Impact

A roadmap for success

Advancing the arts
Chemistry scholarship helps aspiring teachers
Marching toward a new facility
Transcending time and distance
# Contents

- **A SENSE OF CELEBRATION**  
  A message from Elizabeth A. "Betsy" Flanagan, vice president for development and university relations  
  [4]

## FEATURES

- **A roadmap for success**  
  [6]

## Advancing the arts

- An extraordinary canvas  
  [10]

## A historic day for Virginia Tech  
  [13]

## Chemistry scholarship helps aspiring teachers  
  [14]

## DEPARTMENTS

- Building for the future  
  [17]

## Upper Quad transformation  
  [18]

## Marching toward a new facility  
  [20]

## Student standouts

- Scholarship recipient works with Wounded Warrior Project  
  [20]

## Cadet finds Tech a perfect fit  
  [22]

## Scholarship student’s innovation helps those with disabilities  
  [24]

## Faces of philanthropy

- Legacy Society fall celebration  
  [26]

## Giving society snapshots

- Always a Hokie  
  [28]

## Faculty member gives to veterinary college in many ways  
  [30]

## Transcending time and distance  
  [32]

## Back on their hooves  
  [34]

## Focus on faculty

- Corporate support powers research into improved mining techniques  
  [36]

## Endowing excellence

- International insights help recent master’s graduate  
  [38]
Sustainable growth

Cover photo: Virginia Tech senior Austin Larrowe has developed a passion for two seemingly disconnected fields: international affairs and agriculture. See page 6 to learn more about how he is finding ways to combine his interests and make a difference globally.

This photo: Virginia Tech’s Signature Engineering Building, projected to open in spring 2014, is one example of how private support is facilitating growth at the university. Another is the newly completed Moss Arts Center, featured on page 10, which hosted its inaugural performances in early November.

Online: Visit www.givingto.vt.edu for additional stories about the impact of philanthropy on Virginia Tech.
In the weeks ahead, many of you will join with family and friends to enjoy festive occasions. For our Virginia Tech family, this is also a time of celebration. The power of philanthropy is reshaping the landscape of our campus and opening the doors to discovery and engagement for our students and the broader community. Within this issue, you will see many examples of this.

Just weeks ago, the newly opened Moss Arts Center debuted its first stage performance, a historic occasion for Virginia Tech and Southwest Virginia. We profile the center’s namesake, renowned artist Patricia Buckley Moss, and have an article about the center’s exciting opening ceremony.

Later in the issue, we highlight other exciting building projects that will create new facilities to enrich the experiences of members of the Corps of Cadets and the Marching Virginians.

Projects like these are just one reason we are so thankful this holiday season. The accomplishments of our students and members of faculty are cause for celebration, as is the generosity of our many supporters who help make those achievements possible. Within this issue, you will meet many people who illustrate how giving brings out the best in us.

While I am happy to say it’s not surprising, I believe it’s still noteworthy to point out that many of the donors we spotlight in this issue are women. When I joined Virginia Tech, one of my early priorities—through a program now known as Women in Leadership and Philanthropy—was to increase participation by female alumni and friends in the life of the university, knowing what a powerful asset that can be. Having a woman’s name on our $100 million arts center illustrates the power of women’s philanthropy, as does the scholarship created by one of our profile subjects and the generous commitment of future support made by another.

As we round the corner on 2013, the evidence of your support is visible throughout the Virginia Tech community. We hope you enjoy reading about the many exciting ways that philanthropy benefits every aspect of our university. Your continued commitment to Virginia Tech fuels many of the accomplishments of which we are so proud and for which we are deeply thankful.

Elizabeth A. “Betsy” Flanagan, Vice President for Development and University Relations
Real estate degree program draws donor support

In the fall of 2013, students at Virginia Tech had the opportunity to enroll in an innovative new degree program focused on real estate. Students in the program are exposed to a variety of academic fields, including architecture, building construction, business, civil and environmental engineering, economics, property management, natural resources management, planning, and law.

Philanthropic support is being used to enhance the educational opportunities in the program by bringing industry leaders to campus for lectures and by taking students to work sites off campus, where they connect with their future peers and observe how real estate projects develop.

Carman Liuzzo (accounting ’83), of Cary, N.C., is one of several generous donors to the program.

“I want to assist the university in any way I can, and this was a great way for me to do that,” said Liuzzo, who is vice president of investments for Highwood Properties, a real estate investment trust based in Raleigh, N.C. “We’re a full-service real estate firm and involved in all aspects of the business: finance, architecture, building construction, engineering, and property management. What intrigues me about the program at Virginia Tech is the way it’s structured, so that students will be exposed not only to real estate finance, but to all these other programs as well. Not a day goes by when I don’t see the value in my organization of having that type of diverse exposure and experience.”

Kathy Wentworth Drahosz from Training Connection Inc. is one of several industry professionals involved in Virginia Tech’s new degree program focused on real estate.
Austin Larrowe, a senior majoring in applied economics management and agricultural sciences, knew from a young age that he wanted to attend Virginia Tech. However, the journey from his home in rural Woodlawn to Blacksburg did not follow a direct route. In fact, it spanned far more than the 100 miles separating the Virginia towns.

During his senior year of high school, Larrowe was elected to serve a term as the state vice president of Future Farmers of America. Although the required travel and responsibilities would mean delaying college, for Larrowe the choice was simple.
Over the 12-month term, Larrowe visited 12 countries and led workshops for high schools across Virginia. “It was a transformative year,” he said. “It gave me a chance to grow, to re-charge my batteries. I came back ready. I was energetic about being at Tech, and I had developed the tools to succeed.”

Merging ideas

Larrowe, who has visited 30 countries to date, has developed a passion for two seemingly disconnected fields: international affairs and agriculture. Inspired by his classes in the College of Agriculture and Life Sciences and the relationships he has developed with professors and program leaders around campus, Larrowe founded Feed by Seed.

“I started to wonder if there was some kind of organization that would combine my two interests,” he said. “I didn't find anything right away, so I thought, ‘Why not develop my own?’”

Feed by Seed is a nonprofit organization that provides the education and support to develop an economically and agriculturally self-sufficient community. Feed by Seed currently operates an 18-acre farm in Nicaragua, which grows sorghum, corn, plantains, greens, tomatoes, watermelon, and cucumbers. Its workers also raise rabbits, poultry, dairy goats, and tilapia.
“We strive to provide a learning environment that offers students like Austin the education and global experiences to address modern challenges,” said Alan Grant, dean of the College of Agriculture and Life Sciences. “It is inspiring to see students using their skills in ways that make a real difference in the world.”

Helped by donations

Larrowe is the beneficiary of a Pamplin Scholar Award through the University Honors Program. The four-year, full-tuition scholarship has been a pivotal experience in his education. “Being a Pamplin Scholar has allowed me to take advantage of so many opportunities,” he explained.

Larrowe has participated in the university’s Presidential Global Scholars program, and during the summer of 2013 he was selected to assist with an undergraduate research project in Ghana.

Last year, Larrowe became the first student from Virginia Tech to be selected for the Presidential Fellows Program. Sponsored by the Center for the Study of the Presidency and Congress, the national program introduces select university students to the fundamentals of policy making.

During the year, Fellows attended two weekend conferences in Washington and developed individual research projects. Larrowe’s project identified international agriculture education as a tool for national security.

According to University Honors Director Terry Papillon, “Austin is a unique combination of talent, drive, and humility. He recognizes that the opportunities he has been given are a real gift, and he wants to do everything he can to make the best use of that gift.”

Larrowe’s plans for the future are varied. However, based on his accomplishments during his time at Virginia Tech and abroad, it’s certain that they will be notable.

“Four years ago, I could not have imagined being where I am now, where Virginia Tech has helped me to go,” he said. “I don’t really want to pin myself to a plan. I want to be open to opportunities—to go wherever the road may lead.”

GHANA

Larrowe works with a lab technician from the University of Cape Coast, Ghana, at the Benya Lagoon collecting soil samples.
“I was lucky enough to find [the arts] at a young age, and they opened up so many learning avenues and professional opportunities for me. That is why I am so excited about the impact this wonderful facility will make on thousands of people, young and old, across this entire region of our state.”

Moss Arts Center: An extraordinary canvas for art and education

by ALBERT RABOTEAU
Ask renowned artist Patricia Buckley Moss about her first painting. She can immediately recall its subject, where she painted it, and how great the experience made her feel.

"A cabin in the snow; it was on a tiny little canvas, and I painted it at the kitchen table of our house in Staten Island, since it was the only room where we had heat," said Moss, whose artwork is now represented in more than 200 galleries worldwide. "My teacher had given me a paint set since she knew I didn’t read."

In painting, Moss, who has dyslexia and recalls failing her way through school, had “found something that pleased me, something that I could do and be proud of and not even care if anybody thought it was good or not.”

Continued on next page
That first painting, done while Moss was grammar-school age, was followed by many others. And while Moss may not have cared what others thought of her artwork, her talent was recognized by a teacher whose encouragement helped convince Moss’ mother to send her daughter to Washington Irving High School, in Manhattan, which had a strong arts program.

Though Moss continued to get poor grades at that school, her art portfolio drew attention from the school principal, Mary Meade, who recommended it be entered for scholarship competitions. Moss wound up attending New York’s Cooper Union for the Advancement of Science and Art, a key step in her artistic career.

In October, Virginia Tech announced it had named its $100 million arts center for Moss in tribute to her commitment of $10 million toward construction. The university also announced it had exceeded its $28 million private fundraising goal for the project.

“The arts can change people’s hearts, change their minds, and change their lives,” Moss said shortly before the announcement. “I was lucky enough to find them at a young age, and they opened up so many learning avenues and professional opportunities for me. That is why I am so excited about the impact this wonderful facility will make on thousands of people, young and old, across this entire region of our state.”

Within the Moss Arts Center is the Street and Davis Performance Hall, which contains the 1,260-seat Anne and Ellen Fife Theatre. The arts center facility also includes what was once Shultz Hall. Along with the theatre, the facility features visual arts galleries; studios; Virginia Tech’s Institute for Creativity, Arts, and Technology; and the Center for the Arts at Virginia Tech, which programs and operates the Moss Arts Center.

The Moss Arts Center is the cornerstone project of a broad effort at Virginia Tech to expand creative practice and to support interdisciplinary learning, engagement, and discovery through the arts.

Moss said the scope of the project and her family ties to Virginia Tech led her to want to get involved. Her generous support of the arts at Virginia Tech is also in keeping with her history of philanthropy aimed at promoting the arts in education. A foundation that bears her name has been active in that area for many years, and Moss regularly travels to speak with students and teachers.

“All of us have to try to make a difference, to educate kids, and to help them have some self-esteem,” Moss said. “I learned my self-worth through the arts.”
Hours before the first performance in Virginia Tech’s Moss Arts Center took place, hundreds gathered to celebrate the completion of the spectacular new facility.

Speaking to a crowd containing many donors and administrators who played important roles in the project’s success, Virginia Tech President Charles W. Steger said the investment in the arts made by the university and its supporters “is really a major factor propelling Virginia Tech to greater national stature.”

He added that “a vigorous and visible presence for the arts, we believe, will mark our campus as an even more comprehensive and well-rounded university, while enabling us to compete for funding at the highest levels and enhance our ability to attract the best students and faculty.”

Several key donors to the project said seeing the facility come to fruition was a historic day for the university, and they explained why they considered the center to be such a compelling initiative to support.

Standing in the 1,260-seat Anne and Ellen Fife Theatre, named in honor of his wife and mother, Gene Fife (business administration ’62) said the arts center “just adds more depth and richness to the experience of being here in Blacksburg.”

Sherwood “Sherry” Payne Quillen (health and physical education ’71) said looking at the first art exhibit in the gallery within the center that bears her name was “exhilarating—almost surreal,” and that the scale of the overall center was “larger than life.”

Nicholas Street (general business ’53), who along with his wife, Fay (finance ’77), helped name the Street and Davis Performance Hall, predicted the facility would “take Virginia Tech to a new level; it’s another piece to the puzzle.”

William C. “Jack” Davis, who along with his wife, Sandra, are also namesakes of the performance hall, said watching the progress of construction had seemed slow at times, since he lives in Blacksburg and would frequently pass the construction site on his way to work on campus, but “it’s absolutely thrilling to see it come together now, and to also see all the people who were involved [gather] in one room.”

Nancie Roop Kennedy named an elevator in the center for her late husband, Duncan C. Kennedy III (electrical engineering ’61), and made a point of riding it shortly after the ribbon was cut in celebration of the building’s opening.

“I named an elevator figuring if I could ride it high enough, I could meet my husband up in the clouds,” she said. “I’m sure he’s up there, looking down on all this, smiling.”
Chemistry. The word brings to mind images of scientists in white lab coats conducting experiments using complex formulas. But long before such researchers began collecting data and running studies, they were memorizing elements from the periodic table, reviewing material in textbooks, and scribbling notes during a class lecture.

Ask any scientist how he or she developed an interest in the field, and the answer is likely to begin with an inspiring teacher. Helping to ensure that such teachers continue to be produced is a goal of the ACS-Hach Land Grant Scholarship, which the American Chemical Society has funded at select universities across the United States, including Virginia Tech.

“Teaching is a really appealing job to me because you get to show people why a subject is so captivating,” said Luke Tonia, of Fairfax, Va., who earned his bachelor’s in chemistry in May and was one of two students at Virginia Tech to benefit from the scholarship during the 2012-13 academic year.
Undergraduate chemistry majors who have expressed an interest in teaching at the high school level are eligible to apply. Though now administered by the chemical society, the scholarship was created by Clifford and Kitty Hach, whose Midwest chemical company developed a simplified method for analyzing certain properties of drinking water.

In 1982, they launched the Hach Scientific Foundation to encourage the study of chemistry, which eventually led to the establishment of three programs: the High School Chemistry Grant, the Second Career Teacher Scholarship, and the Land Grant Scholarship. In 2009, the foundation transferred its assets to the American Chemical Society.

Virginia Tech became a partner in the program in 2007-08. As a result, each academic year two students receive $6,000 toward education-related expenses.

“The scholarship helps tremendously,” Tonia said shortly before he graduated. “It’s just a weight lifted off my family and me. School is so expensive, and looking toward graduate school, it’ll help a lot as well.”

Jacob Soles, a senior from Yorktown, Va., who also received the scholarship in 2012-13, noted that it was his high school chemistry teachers who inspired him, not just about the subject, but about education. Midway through his sophomore year, he connected with Jeannine Eddleton, advanced instructor in chemistry, who coordinates the ACS-Hach application process for Virginia Tech’s chemistry department. Soles said the scholarship seemed tailor-made.

“‘It’s important not only financially, but knowing that I have backing from an organization that gives me this much money because they support what I want to do, that in itself is a big inspiration,’” Soles said, adding, “It definitely solidified that teaching is my path.”

Eddleton called the Hach scholarship “a game-changer.” She noted that Virginia Tech is a great place for Hach dollars because it already attracts students who are strong in the STEM (science, technology, engineering, math) disciplines.

“The scholarship allows us to provide an additional option for those undergraduates who may be seeking an alternative to the research culture,” Eddleton said. “This is a unique opportunity to add that teaching dimension to what we offer our undergraduates.”

Bryce Hach, who served for a time as executive director of his grandparents’ foundation, said his family realized that “the role of the chemistry teacher was of crucial importance” in encouraging science literacy.

“In 2007,” he said, “we shifted the scholarships

Continued on next page

“‘The scholarship helps tremendously. It’s just a weight lifted off my family and me. School is so expensive, and looking toward graduate school, it’ll help a lot as well.’”

Luke Tonia
Continued from previous page

specifically to chemistry majors pursuing teaching, and did so at the land-grant universities where the research was solid and tuition was relatively low and the scholarship dollars would be most effectively stretched.

Former Hach scholarship recipient Lauren Thompson (chemistry ’09, M.A. education ’10) was originally interested in marine biology, but her first college chemistry class opened a new window. With the additional inspiration of strong female role models in science, Thompson realized she wanted to become a teacher and “get girls interested in science.”

Thompson started her teaching career at First Colonial High School in Virginia Beach, Va., and recently joined the faculty of Floyd E. Kellam High School, also located in Virginia Beach.

“I love teaching chemistry to other people, and the Hach scholarship just made all of that possible,” she said.

"[K]nowing that I have backing from an organization that gives me this much money because they support what I want to do, that in itself is a big inspiration."

Jacob Soles
Upper Quad transformation to include new Corps Leadership and Military Science Building

A project to replace the Corps of Cadets dormitories—Brodie Hall and Rasche Hall—with state-of-the-art facilities is already underway.

In a related project for which fundraising will soon begin, the Corps Leadership and Military Science Building will provide a single home for the corps’ headquarters, ROTC programs, the Major General W. Thomas Rice Center for Leader Development, the Corps Museum, and associated operations that are now scattered across five buildings.

Initial plans are for construction of this new building to begin within the next five years at the rear of the Upper Quad.

Virginia Tech’s popular Marching Virginians had more than just its 40th season of existence to celebrate this past fall.

In September, the university’s governing Board of Visitors gave a key approval to a project to erect phase one of a structure for the marching band—a roughly 4,300-square-foot building for instrument storage and percussion practice, and an attached, 3,500-square-foot pavilion that will provide covered space for the full band to practice, rain or shine. The project also includes a lighted practice field.

The facilities will be located behind the southeast corner of the Chicken Hill parking lot, near Lane Stadium, and are projected to cost $4.75 million, with $1.8 million expected to come from donors.

Funding for the project is a partnership, with a significant portion coming from the Department of Athletics. Recreational Sports is contributing as well, and construction is also being funded by donations raised by the College of Liberal Arts and Human Sciences. The Marching Virginians are administered through that college’s School of Performing Arts.

"I’m particularly excited about this project, because the Marching Virginians band is made up of students from all over the university," said Sue Ott Rowlands, dean of the College of Liberal Arts and Human Sciences. "While we provide a home for the band, it’s really a university-wide initiative. There are no better ambassadors for Virginia Tech than the Marching Virginians."
Referring to the university’s motto of *Ut Prosim* (That I May Serve), she added that members of the Marching Virginians “exemplify *Ut Prosim* through their service projects, and the nature of the Virginia Tech community through their spirit and enthusiasm.”

When the new building is completed, the Marching Virginians will no longer store instruments in the lower level of the baseball team’s batting cage facility. Along with space for storage and for the band’s drumline to practice, the building will have restrooms and small personal lockers for band members. The building, pavilion, and practice field will give the band more suitable practice spaces. For the moment, it practices on the infield of the Johnson-Miller Outdoor Track Complex.

"They needed a home, and we wanted to help them," said Tom Gabbard, associate athletic director for internal affairs.

"This will make our rehearsals much more efficient and our instrument storage more secure," said Dave McKee, who along with directing the Marching Virginians is a senior instructor in the School of Performing Arts. "It will instill a higher sense of pride for everyone involved in the band. There will be a sense of permanence now, a sense of home."

McKee said he and the band are extremely grateful to the athletic and recreational sports departments, and to the many donors who have contributed toward the project so far. Fundraising is ongoing, with an interest in further developing the facility in a second phase down the road.

While some generous donations “have come from Marching Virginians alumni who recognize that they had a unique experience during their time with the band,” the project’s success will depend not just on band alumni, but on a wide range of supporters who appreciate the role the Marching Virginians play in the life of Virginia Tech, McKee said.

*Virginia Tech News also ran a version of this story online.*
Stephanie Wiltman believes that “every single person has a story, and big or little, they matter.”

The story of her ambition to work in the medical field may date back to Wiltman’s junior year of high school, when she tore her anterior cruciate ligament, but it’s a story that has developed considerably during her time at Virginia Tech.

Wiltman’s injury initially kindled an interest in rehabilitation, but after spending nine months in physical therapy, she changed her focus to prosthetics and engineering. She became curious as to how others coped, both physically and psychologically, with much more serious injuries, and found herself drawn to working with the military.
Thanks to a scholarship at Virginia Tech, the Pittsburgh native has already gotten significant experience in her field of interest.

Wiltman spent the first six weeks of summer 2012 working with the Wounded Warrior Project at the Naval Medical Center in Portsmouth, Va., as a result of being awarded the Patricia C. Perna Scholarship. The scholarship, which is given to an honors student interested in medical occupations, allows its recipient to plan an experience to explore and research issues associated with healthcare treatment and equipment.

“For a while I was sure I wanted to be a prosthetic engineer in the military sector,” said Wiltman, a senior studying psychology and materials science and engineering, “but now I am humbled by the fact that I have absolutely no idea what I want my career to be. All I know is I want to work with the Wounded Warrior Project in any way I can.”

The Perna Scholarship gives students the freedom to choose where they want to spend their experiences, but requires a detailed and thorough application process.

“At first I wanted to go to Afghanistan and help defuse bombs,” Wiltman recalled, “but my mom wasn’t too happy with that idea, so I kept developing [ideas]. It was a very self-fulfilling process, and I really found out a lot about myself.”

While working with the Wounded Warrior Project, Wiltman drew on her psychology background to help those who were not physically hurt but suffered from post-traumatic stress disorder. Her most memorable experience occurred when a soldier she had worked with gave her the stripes an Air Force member receives when he or she enlists.

“Her most memorable experience occurred when a patient gave her the stripes an Air Force member receives when he or she enlists. ... “I didn’t even know I had helped him. It was a big moment for me ...”

Stephanie Wiltman

“He knew I was just starting out and wanted to thank me for my help,” said Wiltman. “I didn’t even know I had helped him. It was a big moment for me because he showed me that every single person has a story, and big or little, they matter.”

Although Wiltman’s story is far from being finished, she said the Perna scholarship gave her the opportunity to discover her purpose in life and to set off on the path to realizing it.
Matt Pucci was reluctant to come to Virginia Tech. Forget about attending, Pucci wasn’t particularly interested in even visiting the campus. His family was on the way from their hometown of Croton-on-Hudson, N.Y., to see relatives in North Carolina when Pucci’s dad said they should stop in Blacksburg, as it was on the way. He wanted to see Virginia Tech’s campus far more than his son did.

That changed when they arrived.

“The second I stepped out of the car, I knew I was going to be here,” Pucci said. “I don’t know how to explain it otherwise. It was a deep-down feeling. The opportunities on campus, and the campus itself, were so amazing.”

Pucci has done well at Virginia Tech and in the Corps of Cadets. A junior majoring in business information technology, he is a cadet sergeant first class in the corps and the Air Force ROTC, who is set to graduate in 2015. When he does, he’ll be commissioned as an officer in the United States Air Force.

It’s because of alumni like Ed Norwood that Pucci is able to be a member of the corps. Pucci benefits from the VTCC Ed W. Norwood ’44 Scholarship, which Norwood and his late wife Barbie established to assist cadets with demonstrated financial need.

This year, there are nine cadets receiving the Norwood scholarship: three Army ROTC cadets, three Air Force ROTC cadets, and three citizen-leader-track cadets. For Pucci, the Norwood Scholarship is critical, as it defrays the expense of out-of-state tuition.

“This scholarship helps me come to this university, and not be back in New York,” Pucci said. “The fact that someone understands the impact it can have on a cadet, and is willing to help that cadet, it means the world to me.”

“The second I stepped out of the car, I knew I was going to be [at Virginia Tech]. I don’t know how to explain it otherwise.”

Matt Pucci
Norwood is a member of the President’s Circle within the Ut Prosim Society of donors to Virginia Tech, and has been a decades-long supporter of the university. During the university’s most recent fundraising campaign, he was a member of the Commandant’s Circle, the highest level of recognition for donors to the corps.

In an interview with the Corps Review during 2010, Norwood reflected on his experiences while a member of the corps. He also recounted the decision to establish a scholarship at Virginia Tech, noting that he not only wanted to help the Corps of Cadets recruit, but to reduce the financial stress of college for others, much like a generous high school teacher once did for him.

Norwood explained, “It’s not hard to understand [the urge to fund a scholarship] if you’ve depended on someone to get through school and watched your roommate depend on someone to get through. There are a lot of deserving kids out there who need a helping hand.”

Philanthropy like Norwood’s makes a big impact in the lives of today’s cadets, such as Pucci. Within the corps regiment, Pucci was the black-shirt noncommissioned officer during new cadet week this past fall. As such, he was responsible for disseminating orders from higher-ranking cadets to 40 sophomores.

Pucci has been involved with the corps’ band, the Highty-Tighties, since his freshman year, when he played the tuba. As a sophomore, he transitioned to working with audio, video, and photography for the band, and today he is the performance noncommissioned officer. In that role, Pucci assists the performance officer in preparing the band for field shows and parades, carries out the orders of the performance officer and drum major in practice, and is expected to step up if the performance officer is unavailable.

Pucci says the corps has played a major role in developing his leadership skills. Being part of the corps has been an everyday commitment for Pucci since he arrived in Blacksburg, and he believes this daily obligation has benefited him a great deal.

“At some ROTC colleges you do it once or twice a week,” Pucci said. “Here it’s 24/7. The switch is always on. You’re always watching leadership, so you develop yourself and you continuously grow.”

“It’s not hard to understand [the urge to fund a scholarship] if you’ve depended on someone to get through school and watched your roommate depend on someone to get through. There are a lot of deserving kids out there who need a helping hand.”

Ed Norwood

Ed Norwood directed C-46 transport pilots in airborne-drop training activities at Bergstrom Army Base in Austin, Texas, in 1945.
Conor Brown and two classmates recently won a silver award for best accessibility innovation in the third annual User Experience Awards. Theirs was the only student team recognized in the international competition. Brown’s accomplishment was fitting, as he is a recipient of the Eastman Innovation Lab Industrial Design Scholarship, which is earmarked for students majoring in industrial design within the College of Architecture and Urban Studies. In excerpts from an email exchange, Brown, a junior from Blacksburg, Va., discusses his contest entry, “Activ,” and also describes how his scholarship has both helped and inspired him.

Q: What is Activ?

Activ is a wireless device that enables a user to accept phone calls and send texts with a simple clench of the jaw. The device utilizes [Apple’s] Siri or Google Now to perform actions on your smartphone over Bluetooth.

Imagine you hear a small beep in your earpiece. The device is indicating that you have a call waiting on the smartphone in your pocket. A quick jaw clench is picked up by a small sensor resting on your jaw muscle known as the masseter. The sensor reads electrical potential, i.e. muscular contraction. This process is known as electromyography.

The sensor communicates with the smartphone over Bluetooth and commands the phone to answer the call. You are able to carry on a conversation without ever touching anything. Activ was designed as a one-piece earpiece to minimize the amount of peripherals needed. The ear-clip, speaker, Bluetooth chip, electromyography sensor, and microphone are all housed in a sleek, unobtrusive unit.

Q: Where did the idea come from?

My project teammates, Cole Smith and Michelle Murgia, and I were given a project to design a wireless solution for a [fictitious] person that had lost the use of an arm during combat overseas. Our subject was Dana, a 24-year-old veteran who is a strong, independent person not willing to let her disability dictate her life. Her job requires her to use her phone frequently for managerial tasks in the field. By using the research technique “walk-a-mile immersion,” we were able to discover just how hard it was to answer a call with one arm behind our backs when the phone was in our pockets. We asked, “How can we stop Dana’s phone from interrupting her...
By using the research technique ‘walk-a-mile immersion,’ we were able to discover just how hard it was to answer a call with one arm behind our backs when the phone was in our pockets.”

Conor Brown

“By using the research technique ‘walk-a-mile immersion,’ we were able to discover just how hard it was to answer a call with one arm behind our backs when the phone was in our pockets.”

Conor Brown

life?” By using Dana as a lens throughout the research process, we discovered that the solution we sought was one that would not only be attractive to people with disabilities, but to any person who was keen on multitasking and increasing the efficiency of their workflow.

**Q:** What was your role in the project?

We were all heavily involved in the research, ideation, prototyping, and finalization stages of the project. I focused less on the process book and more on the presentation video in which we identified the problem and demonstrated Activ through a series of live tasks.

**Q:** Tell me about your Eastman Innovation Lab Industrial Design Scholarship. How did you come to receive it?

I was nominated by either my second-year studio professor or a collaboration of professors. Each year, a sophomore, junior, and senior are selected to receive the scholarship for exemplary studio projects.

**Q:** What has it meant to you?

It has meant a great deal to me to be recognized for a project that I put a great deal of effort into and worked so hard with my teammates to develop. I thank the great people at Eastman Innovation Lab for noticing and appreciating me. This scholarship has given me an enormous sense of graciousness and an incentive to work even harder in the future.
Legacy Society

With the induction of more than 100 donors at a special event held this fall, membership in the Virginia Tech Legacy Society grew to more than 1,800 members. Members of the Legacy Society include the university in their estate plans or make deferred gifts that will come to the Virginia Tech Foundation at a future date.

A special dedication and naming ceremony in recognition of the philanthropic contributions of Hugh and Ethel Kelly, who were featured in the fall 2013 issue of Impact, highlighted the event. Dennis Belcher, attorney for the Kelly estate, delivered remarks.

Bruce Prichard ’75, Nancy B. Prichard ’74, Ellen Beville ’71, and Edward N. Mitchell. (Sisters Nancy and Ellen and their spouses each included gifts to the Virginia Tech Foundation in their estate plans.)

New members of the Legacy Society in attendance, from left, front row, Susan Chapman ’82, Judith B. Simmons, Gretchen A. Flynn, Teresa P. Sanchez ’76, Debbie L. Atkinson, and Patricia P. Kelly ’75; second row, Robert J. Simmons ’67, Brian L. Sanchez ’75, Dexter L. Atkinson ’72, and Mindy King; third row, James T. Flynn Jr. ’64, James L. Chapman IV ’79, James W. Fisher ’68, and John H. King ’00.

Bruce C. Carver ’83

Event speakers Virginia Tech President Charles W. Steger, Kelly estate attorney Dennis Belcher, and Dean of the College of Engineering Richard C. Benson

Kirk E. Spitzer ’67 and Leila B. Spitzer

Kevin T. Crofton ’82 flew from England for the event.
Walking into the Valley Diner in Elk Creek, Va., it’s immediately apparent that Sidney Harvey (secondary education ‘56, M.S. educational administration ‘64, Ed.D. educational administration ’74) knows everyone in town.

Decked out in a maroon Virginia Tech baseball cap and a sweatshirt commemorating his alma mater’s trip to the 2000 Nokia Sugar Bowl, the first thing he does is good-naturedly chide a fellow customer for wearing a Duke shirt. Within a few minutes, he has chatted with another patron about his work at a nearby horse farm, kidded a local game warden about staying out of trouble, and spent time with the eatery’s entire staff.

Harvey is enjoying retirement in his hometown after a four-decade career in education, during which he rose from classroom teacher to superintendent of the commonwealth’s Grayson County school system. He is quick to credit Virginia Tech with helping him spend his life doing the work that he loved.

“If it hadn’t been for Virginia Tech, I would not be where I am today,” Harvey said.

After graduating from high school in 1948, circumstances necessitated postponing college, even though Harvey had already been accepted. He enlisted in the United States Air Force and was eventually stationed in Biloxi, Miss.

Home for a summer vacation in 1953, Harvey took a chance and drove to Blacksburg to see if he could enroll for classes that fall. From then on, serendipity reigned. He gained admission even though the deadline had
already passed, was permitted to charge his tuition on the promise of getting a job, secured a position that same day in the college bookstore despite its history of not hiring freshmen, and later lucked into a teaching job that his program administrators allowed him to substitute for a traditional student-teaching assignment.

“I was meant to be a Hokie,” Harvey declared.

Harvey has been a steadfast supporter of the university for more than 30 years and belongs to the Pylon Society of donors who give in consecutive fiscal years. His gifts have benefited the Corps of Cadets, athletics, the Annual Fund, and several other programs.

Between his long career in education and his abiding love for the university, Harvey found yet another way to demonstrate his support. For the past several years, he has been channeling resources to fund the Dr. Sidney B. Harvey Memorial Scholarship. Upon his death, it will be awarded to a Grayson County High School senior who has been accepted to Virginia Tech and has committed to attend.

“I wanted to put my extra money into helping another student,” he said.

A lifetime of being a Virginia Tech fan has also left Harvey with a mind-boggling collection of Tech memorabilia.

Stadium cups, vintage issues of school magazines, watches, pillows and blankets, a nutcracker, and an old band uniform are just a few of the items on display. One centerpiece of the collection is a custom case displaying two helmets and rows of small plaques recording the scores of all the football games between Virginia Tech and its longtime rival, the University of Virginia.

Although Harvey confesses that he can’t recall the story of each and every item at this point, his passion for Virginia Tech is evident in his collection. According to Harvey, that same passion also drives him to give back to his alma mater. “Being a Hokie means so much to me,” Harvey said. “It’s just more than I can tell.”

Marvin Huff, a Virginia Tech alumnus and one of Sidney Harvey’s favorite teachers, escorted a group of students to the 1947 Thanksgiving Day football game between Virginia Military Institute and what was then Virginia Polytechnic Institute. Although his future school lost, Harvey became a diehard fan anyway. (Game program cover image provided by Ivan Morozov.)

Visit http://bit.ly/SidneyHarvey to read Harvey’s own written remembrance of his Virginia Tech experience and to view some items from his impressive collection of Hokie memorabilia.

Share your story of what Virginia Tech means to you, and why you give to the university. Email giving@vt.edu.
Marion Ehrich is making a difference for her students today, as well as the ones she’ll have tomorrow.

Ehrich, a professor in the Department of Biomedical Sciences and Pathobiology at the Virginia-Maryland Regional College of Veterinary Medicine and co-director for the Laboratory for Neurotoxicity Studies, has donated generously to the veterinary college during her career.

Much of her giving has been directed toward research performed in the college, but Ehrich also created the Fiedler Scholarship for Students from Rural Areas. Established in 1995, the scholarship was set up to honor her father and his farm roots, by providing educational opportunities to students from small, rural communities.

Ehrich knows firsthand the numerous challenges that face students who hail from small, rural schools. The South Dakota native was one of just 18 students in her graduating class in high school. Like many rural schools, Ehrich’s high school lacked those resources that are often readily available to students who attend larger schools.

“They don’t have the choices for course selection that students in larger cities have,” Ehrich said. “They don’t have extracurricular activities, and they don’t have the counselors.”

Ehrich’s father, the late Herman Fiedler, was a farmer who did not advance past the eighth grade. He was proud of the education his daughter received and her career at the college of veterinary medicine. “He used to love to come and visit me here,” recalled Ehrich, a member of the Caldwell Society since 2008. “He always wanted to take a tour.”
Ehrich’s mother, Emma Fiedler, attended a single year of college so she could teach in country schools in the 1930s. In her later years, Emma Fiedler enjoyed seeing pictures of scholarship recipients and reading their letters of appreciation. After she passed away in 2008, Ehrich had the wording of the scholarship changed to honor both of her parents.

The scholarship “is for those people who don’t get particular recognition for some of the difficulties they overcome in order to succeed in larger classes” in higher education, Ehrich said. “It’s a big thing to go to a school where you have 100 people in a single class.”

Ehrich came to Virginia Tech in 1976 to complete her post-doctoral work and has been in Blacksburg ever since. She is the former president of the Society of Toxicology, and received the society’s 2010 Merit Award in recognition of her contributions to the field.

Along with her professional and philanthropic contributions to the veterinary college, Ehrich also makes a musical one. She has celebrated the achievements of students by volunteering to play the piano at nearly every graduation over the past 30 years.

Derek Heizer (dairy science ’11), a second-year student in the Virginia-Maryland Regional College of Veterinary Medicine, is a recipient of the Fiedler Scholarship for Students from Rural Areas. Heizer hails from Middlebrook, Va., a small community in Augusta County, which, according to the 2010 census, recorded a population of 213. When he enrolled at Virginia Tech, Heizer joined a community of students that was more than a hundred times larger than his hometown. Although Heizer is proud of his roots, he says that coming to a university like Virginia Tech can be challenging for students from small schools, noting that his high school offered only one advanced science class: chemistry. All other such classes had to be through distance learning.

“This means a lot,” Heizer said. “I was actually very surprised this school offered something like this for people from a small-town background. It’s important to me to be from a small town because you understand how important individual people are, but you’re at a little disadvantage because you don’t have an advanced science background.”

Marion Ehrich

Derek Heizer (dairy science ’11), a second-year student in the Virginia-Maryland Regional College of Veterinary Medicine, is a recipient of the Fiedler Scholarship for Students from Rural Areas. Heizer hails from Middlebrook, Va., a small community in Augusta County, which, according to the 2010 census, recorded a population of 213. When he enrolled at Virginia Tech, Heizer joined a community of students that was more than a hundred times larger than his hometown. Although Heizer is proud of his roots, he says that coming to a university like Virginia Tech can be challenging for students from small schools, noting that his high school offered only one advanced science class: chemistry. All other such classes had to be through distance learning.

“This means a lot,” Heizer said. “I was actually very surprised this school offered something like this for people from a small-town background. It’s important to me to be from a small town because you understand how important individual people are, but you’re at a little disadvantage because you don’t have an advanced science background.”

Marion Ehrich

Derek Heizer (dairy science ’11), a second-year student in the Virginia-Maryland Regional College of Veterinary Medicine, is a recipient of the Fiedler Scholarship for Students from Rural Areas. Heizer hails from Middlebrook, Va., a small community in Augusta County, which, according to the 2010 census, recorded a population of 213. When he enrolled at Virginia Tech, Heizer joined a community of students that was more than a hundred times larger than his hometown. Although Heizer is proud of his roots, he says that coming to a university like Virginia Tech can be challenging for students from small schools, noting that his high school offered only one advanced science class: chemistry. All other such classes had to be through distance learning.

“This means a lot,” Heizer said. “I was actually very surprised this school offered something like this for people from a small-town background. It’s important to me to be from a small town because you understand how important individual people are, but you’re at a little disadvantage because you don’t have an advanced science background.”

Marion Ehrich
Long before he attended the university, Virginia Tech already meant a lot to Chris Shean (accounting ’87).

Shean’s Hokie spirit was ignited at a young age. He remembers traveling as a boy from rural Victoria, Va., to watch football games. Years later, he enrolled at Virginia Tech, where he met his wife, Lesley (elementary education ’88).

Shean remembers countless great experiences from his time on the Blacksburg campus and in the classrooms of the Department of Accounting and Information Systems at the Pamplin College of Business. And even though he lives more than half a country away these days, he’s always keeping a close eye on the Hokies.

“Lesley’s got great feelings about Virginia Tech, although she’s certainly not as passionate about the sports programs as I am,” Shean said, adding that he is such a rabid fan that “nobody can sit in the room with me when I’m watching games.”

In addition to being a serious Hokie sports fan, Shean has plenty of enthusiasm for the accounting and information systems department, which he said prepared him to succeed in business.

“You’re still starting pretty much from ground zero, but [a Virginia Tech accounting degree] gives you a great foundation,” Shean said of entering the workforce. “It teaches you how to be mature and be an adult, and readies you for a life beyond college. It was a great education.”

After earning his bachelor’s degree in accounting, Shean landed a position in Norfolk, Va., with KPMG. Work brought him to Denver in 1995, and in 2000 he joined Liberty Media, where he now serves as senior vice president and chief financial officer.

The Sheans, who live in Castle Pines Village, Colo., have two sons: Tyler, a junior at the University of Northern Colorado, and Max, a sophomore in high school.

As his career flourished, Shean became a dedicated supporter of Virginia Tech, both financially and by giving his time in service to the university.

Since 2012, he has sat on the Pamplin Advisory Council and the Department of Accounting and Information Systems Advisory Board. Shean has donated toward the Richard E. Sorenson Dean’s Chair Endowment, and has provided unrestricted funds to the Department of Accounting and Information Systems.

He was inducted into the Caldwell Society in 2011, and earlier this year advanced into the Ut Prosim Society, which is named for the university’s motto Ut Prosim (That I May Serve).

“That motto resonates deeply with me,” Shean said. “Taking it to a philanthropic level, it’s the Biblical passage, ‘To whom much is given, much will be required.’ This is an opportunity for me to share with others some of the success I’ve had, which, in part, was allowed by the education that I got at Pamplin.”
Chris Shean, a member of the Ut Prosim Society, contributes unrestricted funds in support of the Virginia Tech Department of Accounting and Information Systems. His gifts enrich the academic experiences of students in classes such as the one pictured. Visit http://bit.ly/ut-prosim-society to learn more about the Ut Prosim Society.
Back on their hooves:
A helping hand for horses in need

by ALBERT RABOTEAU

Peggy Schultz remembers the strong sense of accomplishment her whole family would feel when her father succeeded in nursing an injured horse back to health on their farm.

“He wasn’t a sophisticated veterinarian or anything, but would just patch them up and make sure they got a lot of rest, pain management, bandaging, and cleaning,” she said. “We would get real excited when one got well. It was like a big celebration.”

Through her philanthropy, Schultz will help make it more likely that other horse-loving families will have similar cause for celebration in the future. A public-school educator from Woodbine, Md., she recently made a generous commitment of support from her estate toward research into regenerative medicine at the Marion duPont Scott Equine Medical Center, located in Leesburg, Va.
Regenerative medicine refers to the practice of stimulating the body’s own repair mechanisms with the use of stem cells or through other means.

“I was thinking about what would happen with my resources after I was deceased, and thought it would be satisfying to support something that would make a difference over time,” Schultz said. “I've always been interested in horses. They do bring me a lot of happiness and peace, and I was really interested in all the regenerative medicine work that is going on. It seems like something with a future that’s worth exploring.”

This school year was Schultz's 51st working for the public school system in Howard County, Md., where she coordinates the home-teaching program that serves students who cannot come to school buildings due to physical or emotional conditions. When not involved in those duties, she also spends considerable time working with her own horses and the Maryland horse community.

She has been a member of the Maryland Western Horse Association since its inception in 1952. For 22 years, she has run the horse shows at the Howard County Fair. And, three years ago, she helped start the Lisbon Ole Fashion Christmas Horse Parade, which she estimates drew 400 equine exhibitors in 2012.

“I'm still taking riding lessons at 72 years old,” Schultz said. “I've ridden all my life, but there’s always so much more to learn.”

Schultz’s desire to learn more about horses extends past riding them and into how they can best be healed. Her curiosity, and conversations with a friend, led her to start reading up on regenerative medicine and then visiting the Equine Medical Center, where she met Dr. Jennifer Barrett, an associate professor whose research includes regenerative treatments.

“I have a girlfriend who had some regenerative medical work done on her horse and I think it really saved that horse’s life,” Schultz said. “I’ve had a couple horses put down after injuries, and think maybe if medicine had been advanced enough their lives could have been saved.”

Helping to advance research into potentially lifesaving treatments seems to be an entirely fitting legacy for a woman like Schultz, who said she has “never known life without a horse involved.”
Corporate support powers research into improved mining techniques

by GARY COPE ’97

Coal mining has long been an important part of the Appalachian economy, and while efforts to find sustainable energy sources are ongoing, coal continues to be a major source of energy and jobs.

Regulatory concerns over the environmental impact of mining are leading researchers to develop new technologies to help mining companies minimize their impact on the environment, restore ecosystems on reclaimed mine sites, and still retain economic viability.

With help from a six-figure Wells Fargo Clean Technology and Innovation Grant, Virginia Tech researchers are testing a technology called electrical resistivity imaging (ERI) that has the potential to visualize near-surface hydrology and allow mining operations to improve management of water flows and quality.

"Electrical resistivity imaging will allow us to see inside the valley fills created by surface coal mining in a brand new way," said Erich Hester, assistant professor of civil and environmental engineering. "This will allow us to better understand how water moves through the ground during storms and how it interacts with pollution-generating spoil rock."

Near-surface hydrology is the study of rainwater flow over, into, and through shallow soil and rock. It is used to analyze the environmental impact of surface coal mining, which releases natural minerals from the rocks that can have a negative impact on water resources and can increase the possibility of flooding in nearby streams.

These concerns can be addressed if mine reclamation practices can restore near-surface hydrology as closely as possible to pre-mining conditions.

However, restoring mining sites can be challenging because...
“This knowledge should eventually allow future mining operations to adjust fill placement techniques to reduce pollutant loading to streams, thereby helping restore the health of downstream aquatic ecosystems.”

Erich Hester

water flowing beneath the surface is difficult to see or measure. ERI aims to change that. The technology sends brief electrical pulses into the ground, measures pulse transmissions to other locations, and creates maps of the electrical resistivity of soils and other geological materials. These maps can be used to determine water flow paths in multiple dimensions.

“This knowledge should eventually allow future mining operations to adjust fill placement techniques to reduce pollutant loading to streams, thereby helping restore the health of downstream aquatic ecosystems,” said Hester, who is leading the research project along with Carl Zipper, a Virginia Tech professor of crop and soil environmental science within the College of Agriculture and Life Sciences.

In a statement, Dee O’Donnell, regional president for western Virginia at Wells Fargo, explained why funding this particular research was appealing to her company. “I am thrilled that Wells Fargo is able to support a project such as this one,” she said. “The ERI technology that this grant supports could help reduce the environmental impacts, resulting in improved resources for the community, reduced treatment costs, and job creation—if the technology evolves and is widely adopted—which I have full confidence that it will be.”
Mary Harman admits she was intimidated when she set off for the Philippines to conduct research related to the master’s degree in geography she earned from Virginia Tech’s College of Natural Resources and Environment in May 2013.

A native of Bluefield, W.Va., who had never traveled outside the United States, Harman was en route to a rural region of a country on the other side of the world, where few people spoke her language.

To help cover the cost of her travel, Harman’s research assistant funding was supplemented with money from the Sidman P. Poole Endowment in Geography. Unfortunately, Harman’s faculty advisor was unable to make the trip.

As a result, it was up to Harman to coordinate the visit, work with a translator to conduct interviews, and gather information on how gender relations might affect efforts by the Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program to promote sustainable agriculture.

“The trip provided me not only with skills, but insight into how development projects and research work,” said Harman.

The research program Harman worked on is affiliated with Virginia Tech’s Office of Outreach and International Affairs. She planned to continue to work at that office for several months after graduation, and said working in human development, which often includes trips abroad, was one of her long-term career interests.

Harman described her experience in the Philippines as something she “will use to my advantage for the rest of my academic or private sector career,” and said she was deeply grateful for all the funding that made it possible.

Mary Harman worked with a translator to conduct interviews with local residents in the Philippines.

International insights help recent master’s graduate

by ALBERT RABOTEAU

International education participants by academic year

Virginia Tech study abroad participant numbers as reported to the Institute of International Education Open Doors annual statistical survey of the internationally mobile student population in the United States.
Ways to give: Year-end giving guidelines

When it comes to maximizing the tax benefits associated with your charitable gifts, **timing is everything.** Please keep the following deadlines in mind to ensure year-end tax credit for your 2013 contributions:

**Online credit card payments** must be made by 11:59 p.m. EST on Dec. 31, 2013, at www.givingto.vt.edu.

**Credit card payments by telephone** **must be received** no later than 5 p.m. EST on Dec. 31, 2013, and can be made by calling 800-533-1144 or 540-231-2829.

**Credit card payments sent by mail** **must be received** by the Office of Gift Accounting by 5 p.m. EST on Dec. 31, 2013, so that they can be processed by the end of the year.

**Checks delivered by the U.S. Postal Service** **must be dated** on or before Dec. 31, 2013, and **postmarked** by Dec. 31, 2013, in order to be credited to 2013.

**Checks delivered to Virginia Tech by other means (hand-delivered, FedEx, UPS)** **must be dated** on or before Dec. 31, 2013, and **received** by the Office of Gift Accounting by no later than 5 p.m. EST Dec. 31, 2013. Gift checks that are not mailed through the U.S. Postal Service are effective as of the date they are **received** by Virginia Tech.

**Transfer of securities (stocks, bonds, mutual funds)** Planning is essential when it comes to gifts of securities (stocks, bonds, mutual funds). The transfer must be executed by your broker and received in an account owned by the Virginia Tech Foundation on or before Dec. 31, 2013, before it is considered complete. Please allow at least five business days for electronic transfers. For more information, call 540-231-2325 or visit www.idm.vt.edu.

**For detailed instructions on ways to give in tax year 2013,** call the Office of University Development at 800-533-1144 or visit http://bit.ly/yearendguidelines. With the exception of Dec. 24-25, 2013, the Office of Gift Accounting will be open Monday through Friday, 8 a.m. to 5 p.m., throughout December.

**IRA charitable rollover to expire Dec. 31, 2013**

The January 2013 tax bill extended—until the end of 2013 only—the charitable IRA rollover (qualified charitable distribution) for donors age 70 1/2 or older wishing to make a gift directly to a charity, such as Virginia Tech, from their traditional or Roth IRA. A qualifying charitable IRA rollover often results in a more-favorable tax outcome than simply withdrawing funds to make a gift.

**Contact the Office of Gift Planning:**
Call 800-533-1144 or 540-231-2813, or visit us online at http://bit.ly/irarollover, to learn more about charitable IRA rollover qualifications and restrictions.
Fueled by philanthropy

Cornelia Crum, her son, Dylan Thomas, and her husband, Tim Crum, were among the dozens of Hokie families who toured the College of Engineering’s Joseph F. Ware Jr. Advanced Engineering Lab during Family Weekend in late September. Funded in part by donors, Family Weekend is organized by the Division of Student Affairs. Tim Crum said the weekend was the first time he and his wife had been to campus, where his stepson is a junior majoring in aerospace engineering.