarded the College of Engineering Outstanding New Assistant Professor Award. Eatherton was one of only two such winners. This award highlights Eatherton’s excellence in and outside of the classroom. He attempts to engage his students in a variety of ways including physical demonstrations of engineering principles, open-ended class projects, and fostering a relaxed atmosphere of mutual respect. Eatherton and his research group contribute to multiple outreach events each year in the local community, often with a small-scale shake table that they use to knock down structures built by K-12 students. Eatherton’s energy and enthusiasm produce an atmosphere for learning and development within the department and the college as a whole. Dr. Eatherton’s research focuses on improving the performance of our civil infrastructure during earthquakes. His research group seeks to do this through developing innovative high performance structural systems, improving our understanding of how structures resist earthquake ground motions, and improving the analysis and design of steel structures.

Dr. John Taylor, associate professor focusing in construction engineering and manage-

See Dean’s Award Winners, next page
ment was awarded the College of Engineering Dean’s Faculty Fellow Award for recognition of extraordinary performance in research. Professor Taylor is the Director of the Civil Engineering Network Dynamics Lab and his research focuses on examining, modeling and improving systemic change in engineering networks of industrial and societal importance. Taylor was awarded a plaque and $5,000 per year for three years as discretionary funds for research.

Taylor’s current research focuses on three key network dynamics: achieving sustained energy conservation in the built environment by coupling energy use and energy conservation practices with building occupant networks; the trending increase in global outsourcing of complex engineering services; and examining the impact of integrated information systems on project networks and the associated virtualization of the engineering workforce. He was also a co-principal investigator on an NSF IGERT grant on solving urbanization challenges by design, a four-year, almost $3 million grant.

Taylor also received the university’s 2013 XCaliber Award for excellence as an individual involved in teaching with technology. Established in 1996 by Office of the Provost, the XCaliber Award (shorthand for exceptional, high-caliber work) is presented annually by the Virginia Tech Center for Innovation in Learning to recognize individual faculty members or teams of faculty and staff who integrate technology in teaching and learning. The award celebrates innovative, student-centered approaches to learning activities.

At the end of the course, teams prepared a presentation, which they delivered as a globally distributed team in the CyberGRID with industry representatives present. Taylor’s citation states, "Professor Taylor has created a learning environment that replicates the skills and competencies engineers need in the 21st century. His CyberGRID provides students with an environment for developing collaborative and innovative strategies to address distributed design problem-solving in a global context."

Dr. Russell Green, associate professor was awarded the university Alumni Award for Excellence in International Research. Sponsored by the Virginia Tech Alumni Association, the Alumni Award for Excellence in International Research is presented annually to a faculty or staff member who has had a significant impact on international research in the areas of engineering seismology and earthquake engineering with the objective of lowering the risk of damage from future earthquakes worldwide. He and his students have performed collaborative work in New Zealand, Japan, Iceland, Haiti, China, and Dubai, among others. The results of his research are currently being used in the rebuilding of Christchurch, New Zealand, and Port-au-Prince, Haiti, following recent devastating earthquakes.

Since joining the Charles E. Via, Jr. Department of Civil and Environmental Engineering in 2008, Green has been heavily involved in international research in the areas of engineering seismology and earthquake engineering with the objective of lowering the risk of damage from future earthquakes worldwide. He and his students have performed collaborative work in New Zealand, Japan, Iceland, Haiti, China, and Dubai, among others. The results of his research are currently being used in the rebuilding of Christchurch, New Zealand, and Port-au-Prince, Haiti, following recent devastating earthquakes.

In 2011, Green worked with researchers from New Zealand gathering post-earthquake data. Of particular significance was his analysis of soil liquefaction that was pervasive in the eastern suburbs of Christchurch, the results of which have direct implications on how the risk due to liquefaction is evaluated in the US and worldwide.

Green emphasizes the value of international research experience to his students, and has led a group of undergraduate and graduate students to Iceland to establish a formal student exchange agreement between the college and the University of Iceland. He is the recipient of several prestigious fellowships with international universities, all geared at increasing research collaborations.
Dymond receives 2013 award

Dr. Randy Dymond, associate professor in the environmental and water resources engineering program area, is the 2013 recipient of the CEE Alumni Teaching Excellence Award.

The CEE Alumni Board selects the recipient of this award based solely upon nominations received from the CEE alumni who have graduated in the past five years.

This marks the second time that Dymond has received the award, the first time in 2008. Faculty members may not win the award more than once every five years and “it is internally called the ‘Randy Rule,’” explains Department Head Sam Easterling, “as Dr. Dymond is continually highly regarded in the VT CEE alumni surveys that are collected.”

Dymond has been with the Via Department since 1998 and in that time he founded Virginia Tech’s Center for Geospatial Information Technology in 2003; helped to develop the CEE computer lab and also played an integral role in the development of the Land Development Design Initiative known as LDDI.

LDDI is a collaborative effort of the Via Department of Civil & Environmental Engineering at Virginia Tech with industry practitioners. The two primary objectives of LDDI are to improve land development design education, by increasing student awareness of land development design as a career path and by increasing interaction between practitioners and undergraduate civil engineering students. LDDI involves more than 70 engineering and land development firms, many of which provide financial support to the program.

One student stated that Dymond’s, “dedication, energy, and invaluable practical teaching experience helped me choose a career in Land Development and I am currently enjoying every minute of it!”

Another student stated that the LDDI courses offered “a one of a kind class in which my work received feedback in a professional setting and took students beyond the academics of design, and into the realm of real-world problems and solutions.”

When awarded the recognition Dymond stated that, “having former students remember and honor me with this award is truly humbling. For me, there is no greater reward for a career in academia than being recognized for the positive impact that you’ve had on a students development.”

Dymond received a certificate and a monetary award to be spent on classroom teaching improvements.

In Memoriam: Dr. Shinya Kikuchi

Professor Shinya Kikuchi grew up in Kobe, Japan. He obtained both a bachelor’s and master’s degree from Hokkaido University in Sapporo. He studied transportation systems engineering at the University of Pennsylvania, where he achieved a Ph.D. in 1974. In 1982 he joined the University of Delaware and stayed for 23 years. His positive attitude and commitment to academia is displayed in the large number of international students he sponsored and in the fact that many of his students have gone on to become leading professors around the globe. In 2005 Dr. Kikuchi came to Virginia Tech as a Charles E. Via Professor of Civil and Environmental Engineering and served as the CEE program director in the National Capital Region. Dr. Kikuchi leaves a legacy to his students, colleagues and family as an accomplished transportation expert, scientist, educator, and friend. His students commemorate him with their own dedication to lifelong learning and commitment to research excellence.
In 1998, the Via Department of Civil and Environmental Engineering (CEE) and the CEE Alumni Board formally initiated the CEE Alumni Achievement Awards Program as a means of honoring both younger alumni and those who have graduated from the department years ago. Two award categories were created within this program: the Academy of Distinguished Alumni and the Outstanding Young Alumni Award.

Alumni may be selected for induction into the Academy of Distinguished Alumni (CEE Academy) based upon a review of their overall career accomplishments and contributions to the profession, their community, and service to Virginia Tech. Younger alumni within 15 years of their undergraduate BS degree may be selected to receive an Outstanding Young Alumni Award. After this year’s induction, there are a total of 96 members in the CEE Academy and 44 Outstanding Young Alumni.

The Inductee Class of 2013
Academy of Distinguished Alumni

Mr. Michael N. Biscotte, PE, Class of 1980
Mr. Gary P. Bowman, Class of 1980
Mr. James G. Davis, Class of 1980
Dr. Billy L. Edge, Class of 1964, MS 1964
Mr. Timrod Groover, Class of 1979, MS 1980
Mr. Kenton Meland, Class of 1982, MS 1987
Dr. Elizabeth Southerland, MS 1975, Ph.D. 1982

Outstanding Young Alumni

Dr. Stacey D. Diefenderfer, Class of 1997, MS 1999, Ph.D. 2009
Maj. Aaron T. Hill, MS 2006
Dr. Justin Marshall, Ph.D. 2008

Each year, candidates for these awards come from nominations submitted directly to the CEE department by our alumni. If you are interested in nominating someone for the CEE Academy or the Outstanding Young Alumni Award, please follow this link to the nomination form: http://www.cee.vt.edu/alumni/alumni_awards/distinguished_alumni_nomination.html

Forms can be completed electronically through the website, via email to arubio@vt.edu or printed and mailed with supporting documents to:

Via Department of Civil and Environmental Engineering
Virginia Tech
200 Patton Hall
Blacksburg, VA 24061
Virginia Tech honors CEE alum Ellis for her career achievements

By Lindsey Haugh

Anne Ellis of McLean, Va., who earned her bachelor’s degree in civil engineering from Virginia Tech in 1980, is a 2013 inductee into Virginia Tech’s College of Engineering Academy of Engineering Excellence, joining an elite group of 119 individuals out of more than 60,000 living engineering alumni.

The Academy of Engineering Excellence was founded in 1999 by F. William Stephenson, past dean of the college of engineering, and the College’s Advisory Board. The inductees are engineering graduates of Virginia Tech who have made continuous and admirable engineering or leadership contributions during their careers. This year marked the fourteenth anniversary of the first induction.

Born in Salisbury, Md., to a salesman and a secretary, Ellis was one of four siblings, all of who were the first generation in her family to attend college. For 16 straight years, her hard-working parents provided for one or more of their children to attend college at Virginia Tech, Virginia Military Institute, Longwood College, or American University.

At first, she thought she would become a teacher. But at 16, Ellis was captivated by the vision of a church group advisor and with the help of another friend who promoted the engineering program, Ellis and her family made the trip to Virginia Tech.

“We arrived on a beautiful spring day, drove around the Drill Field, and it was a done deal,” Ellis recalled. “I came from a rural, small town, and Virginia Tech was the right match for me.”

She found the university to be challenging and in her junior year, Ellis moved into the civil engineering discipline.

After graduating from Virginia Tech, Ellis was sought after by companies such as Grumman and Boeing, and took a position at a structural engineering firm in the Washington, D.C. area. But 18 months later, the economy took a downturn and Ellis was laid off. Soon after, Martin, Cagley & Middlebrook hired her as a project engineer on flagship building projects. Additional exciting projects followed when she joined Dewberry & Davis (now Dewberry) as a project manager. Ellis’ portfolio of projects included casinos, hospitals, and many high-rise buildings. One of her achievements, The Trump Marina, originally designed for the Hilton is now the Golden Nugget in Atlantic City.

During the 1990s, the civil engineer spent time at Total Training Technology (TTT) as a contract instructor, which

Continued on page 16
Quillen honored by Virginia Tech for his career achievements

By Lindsey Haugh

Michael Quillen of Bristol, Va., who earned both his bachelor’s and master’s degrees in civil engineering from Virginia Tech in 1970 and in 1971 respectively, is a 2013 inductee into Virginia Tech’s College of Engineering Academy of Engineering Excellence, joining an elite group of 119 individuals out of more than 60,000 living engineering alumni.

The Academy of Engineering Excellence was founded in 1999 by F. William Stephenson, past dean of the college of engineering, and the College’s Advisory Board. The inductees are engineering graduates of Virginia Tech who have made continuous and admirable engineering or leadership contributions during their careers. This year marked the fourteenth anniversary of the first induction.

Quillen’s robust professional reputation was built through his lengthy career with the mining industry, often working in the deep pits side by side with the operators.

The straight A high school student was accepted at Virginia Tech on partial scholarship, but learned college professors had different ways of grading.

He credits Paul Torgersen, president emeritus of Virginia Tech, with his decision to remain in engineering at Virginia Tech. A low score made him consider leaving engineering until he met with Torgersen who explained to him how a grade of 40 could be rounded up on an academic curve. He stayed in the program and even opted for a master’s in civil engineering.

Throughout the 1970s, Quillen worked two to three jobs: a mine superintendent during the day and chief engineer for another company at night. And he was surveying in his minimal spare time with a startup engineering company he formed with a Virginia Tech classmate.

Quillen was named president of Paramount Coal Company in Wise, Va., by the age of 31. His duties increased when he became president of WR Grace’s Eastern Coal Group, managing three different coal companies.

The mining engineer became president of six of Pittston Coal Company’s in 1994, managing divisions in Virginia, West Virginia, Kentucky, and Ohio, representing 15 million tons of production. A year later, Pittston promoted Quillen to executive vice president of sales and marketing and president of Pittston Coal Sales for the Pittston Coal Co., of Lebanon, Va., where he gained experience in international business, especially in the Far East.

In 2002, he along with others formed Alpha Natural Resources of Abingdon, Va. Quillen developed the company to become the Commonwealth’s largest coal producer with revenues in excess of $1.6 billion annually.

In the spring of 2012, he formally retired as the chairman of this company, traded on the N.Y. Stock Exchange.

Quillen continues to be involved with his alma mater. He currently serves as the rector of the University’s Board of Visitors, and is a past member of the College and CEE Advisory Boards. He was the 2006 Distinguished Alumnus of the College. Most recently, Quillen was named 2011 Virginia Business Person of the Year.

Pictured from left are Paul Torgersen, president emeritus of Virginia Tech; Michael Quillen; Richard C. Benson, dean of the college of engineering; Sam Easterling, department head of civil and environmental engineering; and Greg Adel, department head of mining and minerals engineering.
White House recognizes Dingus for research

Dingus and his fellow Champion honorees were selected for their “exemplary leadership in developing or implementing transportation technology solutions.”

By Steven Mackay

Thomas A. Dingus, director of the Virginia Tech Transportation Institute, was honored by the White House as a Champion of Change, a group of Americans seen as making positive change. This year’s theme is Transportation Technology Solutions for the 21st century.

“It’s a very high honor,” said Dingus, adding that the award also recognizes all researchers and staff at the institute. “One of a handful of large-scale transportation institutes worldwide, [the Virginia Tech Transportation Institute] is helping shape national and global change in public policies for driver, passenger, and pedestrian safety and is advancing the design of vehicles and infrastructure to improve safety.”

Among its groundbreaking research efforts: Ongoing, in-depth analysis of naturalistic driving, distracted and impaired driving, active and passive safety system design, connected and automated vehicles, mobility improvement, and efficient infrastructure investment.

Dingus also oversaw the opening of the Virginia Smart Road test track, located at the institute in Blacksburg, and a soon-to-open high-tech driving laboratory in northern Virginia.

Dingus and his fellow Champion honorees were selected for their “exemplary leadership in developing or implementing transportation technology solutions to enhance performance, reduce congestion, improve safety, and facilitate communication across the transportation industry at the local, state or national level,” according to the White House website. Staff at the institute nominated him.

An endowed Professor of Civil and Environmental Engineering at the College of Engineering at Virginia Tech, Dingus also is a Fellow of the Human Factors and Ergonomics Society which honored him with the A.R. Lauer Award for outstanding career achievement in the field of safety. He also serves as director of the institute’s National Surface Transportation Safety Center for Excellence.

Dingus’ colleagues at Virginia Tech are praising his research and collaborative efforts.

“The bottom line is that Dr. Dingus and the work that he does at the Virginia Tech Transportation Institute saves lives,” said Robert W. Walters, vice president for research at Virginia Tech.

“It’s commonplace to see a news report about the dangers of distracted driving, texting while driving, or other hazards, and then hear more about the Smart Road and the research done at Virginia Tech to help keep people safe behind the wheel. Many of these vital insights travel directly from Tom’s institute straight into public policy, and the White House has noticed.”

Dingus is a two-time Hokie graduate, earning master’s and doctoral degrees in engineering and operations research in 1985 and 1987, respectively. Dingus named Walt Wierwille, emeritus professor of industrial and systems engineering at Virginia Tech and a retired associate director at the institute, as a mentor in an autobiography he prepared for the Champions event.

Dingus credits Wierwille’s research of automotive safety as a game changer in his pursuit of studying safety and risk management.

“It quickly became apparent that this field was at the center of injury prevention and risk management. That is, the most injuries occur behind the wheel,” said Dingus, whose 1985 dissertation was the first on-road safety evaluation of a moving-map navigation system and focused on issues of distraction and attention.
By Doug Scott, ASCE

“How many people in the course of their careers are acknowledged by the President of the United States for making a significant impact with what they do and then get the opportunity to actually sit down and discuss it with the president?” Thus remarked John R. Hillman, P.E., S.E., M.ASCE, on being named a Champion of Change for Transportation Technology by the White House.

Hillman, CEO and chairman of Wilmette, Illinois-headquartered HCB Inc., invented the Hybrid-Composite Beam, a revolutionary structural technology that results in stronger, lighter, safer, and more sustainable bridge structures. The White House Champions of Change program highlights the stories and examples of ordinary citizens who are doing extraordinary things for their communities, their country, and their fellow citizens.

In addition to being recognized as one of the Top 25 Inventions by the Modern Marvels Invent Now Competition in 2007 and one of the Top 10 Inventions of 2008 by Popular Science magazine, Hillman has now won many of the major national design and construction awards available in the United States, including a national Grand Award in 2009 from the American Council of Engineering Companies, the 2010 Ace Award from the American Composite Manufacturing Association, the 2010 Award of Excellence from Engineering News-Record, and the 2010 Nova Award from the Construction Innovation Forum. Hillman also won ASCE’s 2013 Charles Pankow Award for Innovation.

Hillman was nominated to become a Champion of Change by ASCE President Gregory E. DiLoreto, P.E., P.L.S., DWRE, F.ASCE. He is the son of a civil engineer and has been employed as a structural engineer in the inspection, construction, and design of unique bridges for over 27 years. Among his more notable assignments was managing the construction of a 1,263-foot incrementally launched bridge in Puerto Rico in the early 1990s. More recently, Hillman served as conceptual designer and project manager for the award-winning 35th Street Pedestrian Bridge over Lake Shore Drive in Chicago, IL. He is also a senior bridge engineer with US Services Inc.

Hillman has worked tirelessly for the last 17 years on the development of the Hybrid-Composite Beam (HCB), originally conceived in 1996. Nights, weekends, holidays, and vacation time have been consumed with the pursuit of commercializing HCB and changing the way engineers rebuild the world’s infrastructure with better, stronger, and more sustainable bridges. Currently he holds 4 U.S. patents for this unique bridge technology and over a dozen foreign patents pending.

“For me, contained within the very essence of what we do as civil engineers there is this sense of satisfaction in being able to solve a technical problem that results in creating a better world for everybody to live in,” says Hillman, who received his bachelor’s degree in civil engineering from the University of Tennessee in 1986 and his master’s degree in civil engineering from Virginia Polytechnic Institute and State University in 1990. “And I think America is still unique in that, inherent in our freedom, there is more opportunity for creative thinking and coming up with innovative solutions than anywhere else in the world. So for me, the greatest satisfaction about being a Champion of Change is: if I have a better idea, I am free to take it as far as I want and hopefully the result of my hard work is an improvement to the way that we do things in the civil engineering world.”

Hillman has now won many of the major national design and construction awards available in the United States.
NEW BOARD CHAIR

Laura McNamee Morillo, PE, is a Project Engineer, Energy-Nuclear, for Five Star Products, in Fairfax, VA. The privately held firm, founded over 50 years ago, is headquartered in Fairfield, CT. They have five manufacturing locations in the US and have licensees in 40 countries to supply products worldwide.

Laura started with Five Star Products in May of this year after being with her previous employer for 19 years.

Five Star Products is a manufacturer of precision nonshrink cement and epoxy grouts, foundation systems and concrete restoration materials. They recently entered into the Nuclear Market with six key products manufactured under an ASME NQA-1 and the US NRC 10CFR50 Appendix B program.

Laura began her career in 1984 after graduating with her bachelor’s in Civil Engineering from Virginia Tech. She relocated to Dallas, TX and worked for Albert H. Halff Associates for 2 ½ years.

She then relocated back to Northern Virginia and worked for Dewberry and Davis in Fairfax, VA. After working at Dewberry and Davis for 5 years, Laura took a job with the National Park Service, National Capital Parks Central in Washington, DC. She worked there for 2 ¼ years.

Then Laura took a position at Hilti, Inc., working in the Washington, DC area. Hilti is a manufacturer of tools, fasteners & anchors and chemicals for the construction industry. While at Hilti for 19 years, Laura was the recipient of the President’s Club award in 2001. Laura held various positions in several markets as Senior Field Engineer including direct report to the China Market Organization supporting the Nuclear New Builds in China designed in the US and she also held the position of Technical Market Manager working for the VP of Engineering.

Laura has served as a member of the CEE Alumni Board since the fall of 2010 and enjoys participating in the student interactions and has served on a panel discussion for the CE undergraduate course to students.

Laura is married to Luis Morillo, who is in Technical Sales for Xceed Technologies in South Riding, VA. They have two children, Sarah and Anna, who are in High School and Middle School in Fairfax, VA. Laura enjoys attending Lacrosse and Field Hockey games and swim meets to watch her daughter Sarah compete and Cheer competitions for her daughter Anna. She also enjoys exercising and relaxing with her family.

NEW VICE CHAIR

James Noble Carter, Jr., PE, is Chief Engineer Bridges and Structures for Norfolk Southern Corporation, headquartered in Atlanta, GA.

Jim began his railroad career as a Co-op student with Southern Railway System in the spring of 1971, working in Atlanta, Knoxville, TN, Charlotte, NC, and Alexandria, VA while attending Tech.

He graduated with a BSCE in 1975 and accepted a position as a Management Trainee with Norfolk and Western Railway. Those two companies merged to form Norfolk Southern in 1982. Jim has spent his entire career with Norfolk Southern and has held various positions in its Engineering Department, located in Williamson, WV; Cleveland, OH; St. Louis, MO; Roanoke, VA; Norfolk, VA; and Atlanta, GA.

Jim is 2012/2013 President and Chairman of the Board of Governors of the American Railway Engineering and Maintenance Association (AREMA), where he is also a member of Committee 15 Steel Structures, and served a Director of the Structures Functional Group from 2007 to 2011, and as Senior Vice President for 2011/2012. He is also a member of ASCE.

Jim has served as a member of the CEE Alumni Board since the fall of 2010 and enjoys participating in the student interactions and has served on panel discussions for the CE undergraduate courses to students, and the ASCE Student Chapter. He is very proud of the student AREMA Chapter that was started in 2012.

Jim was born near Mullens, WV, and his father was a railroadroader. He was raised in Virginia Beach, and finished high school at Graham High School in Bluefield, VA.

He is married to Lynn Marlin Carter, who was a student at Radford College when they met in 1972. The couple resides in Bold Springs, GA. They have two children, Jimmy and Jared, and like many Hokies, he is an avid Tech football fan, attending most games that he can with friends and family.

He also enjoys playing golf, cooking, traveling and spending time with his family, especially one year old Granddaughter Charlotte.

LAURA MORILLO

NEW BOARD CHAIR

JIM CARTER

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He also enjoys playing golf, cooking, traveling and spending time with his family, especially one year old Granddaughter Charlotte.
An insider’s look at the CEE Alumni Board

Although it’s been many years since I attended Virginia Tech as a student, VT has always held a special place in my heart. I was fortunate in my position at my previous employer, Hilti Inc., to manage a symposium which led me back to the CEE department. Dr. Sam Easterling, the CEE department head, was asked to be a guest speaker. He spoke about a study conducted at the facilities at VT by one of his graduate students.

At this symposium, Dr. Easterling and I reconnected and discussed the remarkable things that have happened in the department over the years. Dr. Easterling shared his vision of the department. This is when I found out that we, fellow graduates of the CEE department, had an Alumni Board.

I had obviously been disconnected, even though VT still held a special place in my memory and I had attended a football game or two since graduating in 1984. I am sure I was not alone; so many of us refer to our alma mater in fall football discussions, but that may be all. I am grateful to be associated with Dr. Easterling and with the current CEE department and its Alumni Board.

Unlike many of my board member colleagues, I did not go back or stay to obtain a graduate degree – but the great thing is that advanced degrees do not define the Alumni Board. It is the sense of dedication, participation, and humility of the CEE department and the board membership that make it unique.

Members from all across the U.S. represent many different careers. Many of the members travel regularly to participate in meetings and other activities sponsored by the department. I am in awe as I meet past, current and new board members at each meeting.

There are so many board members making a difference, not only to the CEE department and VT, but also in the world.

I have to mention one recent excursion by Bob Jansen. Bob is the president of Jansen Land Consulting and has been a very involved member of the CEE Alumni Board and the department. He began a philanthropy project supporting the efforts of clean water in Africa. He traveled to Zambia this month in support of installing clean water wells at rural schools. Bob is an example of the caliber of folks representing the CEE department and we should all be very proud.

I am so thankful to be surrounded by such amazing civil and environmental engineering alumni as well as the department faculty and staff on a regular basis. With everyone I meet in my travels, I talk about the wonderful things our department and the Alumni Board is doing to support not only the undergraduate and graduate students, but also the world around us.

It is with confidence that I promote our department and our university to everyone I meet and I feel very fortunate to have the opportunity to reconnect with Virginia Tech and to support my alma mater.

ELLIS (from page 11)

allowed her to spend more time with her three young children. But in 1996, she returned the work force, full-time, representing National Ready Concrete Association’s non-profit interests in the area of standards and codes. Later, she took on the same duties for Portland Cement Association.

It was in 2001 that fellow CEE alumnus Dennis Kamber, also a member of the Academy, convinced her to join Earth Tech, part of Tyco International, as a program director. When the parent company imploded in 2002, Ellis was assigned to manage some of the fallout, and worked on Capitol Hill. Earth Tech was acquired by AECOM in 2008, and subsequently her career continued to soar.

Currently, Ellis is vice president for AECOM, a global provider of professional technical and management support services, and the current president of the American Concrete Institute, the first female professional engineer to hold this leadership position.

The American Concrete Institute (ACI) is a nonprofit technical and educational society organized in 1904 and is one of the world’s leading authorities on concrete and technology. ACI currently has 99 chapters and 20,000 members spanning 108 countries.

Serving as the vice president for Americas and Government, the Maryland native is responsible for two of AECOM’s advisory councils, and in the past the Virginia Tech advisory boards for the college, the CEE department, and the Alexandria Research Institute.

Ellis and her husband, Marc Lubin, reside in McLean, Va. She has three children: Jake and Olivia are Virginia Tech Hokies, and Julie graduated from Hunter College in New York City. Her blended family includes Marc’s children: Alexander, Emily, Caroline and her husband, Alan.
1950s

Scott, Dan • B.S. ’59 • Scott worked for a few years with the Norfolk and Western Railway company, then went back to graduate school, receiving a Master of Divinity Degree from Asbury Seminary in Kentucky and a Doctor of Ministry Degree from Drew University in New Jersey. Scott and his wife attend Virginia Tech football games and are frequently in Blacksburg to visit their son who teaches here.

Aden, William • B.S. ’67 • Received the Distinguished Business Person of the Year award from the Montgomery County Chamber of Commerce in December.

Hewitt, Mike • B.S. ’74 • Hewitt retired from DuPont after 35 years of service and he and his wife have returned to the area and are enjoying the beautiful scenery near the Virginia Tech River Course.

Phlegar, Archie • B.S. ’75 • Approaching 40 years of service to American Electric Power and currently working on one of several coal fired power plant decommissionings.

Truax, Dennis • B.S. ’76 • Truax is the James T. White Chair and Department Head of Civil & Environmental Engineering at Mississippi State University.

1960s

Cates, Brian L. • B.S. ’82 • Cates has owned and operated Cates Engineering since 1988 and they currently employ six Hokies among other employees! Check them out at www.cateseng.com.

Bain, Robin • B.S. ’80, M.S. ’87 • Bain was selected as the WaterReuse Association’s 2012 Person of the Year. Bain currently serves as the Environmental Resources Manager for the city of Peoria and has been advancing the platform of “the right water for the right use” for over 32 years. She has been involved in planning, policy development, permitting, grant funding, public outreach and education, and political decisions associated with reclaimed water direct reuse and recharge. Ms. Bain was largely responsible for the award of almost $2 million in grants from the U.S. Bureau of Reclamation; the City has used these funds to create and expand significant water reuse projects. Thousands of acre-feet of reclaimed water each year can now be directly reused or recharged. Great job Robin!

Lizzi, James • B.S. ’81 • Lizzi claims to be “stuck” in California since he is originally from Connecticut, and he currently works as a Registered Traffic Engineer in Irvine — which sounds pretty interesting!

Prevette, Steven • B.S. ’81 • Prevette is an American Society of Quality Fellow working at the Department of Energy Savannah river site where he also teaches Nuclear Quality Systems at Aiken Technical College.

Weiss, Linda • B.S. ’81 • Weiss is currently the Director for the U.S. Geological Survey New Mexico Water Science Center in Albuquerque.

Mir, Kashif • B.S. ’96 • Mir currently works for Westchester County Public Works in New York as a Design Engineer. Mir is also a Director Technical/Overseas for Geomatics & Engineering Services (Pvt) Ltd a Surveying and Engineering Consulting firm based in Lahore, Pakistan. After graduating from Virginia Tech, he worked in Nashville, TN with Terracon Consultants (Geotech-Environmental firm) before returning to my home country Pakistan in 1997. From 1997 through 2004, Mir worked for Pakistan’s largest consulting firm NESPAK on various projects funded by the World Bank before returning to the US. Mir also worked as an Airport Engineer with DY Consultants in Long Island, NY before making the move to public service with Westchester Country (NY).

Simms, R. Bruce • B.S. ’93 • Simms has worked with fellow alumnus for over a decade to protect people at heights, or fall protection. He has done work all over the country and internationally including on top of the US Supreme Court, on the roofs of skyscrapers, on roller coasters, on NASA’s launch buildings and many more. Simms has also taught courses through the VT Building Design & Construction Foundation (a non-profit dedicated to providing funding, resources, and mentorship to winning teams from local high school business competitions). Homer also volunteers for Habitat for Humanity and Engineers Without Borders.

Homer, Francis • M.S. ’06 • Homer is a project manager for Whiting-Turner and has managed over $100 million in projects. He was named 2011 Building Design & Construction Magazine ´40 Under 40´ National winner and is co-founder of The Heylo Foundation (a non-profit dedicated to providing funding, resources, and mentorship to winning teams from local high school business competitions). Homer also volunteers for Habitat for Humanity and Engineers Without Borders.

Link, Christopher • M.S. ’03 • Link spent a year and a half working for a small consulting firm doing light commercial and residential construction, See Alumni Updates, next page
Continued from previous page then spent 4.5 years in a design/detailing office providing engineering services to the precast concrete industry. He also taught a summer semester of statics at J. Sargeant Reynolds Community College in the summer of 2010 while simultaneously starting at my current position at iTAC Fall Protection Services, a division of Industrial Turn-Around Corporation in Chester, VA. iTAC is dedicated solely to fall protection, providing site audits, training, system design, turn-key fall-protection installation, regular load-testing and inspections, and any combination thereof. Link also routinely performs 1,2, and three-day training seminars and has even had the chance to teach (2) one-day seminars for Virginia Tech’s continuing education programs.

Vakil, Rahul • M.S. ’00 • Vakil is a Director with a Civil-Structural Engineering & Architecture firm based in Ahmedabad, India.

In Memoriam

Dr. Alok Bhandari 1992 and 1995 Virginia Tech alumnus and Outstanding Young Alumni in 2003
Ms. Theresa DeFore Beloved sister, friend and Virginia Tech alumna
Dr. Julio Cesar Martinez Virginia Tech faculty member 1996-2007
Frederick Hoffman 2013 alum
Quinn Asher 2013 alum

HOKIE Heroes

CEE and cadet alum Crowley honored

By Maj. Carrie Cox

Maj. Ryan Crowley, U.S. Air Force, Virginia Tech Corps of Cadets alum, earned a degree in civil engineering from the College of Engineering, and a minor in leadership studies from the Virginia Tech Corps of Cadets Rice Center for Leader Development in 2001 was honored as the Hokie Hero for the Florida State game in November 2012.

The Virginia Tech Corps of Cadets Hokie Hero program started in 2006 by IMG College and sponsored by the University Bookstore, honors Virginia Tech Corps of Cadets alumni who are currently deployed.

Recipients of this honor are highlighted by Bill Roth and Mike Burnop during the radio broadcast of Virginia Tech football games, on the Corps of Cadets website, on the Corps of Cadets alumni website, and in the Corps Review magazine.

Crowley is currently stationed at an undisclosed location in Southwest Asia as the deputy commander for the 379th Expeditionary Civil Engineer Squadron. This is his third combat deployment.

Crowley is a member of the Virginia Tech Corps of Cadets Class of 2001 and served in Bravo Company, India Company, and on 1st Battalion staff as a cadet.

He says he would like to send his love to his wife, Lisa; one-year-old son, Oliver Adin; and to his family and friends all over the world.

The Virginia Tech Corps of Cadets has produced military, public, and corporate leaders since the university was founded in 1872. It is one of just two military corps within a large public university.

The corps holds its members to the highest standards of loyalty, honor, integrity, and self-discipline. In return, cadets achieve high academic success and a long-lasting camaraderie with fellow members.

Virginia Tech, the most comprehensive university in Virginia, is dedicated to quality, innovation, and results to the commonwealth, the nation, and the world.

Maj. Ryan Crowley
You can tell just by meeting him that Dustin Dorph (BS’13) is a passionate person. Dorph is easy to talk to and will quickly tell you why his experiences in civil engineering along with his interest in business are going to lead to a successful career in real estate development.

It comes as no surprise that he served three years on the Student Government Association, ending his tenure as President just a few days before graduation, stating that his term, “fundamentally transformed the way people think about SGA at Virginia Tech” and I believe him.

Coming from Oak Ridge, New Jersey, Dorph completed an impressive 100-hour internship in high school and was involved with student government. His original plan was to become an engineer for NASCAR, but in his sophomore year, Dorph realized he wanted to work with people and switched his major from mechanical engineering to civil engineering, to begin focusing less on fast cars and more on combining his drive for science and business.

Civil Engineering is home to many alumni who are successful business owners, and Dorph will have the opportunity to intern in one such company this summer, Brookfield Homes.

In August, Dorph plans to return to Blacksburg to follow a two-year dual degree program, which will combine a master’s of construction engineering management with a master’s in business administration. Dorph believes the two degrees offer something extra, and he has always enjoyed the business side of engineering so accomplishing the two degrees in two years just made sense. Dorph attributes his success in his undergraduate program to, “quality professors who care and provide practical skills for students to utilize in the future,” and he plans to continue to challenge himself to reach his goals.
The Council on Undergraduate Research selected Elizabeth Godfrey for the Posters on the Hill event, which took place on April 23rd and 24th. Godfrey, of Norfolk, Va. is a senior in the Via Department of Civil and Environmental Engineering with a focus in Geotechnical Engineering.

Godfrey, who is enrolled in the dual degree program, which boasts a cumulative grade point average of 3.5 or better to enroll, will graduate with a bachelor’s in civil engineering this May.

Godfrey’s research project, “Site amplification in the Washington, D.C. area during the 2011 Virginia earthquake” was one of 60 selected out of 800 applicants to present at the Posters on the Hill event, at which 44 out of 50 states were represented.

When asked about participating in this highly demanding program, Godfrey said that being involved with the undergraduate/graduate curriculum gave her, “the chance to work closely with professors and students to confirm that the coursework and graduate school were right for me.”

Godfrey’s research project, “Site amplification in the Washington, D.C. area during the 2011 Virginia earthquake” was one of 60 selected out of 800 applicants to present at the Posters on the Hill event, at which 44 out of 50 states were represented. Godfrey was the only attendee from Virginia Tech.

The project investigated the recent Magnitude 5.8 earthquake that occurred in Virginia on August 23, 2011. Its epicenter was about 80 miles southwest of the nation’s capital, but was still strong enough to cause damage to landmark structures such as the Washington Monument. The team found that the unique geology in the Central and Eastern United States and the sharp shear wave velocity contrasts in the District of Columbia resulted in significant amplification of ground motions not accounted for in the building codes. Dr. Guney Olgun, research associate professor in the CEE department, has been advising Godfrey during this research and accompanied her to Washington, D.C.

This summer Godfrey will intern in Baltimore with Whitman, Requardt & Associates, LLP, before returning back to Blacksburg in the fall. She was awarded a prestigious National Science Foundation fellowship and will use it to further her research with Virginia Tech, graduating in May 2014 with a master’s.
It takes a different kind of innovation and passion to build a social business that will benefit children halfway around the world – especially as a full-time student. One civil engineering senior, Alley Heffern (BS ’13) with her friend and fellow Virginia Tech engineer, Jack DuFour, have done so by starting Taaluma Totes (www.taalumatotes.com).

Taaluma Totes is a social venture that sells backpacks made of fabric from around the world and returns proceeds to fund educational scholarships in the countries where the fabric originated. Currently, Heffern and DuFour are starting with four countries, Ghana, Kenya, Indonesia and Papua New Guinea and hope to expand from there.

Heffern and DuFour traveled to Uganda in the summer of 2012 with Engineers Without Borders, a non-profit organization that ‘supports community-driven development programs worldwide by collaborating with local partners,’ which proved to be an eye-opening experience.

While in Uganda, Heffern read Start Something That Matters by Blake Mycoskie, the creator of TOMS Shoes, stating that it “planted the idea that then consumed us!”

After returning to Blacksburg in the fall of 2012, Heffern and DuFour started their work to create a business in which they could give back to students around the world, while raising awareness in the U.S. and their quest for social entrepreneurship began.

Attending the Ashoka U Exchange conference this past February supported Heffern in diverging from the usual path, to a path in which sustainable international development is the main goal.

Ashoka is ‘the largest network of social entrepreneurs worldwide’ and provides guidance, financial and professional support to individuals around the world that are working to change the world for the better.

Heffern stated that the conference was inspiring because, “social entrepreneurs work together to help one another succeed – the more social change around the world, the easier it is for others to join the cause.”

Ashoka’s motto is “everyone a changemaker” which is appropriately mirrored by Virginia Tech’s motto, Ut Prosim (That I May Serve) – both of which Heffern and DuFour are committing their educations and life’s work.

Please visit their website and spread the word to Carry a Cause with Taaluma.
Kin Wong (BS ’13) is on the verge of an experience of a lifetime. Just weeks before graduation he found out that he was selected for a new internship program partnering AECOM and the United States Agency for International Development (USAID) working in Port Au Prince, Haiti from August to December.

The best part about the internship for Wong is that he has already fallen in love with Haiti. For three years Wong has served on the Virginia Tech chapter of Bridges to Prosperity (B2PVT), a student organization in which they partner with rural Haitian communities to build footbridges in areas that need it most.

Most recently, in January, B2PVT finished a 203 ft. long footbridge in Lougou, which served up to 15,000 people. Wong served as the president of the club last year and when asked about the experience he said, “Matt Capelli (BS ’10, MS ’12), Chris Cooke (’11), Nick Mason (BS ’11, MS ’12), Tyler Welsh (’11), the students who started B2PVT helped me to discover something about myself. Through Bridges to Prosperity I have figured out what I want to do with my education; I want to serve others, I am a better leader now and I want to share that.”

Bridges to Prosperity at Virginia Tech brings together students from different disciplines and embodies the university’s motto, *Ut Prosim* (That I May Serve), by giving of time and talent to help make a lasting impression on the lives of many.

Wong plans to return to Virginia Tech in December 2013 and begin work on his master’s degree in civil engineering concentrating on environmental and water resources and hopes to continue to serve others with the leadership skills and education he has gained from CEE.
AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA)

The Virginia Tech Chapter of the American Railway Engineering and Maintenance-of-Way Association, or AREMA at VT, was started in the spring of 2012.

The club’s main goals are to introduce students to the engineering opportunities in the railway industry and teach members the basics of railroad engineering. These goals are accomplished through a combination of presentations and field trips involving professionals in the railroad industry.

The national organization is geared towards civil engineers and some electrical engineers, but the Virginia Tech chapter is open to any Tech engineers interested in railroads.

Events are held about once a month, and they range from field trips to local railroad facilities to guest speakers and railroad information sessions on campus.

This year the group took a ride on Norfolk Southern’s track geometry train (pictured), and visited Freight Car America and Norfolk Southern’s locomotive shops in Roanoke.

The group was also pleased to have campus visits from representatives of Norfolk Southern and Union Pacific – among these a distinguished VT CEE alum and advisory board member, Mr. James N. Carter, Jr. current national president of AREMA.

If you have any questions or would like more information about the club, send e-mail to vtarema@gmail.com.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

The Virginia Tech chapter of ASCE (VT ASCE) has completed another exciting and productive year. Building upon a solid, existing foundation, the chapter attempted a number of new offerings this year including the first-ever field trip to New York City! During this trip, students had the opportunity to tour the Empire State Building, the Brooklyn Bridge, and the Newtown Creek wastewater treatment plant (renowned for its anaerobic digesters). Other field trips this year included active construction sites and the famous New River Gorge Bridge.

The chapter also developed some new activities this year, such as a student competition sponsored by a national engineering firm. Student teams were tasked with evaluating a proposed engineering design for a new development, and teams presented their finding to an engineer who was familiar with this real site design. Other new activities included an interview workshop administered by the VA ASCE section president (and other VA section officers), and student-faculty luncheons were introduced this year.

The VT ASCE chapter continued its traditional activities like the steel bridge and concrete canoe teams, with both teams having respectable showings during the regional ASCE Virginias’ Conference. The outreach program, Concrete for Kids, visited local schools and taught elementary school children aspects of engineering design.

The overall success of the past year can be evaluated by a few simple metrics. First, student participation in meetings, field trips, and other activities was double compared to that of previous years. The national ASCE organization recognized the chapter’s accomplishments, and ranked the VT ASCE chapter within the top 1/3 of all student chapters (highest possible ranking)! A new officer team has been selected for the next academic year—a team who is excited to continue promoting civil engineering to their student peers.
The Alliance of Transportation Engineering Students (ATES) is a student organization comprising of graduate students of the Transportation Infrastructure and Systems engineering program and undergraduate students interested in Transportation Engineering. The year 2012-13 was a booster year for ATES with its all-new system of student activities aiming at bringing the students together in both social and academic perspective. ATES plays the primary role in arranging the TISE Program Open House.

Apart from this, we had seven social events including picnics, game events, general meetings, break-time parties and a special event highlighting the TED talks.

ATES also is the primary convener for the Virginia Tech Traffic Bowl Team, which represented Virginia State at the Southern District Collegiate Traffic Bowl conducted at Charlotte by the Institute of Transportation Engineers (ITE).

Another goal of ATES was to have an information portal and we opened a new website (www.ates.org.vt.edu) with up-to-date information on ATES events and other relevant events in the town. It also highlights other useful tools such as a “transportation calendar,” which is a one-stop information center about upcoming paper deadlines, conferences and other transportation-related events.

We also started a tradition of a monthly e-Newsletter highlighting student achievements, opportunities, call for papers and information about upcoming deadline, which are sent out in the first week of every month.

These information-sharing initiatives have helped many students apply for student scholarships and competitions.

Bridges to Prosperity at Virginia Tech recently completed bridge two and three in Haiti. The bridge in La Chambre, Haiti was completed in the summer of 2012 and was supervised by project manager Jason Paljug (CEM 2013). The third bridge in Lougou, Haiti, was completed in January 2013 and was supervised by project manager Mike Lewis (CEM 2014). Both of these bridges connect communities in rural Haiti to vital education, health-care, jobs, and family, who would be completely cut off during the rainy season by raging, infectious rivers. Each bridge serves over 10,000 people - effectively saving and improving their lives.

During the year, club members busily worked on different teams to accomplish goals of the chapter. The design team, managed by, Emily Hagen (Architecture 2014), worked on the design for our next bridge while the construction logistics team, lead by Tyler Edwards (BC 2015), worked on the construction logistics. There was also a model bridge team that built a model bridge for the club chaired by Lynn Wormeli (CS & Geography 2016). The Marketing/ Fundraising team was jointly chaired by; Christina Beau boeuf and Grace Mangino (both CEE 2016) who worked on small and large-scale ways fundraise for our next bridge. There was a bridge manual team lead by Frank Kozuch (CEE 2015) and Mike Lewis that worked on creating a construction manual with only pictures, to help teach people in both Haiti and Guatemala (and hopefully many other countries) how to build these suspended bridges, even if they can’t read.

Our next bridge will be in Guatemala. A few students are traveling down for a surveying trip in August, right before classes start in the fall. This bridge will be in partnership with Bridges to Prosperity and Agua Para Salud (a non-profit based in Guatemala), but there is still a huge need for support. If you are interested in helping B2PVT please contact our president: Ginny Roach at ver92@vt.edu.

A big congrats to the B2PVT 2013 graduating seniors! Congrats to Kin Wong (CEE), Kelsey Brant (CEE), Derek Slovac (CEE), Michelle McGuire (IS&Psychology), and Sara Diaz (Geography) for their years of heard work and service to B2PVT, you will be missed!
CONSTRUCTION MANAGEMENT ASSOCIATION OF AMERICA (CMAA)

As 2012 ended, the Virginia Tech CMAA student chapter celebrated six years of success on campus. We continue to develop a diverse member base from a variety of undergraduate and graduate majors. We have an ongoing relationship with the National Capital Chapter (NCC) and CMAA National to help students get ready for their construction management careers.

During the fall semester our chapter conducted a series of site tours on campus visiting Gilbane and Holder sites. We also volunteered with Habitat for Humanity at the Blitz Build. The most notable event was the Rising Construction Manager Conference in Chicago, Ill. on October 20-21, 2012. Our chapter met with other student chapters for an intensive networking weekend.

In the spring we remained active by working with Concrete for Kids to teach elementary school students about building with concrete. We also showed our support to the Myers-Lawson School of Construction Young Alumni Committee by participating in Industry Day on the Drillfield.

It has been a pleasure to be involved with the Civil Engineering Department at Virginia Tech. We at CMAA welcome students interested in construction management to explore the organization to find out if it is right for them.

GEOTECHNICAL STUDENTS ORGANIZATION (GSO)

The VT GSO has completed yet another academic year that was full of many great accomplishments. Thanks to the generosity of our faculty members and inspiration from leaders in industry, the GSO was provided the necessary tools and motivation to achieve nearly all of our goals for the year.

We continued our mission of promoting the field of geotechnical engineering through participation in various outreach activities. In total, the GSO coordinated three separate outreach events this year in which we communicated the role of geotechnical engineers to K-8 students by engaging them in hands-on activities such as the construction of a small MSE wall. These experiences were rewarding for all parties and we hoped to have planted the seeds for several future geotechnical engineers!

Through our participation in this year’s GeoCongress, held in San Diego, Calif., we continued to foster ties between our student members and the wider geotechnical community. In part by our over-whelming attendance, we further reinforced our reputation as a leader among other graduate geotechnical engineering programs worldwide. Out of all the attending organizations, the Virginia Tech GSO had the largest student representation with over 40 student attendees. Furthermore, two of our own student members placed first and third in the GeoPoster competition which is a testament to the strength of our program.

To supplement the valuable lessons learned both from our coursework and through conference attendance, the GSO also strived to coordinate extracurricular field trip opportunities. Thanks to Schnabel Engineering, a large group of us were able to visit the Ragged Mountain Dam project in Charlottesville, Va.

In addition to enhancing the education experience of the student body, the GSO also functions to stimulate personal experiences. Towards this end, the GSO coordinated several social functions throughout the year to strengthen student camaraderie, encourage faculty-student interaction, and most importantly, schedule time to escape from the Ozawa library! However with plans for major renovations of Ozawa library to be completed by the end of summer, we students will feel less inclined to leave the room that will soon become one of the best workspaces in all of Patton Hall.

In closing, we want to thank our supporters and loyal VT alumni for providing the GSO with ideas and financial resources.

To learn more about the GSO’s activities, or to offer any suggestions, please contact our president, Lake Carter, at lakec@vt.edu. You can also follow the GSO on Facebook by searching VT-GSO.
The Virginia Tech student chapter of North American Society for Trenchless Technologies (NASTT) began the year with recruiting meetings offering new students a chance to learn about trenchless technology and NASTT.

This year the NASTT student chapter joined with the Environmental Water Resources Institute (EWRI) and the Coastal Hazards & Engineering (COPRI) to participate in the Roanoke River Clean up on October 6, 2012. The students were given a section of the river to clean up.

The chapter also joined the American Society of Civil Engineers (ASCE) on a trip to New York City, where they toured the Empire State Building, Brooklyn Bridge, and Newtown Creek Wastewater Treatment Plant.

Students were also engaged by dynamic speakers such as Casey Smith from Compliance EnviroSystems, LLC and Dave Korman from RS Technik. Both Smith and Korman spoke to the chapter about the use of trenchless methods to save time, money, and societal impacts on wastewater utilities.

The chapter was also very excited to place second in the Closed-Circuit Television (CCTV) competition at the annual No-Dig conference, which was held in Sacramento, California this year March 3rd through 7th.

The chapter was also pleased to host the first ever VT-NASTT disc golf tournament on the 19th of October. The event offered members a chance to spend quality time together.

The Virginia Tech Graduate Student Chapter (GSC) of the Structural Engineering Institute (SEI) has had a very busy spring semester.

After becoming the first officially recognized university chapter earlier this semester, SEI-VT has held numerous seminars with invited guest speakers. SEI Director Jennifer Goupil became our first invited speaker, welcoming SEI-VT into the Local Activities Division of SEI. Donald Dusenberry, Senior Principal at Simpson, Gumpertz, and Heger, presented a very informative seminar on the theory and practice of designing for blast loading. Dr. Masayoshi Nakashima from Kyoto University also spoke with our students about Japan’s research efforts following the 2011 Tohoku earthquake.

SEI-VT also held a joint function with Virginia Tech’s undergraduate student chapter of the American Society of Civil Engineers (ASCE), taking part in a webinar focusing on the professional licensure process. This joint meeting was a great success and we look forward to continuing to work together with ASCE in the future.

We are looking forward to more events in the coming year, with plans for more guest speakers and community outreach projects. This fall Michael Gustafson from Tekla will be showcasing his company’s BIM software to our graduate students, and Bob Ratay with be presenting on his work as a forensic structural engineer. Although this spring was our first semester, we have hit the ground running, and the future is looking bright for the Virginia Tech Graduate Student Chapter of SEI.
With the aid of faculty advisors Kevin Youn and Randy Dymond, 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 Jessica Hekl served as club president this year, and enjoyed the help of officers Julie Trumpoldt and Camilo Apolinares.

During the 2012-13 academic year, the club worked on various service projects. One of these projects involved the design of a parking lot expansion for a local church. Members of the SLDC performed field surveying of the existing lot, and then developed several conceptual layouts to present to the church. The final design nearly doubled the number of existing parking spaces and is set to go to construction in early summer. During the spring semester, the SLDC also partnered with the FloydFest music festival. From relatively modest beginnings in 2002, the festival has grown considerably, and last year’s event saw more than 12,000 attendees. With its rapid growth, festival organizers have encountered numerous challenges, including site layout, shuttling of patrons into and out of the festival grounds, and public safety issues. SLDC members developed a series of site maps to help festival organizers address these issues. In April, SLDC members provided stakeout surveying of the track for Virginia Tech’s annual Relay for Life Event.

In addition to working on service projects, the club also participated in a number of social and educational activities. In both the fall and spring semesters, the SLDC coordinated with LDDI to host “career nights” on the eve of the CEE Career Fairs. In March, SLDC members participated in LDDI’s first annual Design Charrette Competition. Representatives from Dewberry visited campus and introduced a real world site design problem to student design teams. The teams were then given one-hour to work toward a solution. Local land development professionals judged the submittals, and prizes were given to the top teams. In total, eight student teams participated in the event.

Alumni who are interested in finding out more about the club are encouraged to contact Kevin Young at keyoung@vt.edu.

Congratulations to the Top 25 Graduates for the 2012-2013 Academic Year

The following students finished in the Top 25 of all CEE graduates (215 students) completing their undergraduate degree requirements between Summer I 2012 and Spring 2013.

** Ryan Bercaw  
Dylan Berns  
Jacob Buttz  
Marcus Cadman  
Joshua Coble  
Jingjie Chen  
Elizabeth Godfrey  
Jessica Hekl  
Heather Hlavaty  

** Matthew Hoerner*  
Mark Jones  
Taylor Laforge  
Yan Li  
Ross McCarthy  
Eileen O’Shaughnessy  
Michael Sadowski  
Layton Schaeffer  
Krutarth Shukla  

** Derek Slovenec**  
George Sydnor  
Julie Trumpoldt  
Achmaa Vaanjilnorov  
Matthew Weiser  
Zhao Wang  
Joshua Zilke  

** Valedictorian, * Salutatorian
Come back to Blacksburg with your fellow CEE Alumni to watch the Hokies take on Marshall! Save the date of September 21, 2013 for the fifth annual CEE Homecoming. Activities will include student project displays, refreshments and more. We will be located on the drill field this year with the College of Engineering tents on the side closest to the duck pond.

There is no cost to attend but if you plan to stop by, RSVP to Allie Rubio at arubio@vt.edu or (540) 231-0981 so we can plan accordingly. We hope to see you in September!
SHOW YOUR VIRGINIA TECH CEE PRIDE!

Looking for some new Virginia Tech apparel? Check out the newest polo shirts, button-down shirts, baseball caps, and sweatshirts embroidered with the VT logo and the department name. Polo shirts and baseball caps are available in both maroon and black, and button-down shirts are available in khaki only. Sweatshirts are only in heather grey as pictured. Shipping and handling are included in all costs. Complete the form below or call (540) 231-6635 to place your order.

Modeled by Achmae Vaanjilhorou, Marcus Freeman, and Anne Cesnik (BS ’13).

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If you need further information, please call Allison Rubio or Val Dymond at (540) 231-6635.
Checks should be made payable to “Virginia Tech Foundation, Inc.” and mailed along with this form to the following address:

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