HOKIE BUILT
FOR A BETTER TOMORROW

MAKING STRIDES
Hokies in roller derby

CARRY A COUNTRY
Designing mission-minded backpacks

CHASING STEEPLES
Virginia Tech athlete sets the pace

WASTE NOT
Dishing up sustainable changes at mealtime
At Virginia Tech, we’re dedicated to connecting diverse backgrounds, perspectives, and beliefs. Why? We know that real change is rooted in empathy and driven by embracing differences.

Our role in creating that change is to empower courageous and compassionate leaders for our ever-evolving world.

Learn more at vt.edu/inclusivevt
Virginia Tech is redefining the role of the 21st-century comprehensive land-grant by bringing together forward-thinking leaders, world-class faculty, and enterprising students who share the spirit of grit and determination that exemplifies our lunch-pail mentality. Although their individual roles differ greatly, the impact of their combined strengths creates a tremendous force for good.

ON THE COVER: Armed with the traditional lunch-pail mentality, Hokies are building Virginia Tech’s future as a leading 21st-century land-grant university. (At right) Jasmine Edison of Anchorage, Alaska, a graduate assistant, works with technology in the Cube during a special winter semester course. Read more about the Cube on page 20.

END NOTE
Nearly four years ago, I was honored to become the 16th president of this dynamic and enduring institution. I’ve engaged in hundreds of conversations with students, faculty, staff alumni, and partners about Virginia Tech’s future. Together, we have identified a set of aspirational themes that will help guide us as we chart the university’s future direction.

First, and perhaps most importantly, we must remain true to our heritage as a land-grant institution and our tradition of service to our community, commonwealth, and country. It’s our heritage as a land-grant institution and our tradition of service to our community, commonwealth, and country.

We also need to set our sights on becoming a top-100 global university so we can attract the best talent and partners. This will take many years, but everything we envision has one need—your support. Your generosity brought us this far, and now we need you to take us to the next level. The giving rate for our alumni is currently about 12 percent. Other comparable universities have a giving rate of 20 percent. If we can increase our philanthropic giving to match our peers, we can achieve our goals for the university and much more. But we need your help.

On Tuesday, March 20, we will celebrate the first day of spring with the first annual Virginia Tech Giving Day. I want to encourage all of our alumni and friends to take advantage of this opportunity to support our mission and vision. Find out how you can participate by visiting vt.edu/givingday and help us match the giving rate of our peers and competitors.

With your support, we are creating a shared vision for the university’s future that is both inspirational and achievable. As we move forward, I will keep you informed and share our milestones and progress toward our goals.

Thank you for everything you do for Virginia Tech.

Tim Sands is Virginia Tech’s 16th president.
NEW 460 SOUTHGATE INTERCHANGE OPEN

VIRGINIA DEPARTMENT OF TRANSPORTATION’S $46.7 million interchange project creates a new grade-separated, diverging diamond interchange at the intersection of U.S. 460 and Southgate Drive, which leads vehicles to a roundabout. Beyond the roundabout, the road heads directly to the university’s athletics facilities, including Lane Stadium and English Field at Union Park, the baseball stadium.

Southgate Drive from the new traffic circle to U.S. 460 is closed permanently.

ON THE ROAD: A ribbon-cutting ceremony was held in December to celebrate the opening of the Southgate Drive and U.S. 460 interchange. (At left) Civil engineering students, Wade Orman, Tripp Agnor, and Ann Joseph, who served as interns for Branch Highways, were on the worksite as the final beam was installed overnight at the interchange.
Killer weed in East Africa no match for Virginia’s land-grant institutions

With help from the Virginia Tech-led Feed the Future Innovation Lab for Integrated Pest Management, researchers from Virginia Tech and Virginia State University are working to eradicate parthenium hysterophorus, an aggressively invasive plant native to Central America now found on Australian, Asian, and African continents.

Parthenium invaded Ethiopia four decades ago, said Muni Muniappan, dean at Virginia State University, identified two bugs that fit the bill—a leaf-feeding beetle, zygogramma bicolorata, and a stem-boring weevil, listronotus setosipennis. Mersie and the Virginia Tech team worked to bring other scientists and technicians from Ethiopia to South Africa to learn to employ the beetle and weevil as biological controls, then return to Ethiopia to establish a quarantine facility at the Ambo Research Station, where they tested the plant’s growth and help university planners make decisions about development.

STUDY CONTRADICTS COMMON PRACTICE OF TAILGATING AT TRAFFIC LIGHTS

When pulling up to a traffic light, most drivers get pretty close to the car in front of them, leaving just several feet of space between their bumper and the next. Traditional thinking says the closer a car is to a traffic light, the more likely that car will be to pass through the intersection before the light turns red again.

A study by Virginia Tech engineering professors and students in the Department of Biomedical Engineering and Mechanics, published in the New Journal of Physics, used video cameras attached to drone helicopters to capture footage of cars accelerating through a traffic light on the Virginia Tech Transportation Institute Smart Road. By systematically controlling the packing density of the cars, the researchers discovered that any decrease in distance to the light was completely offset by the time it took for cars to regain a comfortable spacing before drivers could accelerate.

Drivers who pack tightly at intersections do not increase their chances of making it through the light, and tailgating at traffic lights can also lead to more rear-end collisions.

POISON CONTROL: Wondi Mersie, right, a Virginia Tech alumnus, is working with a Virginia Tech-led project to control the poisonous weed parthenium in Ethiopia. Also pictured (from left): Bhane Gebrekidan, Virginia Tech Board of Visitors Rector Dennis Treacy '78, Samora Macrincis, Demeku Zewdie, and (seated) Lidyia Alemayehu.

LAB INSTRUCTOR CRAIG TOLLIN FULFILLS LIFELONG DREAM WITH APPEARANCE ON “JEOPARDY!”

With the Virginia Tech College of Science’s Academy of Integrated Sciences, always knew that he wanted to compete on the gameshow “Jeopardy!” and he finally got his chance in 2017, appearing on two episodes televised in mid-December.

In the first, Tollin trailed heading into Final Jeopardy, but correctly answered a clue about the Goodyear Blimp and won with a total of $22,001. In the next night’s broad- cast, Tollin finished second, ending his run on the show.

Tollin’s love of knowledge directly applies to his work with students. He is a lab director and coordinator for the College of Science’s Integrated Science Curriculum (ISC) Neuroscience program, system biology program, and School of Neurosci- ence. His duties put him in contact with hundreds of students each week. In addition to students, Tollin also works with teaching assistants to train them for work in laboratories.

NEW INVENTORY OF 9,000 CAMPUS TREES

Virginia Tech will soon have an inventory of nearly 9,000 trees on campus, thanks to a collaborative effort between the College of Natural Resources and Environment and the facilities department. The campus tree inventory will be used to monitor tree health and growth and help university planners make decisions about development.

CRAIG TOLLIN, A LAB INSTRUCTOR with the Virginia Tech College of Science’s Academy of Integrated Sciences, always knew that he wanted to compete on the gameshow “Jeopardy!,” and he finally got his chance in 2017, appearing on two episodes televised in mid-December.

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“Each tree will have a unique identification number, so whenever a tree needs work done, the grounds staff will be able to see exactly which one needs work and can keep track of it in that system,” he said.

The inventory will also be used by the university to aid in decision-making about construction and landscaping on campus. It will be especially valuable for implementing Virginia Tech’s 2017 Master Plan, which includes the development of new facilities.
LOGAN WALLACE

Data from thousands of real impacts to cushion the force of those impacts. be light and thin, which limits their ability player’s helmet. Hockey helmets tend to rigid surfaces: the ice, the glass, or another opportunities for players to hit their heads on hockey, a game that is packed with oppor- of 48 impact tests designed specifically for Each helmet’s STAR rating is the result measurement correlated with a lower risk of head injuries. Each helmet’s STAR rating is the result of 48 impact tests designed specifically for hockey, a game that is packed with opportunities for players to hit their heads on rigid surfaces: the ice, the glass, or another player’s helmet. Hockey helmets tend to be light and thin, which limits their ability to cushion the force of those impacts. Data from thousands of real impacts recorded during hockey games helped

FIVE-STAR HOCKEY HELMET CHANGES THE GAME FOR CONSUMERS

WHEN THE VIRGINIA TECH HELMET Lab released its first set of ratings for hockey helmets in 2015, the top of the chart was empty. No helmet had earned the highest score of five stars. That vacancy has now been filled, and the first-ever five-star rating awarded to the CCM FitLite 500. The Virginia Tech Helmet Ratings use star ratings between zero and five to indicate how well a given helmet reduces head acceleration during an impact, a measurement correlated with a lower risk of head injuries. Each helmet’s STAR rating is the result of 48 impact tests designed specifically for hockey, a game that is packed with opportunities for players to hit their heads on rigid surfaces: the ice, the glass, or another player’s helmet. Hockey helmets tend to be light and thin, which limits their ability to cushion the force of those impacts. Data from thousands of real impacts recorded during hockey games helped

DUMA NAMED INSTITUTE DIRECTOR

STEFAN DUMA, THE HARRY WYATT

Professor of Engineering, has been named director of the Virginia Tech Institute for Critical Technology and Applied Science (ICTAS). Duma has served as interim director of the institute for two years. ICTAS, which recently celebrated its 10th anniversary, now boasts three buildings on the Blacksburg campus, space in the National Capital Region, and growing collaborations in Roanoke. The institute helps drive research at the university by supporting interdisciplinary teams tackling potentially high-impact research and providing funding, shared workspaces, and other resources. While ICTAS-funded projects cover a wide swath of subject areas, some of the institute’s most prominent initiatives include the Nanoscale Characterization and Fabrication Laboratory, which is a resource for faculty all over campus and now a node in the National Science Foundation’s national nanotechnology network, and the Virginia Tech Mid-Atlantic Aviation Partnership, which runs some of just seven Federal Aviation Administration-designated test sites for unmanned aircraft systems and the new drone park overlooking Oak Lane.

STUDY HIGHLIGHTS CONSERVATION NEEDS OF FISH SPECIES RECENTLY DISCOVERED IN SOUTHWEST VIRGINIA counties. The fish, which grow to roughly 2 inches in length, are typically found in forested streams. They prefer to nest in gravel depressions built by larger fish like creek chubs and stone rollers, which provide well-oxygenated nests for their eggs to develop. Currently, the Clinch dace is in the highest tier of the Virginia Department of Game and Inland Fisheries’ Tiers of Impiment for all wildlife species found in the state.

VALENCIA TECH RESEARCHERS ATTACK CANCERS, PARKINSON’S WITH ELECTRICAL FIELDS

FORMER VIRGINIA GOV. TERRY McAuliffe announced $1 million in funding for Virginia Tech to research electrotherapy, a process that attacks brain tumors once considered inoperable using irreversible electroporation. The technique, developed by Virginia Tech Professor of Biomedical Engineering and Mechanics Rafael Davalos and his team, opens a cancer cell’s pores using low-level electrical pulses, which allows for medicine to be better received by the cell. This new process is also suited to destroy brain tumors and can potentially prevent patients from suffering through chemotherapy. Irreversible electroporation has been successful in treating more than 6,000 patients suffering from liver, kidney, pancreatic, and prostate cancer. Revisit the summer 2015 issue of Virginia Tech Magazine at vtmag.vt.edu to read more about Davalos and the university’s efforts to fight cancer.

IN 1999, A ROUTINE STUDY FOR A pipeline in Tazewell County, Virginia, led to a surprising discovery. Researchers spotted tiny minnows with a black stripe and yellow fins similar in size and skeletal structure to the Laurel dace, a species native to Tennessee. Further sampling, however, revealed that these minnows were actually a separate species. Named for the upper Clinch River basin where it was discovered, the Clinch dace has been extensively studied since 2005. The most recent study, conducted by researchers in Virginia Tech’s College of Natural Resources and Environment, offers suggestions for further methods of study and conservation efforts. The study, published in the Journal of Fish and Wildlife Management, compiled data collected on the Clinch dace from 70 stream segments in Tazewell and Russell
What do fist bumps, customized golf grips, and Kapton have in common? The short answer: additive manufacturing. Commonly known as 3-D printing, additive manufacturing is used to fabricate complex forms by printing them layer by layer. At Virginia Tech, researchers are using the technology in innovative and compelling ways.

**FIST BUMPS**

Josie Fraticelli (pictured above with Blake Johnson) is an active 12-year-old who doesn’t let anything hold her back—not even the amniotic band syndrome that affected the development of her right hand, causing a lack of formation beyond the knuckles.

Josie’s parents, Barbara and Tom Fraticelli, have focused on learning about the defect. Their investigation revealed that some individuals had benefited from prosthetic limbs created using 3-D printers.

Enter Blake Johnson, assistant professor in the Grado Department of Industrial and Systems Engineering (ISE) and a colleague of Josie’s mother. “When Barb told me about Josie, I knew we could help,” Johnson said.

Johnson created an undergraduate research project for ISE students to help them apply their knowledge toward design and fabrication of a 3-D printed prosthetic hand for Josie.

**GOLF GRIPS**

A Virginia Tech student engineering team that included Eric Gilmer, Andy Cohen, Jacob Fallon (pictured below), and Camden Chatham created a customized 3-D printed golf grip that uniquely conforms to an individual golfer’s hands to guide correct placement each time he or she picks up a club.

To create this game-changing golf grip, the team made a clay mold of hands in the correct grip position, scanned the mold, and converted the image to a 3-D computer-aided design model.

The result is a grip that can be slipped onto golf clubs and used as a non-tournament aid for players to help build muscle memory and achieve a consistent, correct grip without the need for a professional trainer.

Researchers from the College of Engineering and College of Science were able to synthesize the macro-molecules, allowing them to remain stable and maintain their thermal properties for processing in 3-D printing. Theoretically, the high-performance polymer now can be used in any shape, size, or structure. Possible future uses are not limited to the aerospace industry.

Read more about 3-D printing at Virginia Tech in the winter 2017 issue of Virginia Tech Engineer at eng.vt.edu/magazine.

**KAPTON**

Virginia Tech researchers created a novel way to 3-D print the type of high-temperature polymeric materials commonly used to insulate spacecraft and satellites from extreme heat and cold.

The material, formally known as Kapton, is difficult to produce in any format other than thin sheets. Researchers from the College of Engineering and College of Science were able to synthesize the macro-molecules, allowing them to remain stable and maintain their thermal properties for processing in 3-D printing. Theoretically, the high-performance polymer now can be used in any shape, size, or structure. Possible future uses are not limited to the aerospace industry.

Read more about 3-D printing at Virginia Tech in the winter 2017 issue of Virginia Tech Engineer at eng.vt.edu/magazine.

**THINKABIT LAB INSPIRES LEARNING OPPORTUNITIES FOR STUDENTS AND TEACHERS**

“THIS WAS BETTER THAN DISNEY World! Do we get to come back?” a Cedar Point Elementary School student exclaimed after visiting the Qualcomm Thinkabit Lab at Virginia Tech’s Northern Virginia Center in Falls Church, Virginia, in April 2017.

Cedar Point Principal Mark Marinoble, a Virginia Tech Class of 1995 graduate, felt the same excitement. Marinoble, who’s now enrolled as a Tech doctoral student, was inspired to plan the field trip following his first visit to the lab. Motivated by the reactions of their students, Marinoble and fourth-grade teacher Adair Solomon met with Thinkabit Lab Director Jim Egenrieder and representatives from Qualcomm Inc. to discuss creating a Thinkabit Lab for their school in Prince William County, Virginia.

“Qualcomm gave us a design framework to build the lab—the ideas, the paint colors, everything they do,” said Solomon. The ideas were implemented over the summer break.

The lab was ready when the students returned to school in the fall. Since then, students from every grade level have spent time in the lab.

Egenrieder says Virginia Tech and Qualcomm are opening more and more labs like Cedar Point’s all over the state and the Mid-Atlantic. The Thinkabit Lab in Falls Church is part of a multiyear collaboration between Virginia Tech and Qualcomm led by the Department of Engineering Education and the School of Education.
Virginia Tech Receives $15.2 Million Gift to Construct Student-Athlete Performance Center

Virginia Tech has received its largest-ever gift to athletics and the single-largest outright gift ever given to the university.

In December 2017, President Tim Sands announced a $15.2 million donation to the university to help create a state-of-the-art Student-Athlete Performance Center on the Blacksburg campus.

The gift will benefit student-athletes in all 22 intercollegiate sports. It was made by an alumni couple who are Virginia natives. This visionary and transformational gift will allow for significant expansion and renovation, encompassing the entire fourth floor of the Jamerson Athletic Center.

These stories contain images of conceptual renderings.
HOME-GROWN HELP

Sustainability efforts at the university begin long before a stovetop is warmed. Currently, just over 13 percent of Dining Services’ food is locally and sustainably sourced—-grown or produced within 250 miles of Blacksburg, or having attributes such as fair trade or organic certification—-with a portion being cultivated just a few miles from campus by Virginia Tech students.

Fifty-four types of crops, featuring multiple varieties of produce, are cultivated at the Dining Services Farm at Kentland Farms. This growing season, the farm produced about 37,000 pounds of food for Virginia Tech Dining Services and harvested around 1,000 pounds of high-value herbs, including 500 pounds of basil.

BETTER CONTAINERS FOR A BETTER EARTH

Once its award-winning food is prepared, Dining Services focuses on a variety of waste minimization initiatives, including recycling and composting.

Since 2012, Dining Services has made strides to shrink its carbon footprint by shifting from plastic foam to-go products to those made of compostable or recyclable material. In 2013, this effort was bolstered with the introduction of the R2G Reusable To-Go containers (R2G), each of which is durable enough to be used more than 300 times.

Originally, students had to have a special key tag to use the R2G boxes. That evolved to a special coin and eventually to a user interface that accepts Hokie Passports. Today, students can use their Hokie Passports like library cards to check out up to three containers at a time. They receive email notifications upon checking out containers, as well as returning them to one of the OZZI collection machines located at West End Market, Owens Food Court, or Turner Place.

The new system enables Dining Services to track usage. About 10,000 containers were checked out between late August and early October of 2017.

NEVER WASTE AN OPPORTUNITY TO SERVE

Since 2009, Dining Services has promoted composting waste, such as carrot tops, vegetable peels, or fruit scraps. The effort has diverted around 5 million pounds of food waste from landfills.

In 2015, a grant initiated a start-up chapter of the Campus Kitchens Project, a national organization that promotes students’ efforts to combat food waste and fight hunger.

From its inception through mid-October 2017, the campus kitchen at Virginia Tech, a VT Engage program, diverted a total of 53,395 pounds of food to those in need. A total of 380 student, staff, and faculty volunteers committed more than 8,900 hours of service.

This year for the first time the group also teamed up with the New River Valley Glean Team, retrieving about 800 pounds of apples for those in need.
SEVEN-AND-A-HALF LAPS, 28 HURDLES, seven water jumps, and one all-out sprint to the finish. This is the steeplechase—a 3,000-meter track event meant for those bred with true grit.

Collegiate competitors are first-timers to the event, which is not available to most younger athletes. Such was the case for Virginia Tech sophomore Sarah Edwards, a Massachusetts native majoring in interior design. “My coaches talked to me about [the steeplechase] on my first official visit before I even committed to Virginia Tech,” she said.

As a freshman, Edwards began training for the event in earnest. In her steeplechase debut, after just two months of practice, she finished second.

Seven races later, Edwards wasn’t just winning; she was breaking records. In 2017, she posted the third-fastest time ever by an American 20 years old or younger. Edwards also raised the bar at Virginia Tech with a time of 9:52.89 minutes. At the ACC Championships, USA Junior Outdoor Championships, and the Junior Pan American Games in Peru, she took gold.

As she begins the 2018 season, Edwards’ goals include a repeat win at the ACC Championships and a return to the national stage. “I really want to put up a fight to win the title,” Edwards said.

When it comes to beating the odds, Edwards is already a proven champion. At the age of 14, she was diagnosed with pilocytic astrocytoma, a rare, but treatable, brain tumor. The diagnosis forced her to mature earlier than her friends. “It helped me because it made me care about things that mean so much more,” said Edwards.

Driven to prioritize what really mattered to her, Edwards turned her focus to college and running. “Most successful people in the world have those coming-about stories,” Edwards said. “Maybe this will be mine.”

Today, Edwards confesses her biggest challenge is neither cancer nor winning. It’s being prepared before she approaches the starting line. “I can’t find my water bottle, or my hair tie broke, or I’ve lost a spike,” said Edwards. “I guess that’s my pre-race tradition, and it freaks me out, but it also gives me this huge adrenaline rush.”

For Edwards, these are small obstacles to hurdle in the big arena. Luckily, she’s on the right track.

Allysah Fox, a Virginia Tech senior, is an intern with Virginia Tech Magazine.
THE SOUND OF SCIENCE

A music professor and an engineering professor at Virginia Tech are working together to create a new way to look at data by turning it into sound.

Using a motion capture system and the immersive sound system in the Moss Art Center’s Cube, participants will be able to navigate sonified data using a gesture-driven interface similar to the one that was depicted in the science fiction film “Minority Report.”

The National Science Foundation (NSF) is funding this first-ever collaboration between the university’s School of Performing Arts and College of Engineering, combining elements of music, geospatial science, computer science, and human-computer interaction. The research project will focus on the earth’s upper atmospheric system, which features physical variables that are spatially and temporally rich.

“It makes sense that we would want to go beyond two-dimensional graphical models of information and make new discoveries using senses other than our eyes,” said Ivica Ico Bukvic, associate professor of composition and multimedia, who is working with Greg Earle, professor of electrical and computer engineering on the special project.

VIRTUAL AND AUGMENTED REALITY technologies are changing the research landscape. Scientists can now be transported to any place in the universe, physically explore massive sets of data, visualize and interact with spatial structures of molecules, and walk through a building before it has been constructed.

The Cube, a multidisciplinary, collaborative research environment located in the Moss Arts Center, accomplishes this and more with the Cyclorama, a massive 360-degree cylindrical projection screen suspended from the ceiling. Measuring roughly 32 feet in diameter and 16 feet tall, the unique screen, installed by the Institute for Creativity, Arts, and Technology (ICAT) in 2016, provides an immersive stereoscopic experience for up to 60 people.

Before the Cyclorama, immersive-environment 3-D experiences in the Cube required individual virtual reality headsets and backpack laptops. Now, inexpensive 3-D glasses, which alternate shuttering the left and right eyes 60 times per second, enable numerous viewers to watch the stereoscopic video at the same time.

“This is immersive environment on a large scale,” said Tanner Upthegrove, media engineer for ICAT.

Because the Cyclorama can also use the Cube’s existing 3-D spatial audio and ultrasonic systems, a 149-speaker array that can place sounds at specific spots in the room, its custom screen needed to be acoustically transparent.

To project, the Cyclorama relies on four edge-blended OmniFocus 30260 lensed Digital Projection LaserLITE projectors (fish-eye), each with 1920 x 1200 resolution at 11,000 lumens. By comparison, a quality home theater projector runs at around 1,000 lumens.

ICAT staff can drive content from their own data visualization platforms to the system. The shape of the Cyclorama’s screens allows for delivery of warped and blended, 120Hz stereo movies at 4K resolution per screen from a single Windows-based machine, which is unique in the industry.

“A custom rack-mount computer, including camera calibration for automated alignment and blending, helps match the video to the curved screens. The computer transports eight HD video signals to the four projectors over the Cube’s Cat 5 Ethernet infrastructure, two displays per projector.

To learn more about the research studies and other projects taking place in the Cube, go to vtmag.vt.edu.
YOUR GRANDMOTHER’S INSISTENCE THAT YOU GET MORE BUG BITES BECAUSE you’re “sweeter” may not be that far-fetched, according to pioneering research from Virginia Tech scientists.

The study, published Jan. 25 in Current Biology, demonstrates that mosquitoes can learn and remember the smells of hosts, and points to dopamine as a key mediator of this process. The project also proved that a mosquito’s preference can shift if an odor once deemed delicious-smelling becomes associated with something unpleasant. Hosts who swat the insects or perform other defensive behaviors may be abandoned, no matter how sweet.

Clément Vinauger, an assistant professor of biochemistry in the College of Agriculture and Life Sciences, and Chloé Lahondère, a research assistant professor in the Department of Biochemistry, found that mosquitoes exhibit a trait known as aversive learning by training female Aedes aegypti mosquitoes to associate specific odors with unpleasant shocks and vibrations.

Twenty-four hours after the initial training, the same mosquitoes were assessed in a Y-maze olfactometer. The insects had to fly upwind and choose between the once-preferred human body odor and a control scent. The mosquitoes avoided the human body odor, suggesting that they had been successfully trained.

The scientists were also able to identify that dopamine is a key mediator of aversive learning in mosquitoes. To target the specific parts of the brain involved in olfactory integration, researchers fit mosquitoes with helmets that allowed for brain activity recordings and observations. Then, the scientists were able to analyze how the insects reacted when exposed to various smells. The findings demonstrated that the neural activity in the brain region where olfactory information is processed was modulated by dopamine in such a way that odors were easier to discriminate, and potentially learn, by the mosquitoes.

“Understanding these mechanisms of mosquito learning and preferences may provide new tools for mosquito control,” said Vinauger.

Aedes aegypti mosquitoes are vectors for Zika fever, dengue fever, chikungunya, and yellow fever viruses, and can be found in tropical and subtropical regions throughout the world. Vinauger and Lahondère are both affiliated with the university’s Fralin Life Science Institute, which supports vector-borne disease research as a major focus area.

Lindsay Key is the communications director for the Fralin Life Science Institute.
THE VIRGINIA TECH COMMUNITY gathered at the Pylons on Nov. 10, 2017, for a series of events in recognition of Veterans Day. The day included a special ceremony organized by the Corps of Cadets in cooperation with the Alumni Association to add a name to the Honor pylon.

“It is at moments like these that we also take time to reflect on the origins and meanings of this university,” said Maj. Gen. Randal D. Fullhart, commandant of the corps. “While we are a modern-day, world-class research institute, Virginia Tech is, at its heart, a land-grant university whose roots in the military tradition form the basis of its motto, Ut Prosim, (That I May Serve). Service is what we honor today.”

Moments later, the name of the late Luther James “Jim” Doss Jr. of the Class of 1970 was unveiled on the Honor pylon. Doss was killed in action on April 30, 1970, in the province of Binh Dinh, South Vietnam while trying to rescue eight soldiers who were surrounded by attacking forces. Last spring, the digitization of a fraternity scrapbook revealed that his name had never been added to the Pylons. His was the 431st name inscribed.

Prior to the unveiling, Doss’ son, David Doss, spoke to the university community on behalf of his family. “You haven’t only carved in these stones the name of my father,” David Doss said, holding back tears, “but you’ve etched in our hearts gratitude that could not be described with words.”

The Honor pylon is inscribed with the names of Virginia Tech students and graduates who have died defending the nation’s freedoms since World War I. At the War Memorial’s center, the cenotaph, an empty monument erected to honor a group of people whose remains are consecrated elsewhere, displays the names of Virginia Tech’s seven Medal of Honor recipients.

FAMILY AND FRIENDS: (Top left) Doss’s family members who attended the Pylon ceremony included widow Barbara Doss Rookstool, son David Doss and his wife April, and their children, Summer and James. (At left) The Virginia Tech community gathered at the War Memorial Pylons on Nov. 10 for Veterans Day.

SERVICE AND SACRIFICE: The name of Jim Doss was engraved on the Honor pylon. (Top) the Virginia Tech Corps of Cadets honored veterans during two special ceremonies on Veterans Day.

Read more about Jim Doss, view a gallery of images from the 2017 Veterans Day event, and learn more about the Pylons at vtmag.vt.edu.
PRIOR TO COMING TO VIRGINIA TECH, BLYTHE BOYD scheduled as many job interviews as she could just to get experience and learn more about being professional. She did not always get an offer, but she walked away from each interview with new piece of knowledge.

A sophomore from Virginia Beach, Virginia, Boyd noticed that many interviewees did not seem to understand the importance of professional dress and behavior. So when she learned that Career and Professional Development was looking for an intern to take the lead on the Virginia Tech Career Outfitters program, which helps provide students with new or gently used professional clothing and accessories, she applied immediately.

“I love event planning, organizing, and coordinating things, but being involved with a program that provides professional wear to students who don’t have access to it really spoke to me,” said Boyd.

Boyd, a fashion merchandising and design major in the College of Liberal Arts and Human Sciences, knows that dressing professionally boosts confidence. “I am helping students feel confident because of what they are wearing, said Boyd. “And I hope their confidence shines through in their actions and behavior, too.”

Career Outfitters, an annual service project that began in 2013, provides free-of-charge shopping for students to obtain new and gently used professional attire. The career closet is replenished throughout the year with donations from alumni, faculty, staff, and local business professionals. There are hundreds of items in the closet: suits, blazers, sport coats, dress pants, dress shirts, blouses, skirts, dresses, and accessories such as jewelry, ties, and belts.

Boyd helps sort and organize items according to type and size. “It is really exciting to look at all the stuff we have in the closet and be able to put together a good outfit that doesn’t make someone feel like they are just blending in with everyone else with the black suit and white shirt,” said Boyd. “Knowing how to present yourself in a professional manner includes being aware of what is appropriate to wear to a job interview and how to behave.”

Donations of new and gently used professional wear are accepted 8 a.m. to 5 p.m. Monday through Friday at the Smith Career Center. For large donations, call 540-231-6241. All donations are tax deductible.

Kelly Shannon is the marketing manager for Career and Professional Development.
Just the mention of germs makes most of us a little squeamish. We take personal hygiene and cleanliness seriously. It’s a fundamental part of our daily routines. But what about those annoying digital bugs that could lead to hacking malware and ID theft?

Virginia Tech cybersecurity expert Eric Jardine suggests that we should develop digital habits that protect our devices and our information, in the same way that handwashing helps prevent the flu.

Jardine, an assistant professor of political science at Virginia Tech and a fellow at the Centre for International Governance Innovation, said that “digital hygiene” consists of habits that can be incorporated into a regular routine to secure computers, smartphones, and other devices.

“Just as healthy people aren’t someone who never get sick, it’s someone who can get sick and bounce back,” Jardine said. “That’s the way you want to be thinking about security. It’s not, ‘Does the system ever get compromised?’ It’s, ‘When it does get compromised, is it catastrophic?’”

WHAT IS DIGITAL HYGIENE, AND HOW DOES IT AFFECT INFORMATION AND DEVICES?

1. CALIBRATE THE LEVEL OF SECURITY YOU NEED.
   “What you use for banking will be different from submitting an academic article to an online journal,” said Jardine. “The potential exposure, potential problems, are different.”

2. UPDATE SOFTWARE FREQUENTLY.
   Updates often contain security patches for newly discovered vulnerabilities. Run updates as soon as they become available, Jardine said.

3. IF YOU’RE NOT USING A PROGRAM OR APP, DON’T LEAVE IT JUST SITTING THERE.
   “A lot of people install a whole host of programs they use just once,” Jardine said. Those unused programs are a source of potential attacks; deleting them decreases vulnerability.

4. BE SMART ABOUT ANTI-VIRUS SOFTWARE.
   Antivirus software is useful and effective, but make sure that the product lines up with your hardware, operating system, and browser. Incompatibilities can create holes. Also, Jardine said, don’t assume that because you have antivirus protection you can be flippant in your online behavior.

5. TAKE CARE WITH PASSWORDS.
   Don’t use the same password across multiple accounts. A password manager can help, or even a system of handmade ten notes spread across multiple postits. Just don’t stash them all in one place, either online or physically.

6. DON’T CLICK ON EMAILED LINKS OR ATTACHMENTS UNLESS YOU CAN CONFIRM THE SOURCE.
   Err on the side of caution. If an email purports to be from a bank or other website where you have an account, sign in through your browser, not through an email link.

7. DON’T OPEN RANDOM FLASH DRIVES.
   Plugging in an unknown flash drive is as dangerous as clicking links in an unknown email.

8. BACK UP YOUR DATA FREQUENTLY.
   If you’re doing regular back-ups, ransomware is more of an inconvenience than a disaster. “You may lose a couple of days of work, but you won’t have lost everything,” Jardine said. “You can wipe the system and reinstall applications and files. How often you back everything up, and whether you use a cloud service or hard drive, is one of those choices that people make based on how much security, how much usability they want.”

WHAT IS A GIVING DAY?

Giving days are 24-HOUR online fundraising challenges that bring communities together to raise money and awareness of the impact of philanthropy. Our Giving Day theme is SPRING FORWARD.

HOW DOES IT WORK?

Hokies from all over make online gifts between noon on March 20 and noon on March 21, Blacksburg time. Participation challenges, matching opportunities, and other surprises will add to the excitement as the Virginia Tech community comes together in support of our university.

HOW DOES MY GIFT HELP?

Your gift of any amount directly helps the college or program you choose. The fact that you gave will inspire other Hokies to join you in making this first Giving Day a success. Your participation shows that you love Virginia Tech and have taken to heart our motto: Ut Prosim (That I May Serve).

HOW CAN I SPREAD THE WORD?

Please tell your friends about Giving Day so that they can participate, too. Share news of your plans, and your gift, on social media with the hashtag #VTGivingDay.

Visit VT.EDU/GIVINGDAY to give.

CALLING ALL HOKIES!

Spring forward twice in 2018.

On March 12, turn clocks ahead.

ON MARCH 20, GIVE BACK.
Virginia Tech’s bold plan to be a force for positive change throughout the world builds on the university’s time-honored tradition of service and its living motto, Ut Prosim, (That I May Serve). It’s a blueprint contingent on people—builders committed to bringing their unique expertise to the table, expanding their focus to all fields, and jointly answering the call to serve.

Virginia Tech is renowned for its roll-up-your-sleeves brand of hard work, resilient commitment, and can-do attitude. True to the blue-collar heritage of Southwest Virginia, these distinguishing characteristics set Hokies apart. For Virginia Tech football players, this distinctive brand of moxie is uniquely symbolized by the famed lunch pail, reminding all Hokies—from the research lab or the boardroom to the athletic field—to focus on the WIN (what’s important now.)

More than 13,000 employees, more than 34,000 enrolled students, and nearly 250,000 living alumni comprise the Hokie Nation. And that doesn’t include the numerous friends, former faculty and staff, or family members who are Hokies at heart. Regardless of their affiliation, most are eager to continue the Tech legacy of hard work and service, transforming the role of higher education and making a positive difference in the world.


At Virginia Tech, research has the power to turn a dedicated scientist into an extraordinary superhero.

Such was the case for John Jelesko, associate professor of plant pathology, physiology, and weed science, whose work studying poison ivy served as the inspiration for an evil weed-fighting character in the online comic, Partners 5. Although Jelesko never does a literal cape and can’t leap tall buildings, he does work to make the world a little safer and a lot less itchy.

In the only research facility in the world dedicated entirely to the study of poison ivy, Jelesko is getting to know the plant on an intensely personal level—investigating where it lives and what environmental factors allow it to thrive.

TeamIng up with fellow researchers whose expertise was vastly different from his own greatly accelerated his work combating the evil weed. “When you work with others who are trained in another discipline, together you can work in a way that is much larger than you alone,” Jelesko said.

Today, a smartphone app known as Investigating Toxicodendron Change and Habitat for Years (ITCHY), which was created from these collaborations, allows for crowdsourcing of hundreds of locations of poison ivy, replacing the need for duplicated field research. Analyzing this data is also expedited thanks to partnerships with university statisticians.

Such collaboration strengthens the project, but, according to Jelesko, it also benefits the researcher.

“It allows you to perhaps think of new ideas that you wouldn’t have if you just stayed stuck in your discipline,” he said. “For example, when I work with ecologists, I actually start thinking and learning about ecology more than I would from my traditional discipline. So, it greatly expands both my intellectual understanding and my curiosity.”

The opportunity to create such partnerships first lured Albert Pan to Virginia Tech last summer. A series of open doors convinced him that he made the right move.

“I was really impressed to hear about the many collaborations across departments and disciplines,” said Pan, who is now an associate professor and Commonwealth Center for Innovative Technology Eminent Research Scholar in the Development and Translational Neurobiology Center at the Virginia Tech Carilion Research Institute in Roanoke, Virginia.

Pan’s first encounters with Hokies made it evident this university was the type of friendly, open culture in which he would thrive. “Apparently, opening the door for others at Tech is a big thing,” Pan said.

It’s in this environment Pan intends to make a big splash by studying a tiny subject—zebrafish brains.

Smaller than most pinky fingers, the translucent zebrafish offers researchers a perfect view of the developing brain, producing insights that can be used to learn more about the development of psychiatric disorders in humans.

While these discoveries help us understand more about how things work and may enable us to develop solutions for problems, Pan believes the value of research extends far beyond results in a lab.

“Research is a great way to communicate with the local and global community and be a part of a worldwide network in science or technology,” Pan said. In fact, his zebrafish found a role as scientific ambassadors when the lab took part in a science, technology, engineering, art, and mathematics event for about 800 elementary school children.

Pan suggested that research is also the perfect training ground for our brains. “How do we adapt to a world where information and technology are advancing exponentially? Rigorous research experience helps us become active learners, problem-solvers, and more adept at adopting technology.”

That passion for recognizing the untapped potential of the research process is echoed by Ralph Buehler, associate professor of urban affairs and planning in the National Capital Region.

“In many ways, research is the main engine that powers the university, because knowledge gained through research contributes to teaching and educating graduates with cutting-edge abilities, motivation, and knowledge,” Buehler said.

For Buehler, research also literally fuels the ease with which people get around town. His work encompasses government transportation policy as well as the impact of transportation access on a person’s health.

“Movement for daily travel is key to public health. As one health researcher recently said at a conference, ‘Sitting is the new smoking’,” Buehler said.

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ALBERT PAN
ASSOCIATE PROFESSOR
Buehler routinely provides his students the opportunity to explore these topics via studio classes designed to solve real-world problems for actual clients. Four such classes have targeted bicycling—three working in tandem with the Washington, D.C.-based Capital Bikeshare.

Buehler suggests that to effectively answer the really big questions, it is essential to consider issues from varying perspectives.

“Transport is mostly just a means to an end—participating in an activity that cannot be reached online or is not at the place where the individual is. However, transport demand is also shaped by other trends in society and at the same time, is closely linked to quality of life, traffic safety, local and global pollution, residential segregation, et cetera,” Buehler said. “Thus, it is crucial to look beyond the narrow disciplinary silo of transport planning.”

**SHORING CONNECTIONS**

Finding a connection between tree-killing beetles from Asia and the 1979 film “Alien” earned one Virginia Tech graduate student $500 during the university’s first Nutshell Games.

During the event, participants were charged with condensing descriptions of their research into captivating 90-second talks. Held to celebrate the opening of the Center for Communicating Science, the Nutshell Games illustrated the power of moving beyond a translation of jargon toward more effective communication.

For Patty Raun, who stepped away from her role leading the School of Performing Arts to serve as the center’s founding director, scientific communication is a stage where researchers can overcome the barriers that limit understanding and stymie potential.

“I have taken my fire for the transformational power of theater into new and unexpected places,” Raun said. “I am teaching people of all backgrounds and all interests a capacity for learning through experience—applying theory to real-life circumstances—and building skills of empathy, connection, and communication.”

The center offers events and workshops aimed at building those skills within areas of academia where they have not traditionally been emphasized or cultivated. “We want to help specialists discover the excitement and adventure of transcending disciplinary boundaries and the satisfaction of climbing over those walls,” Raun said.

With so much of Virginia Tech’s research focused on solving the world’s most pressing issues, communication is especially important. A solution is good only if it can be understood.

But, what happens when scientific advances collide with societal mores? What does it mean to be human in the age of smart houses, smart cars, and intelligent machines?

Sylvester Johnson, who will direct Virginia Tech’s developing Center for the Humanities, said such discussions, as well as current debates addressing social equity and disparity on a global scale, are at the heart of much of the new center’s work.

“Right now, technology is far outpacing guidelines and policy. This is an urgent opportunity for the humanities to take leadership,” Johnson said. “I envision a new humanities center at Virginia Tech that draws on the university’s unique strengths in technology by organizing an artificial intelligence ethics group that can lead the state and this region in creating inclusive, shared governance of the technology that will soon produce technologically enhanced humans and more powerful intelligent machine applications.”

Johnson believes that a university-wide collaborative effort will yield the best and most expedited results and plans to create an advisory group made up of faculty from within every college and department at Virginia Tech.

“I want the humanities center to foster a culture of humanities leadership through transdisciplinary boldness,” Johnson said. “We can build the teams we need to create a better world for experiencing our humanity without being limited or constrained by the field in which we earned a degree or by our departmental affiliation.”

A well-rounded approach to problem-solving requires a table big enough to include a population of thinkers as diverse as our world. But an invitation to sit is not enough; those invited must also feel ownership.

Yolanda Avent knows what it takes for a student to feel genuinely connected to the university. A 1998 graduate, Avent felt alienated as a black woman during her freshman year and considered transferring—until she discovered the Black Cultural Center.

“It was a big part of my ability to survive and thrive here,” Avent said. In October, Avent was named the senior director of the Culture and Community Centers.
In recent years, under the guidance of Student Affairs, the number of centers has expanded to six, including the Black Cultural Center, Asian Cultural Engagement Center, American Indian and Indigenous Community Center, El Centro (a Hispanic and Latino center), the LGBTQ+ Resource Center, and the Intercultural Engagement Center.

Each center consists of a room or several rooms equipped with televisions, sofas, chairs, tables, and bookshelves. But they are more than locations to study or hang out, they are hubs that reflect cultural affirmation, educational connections and community building.

“We are preparing students to become more socially conscious and to critically think about how education and technology can assist in alleviating some of the social ills that currently exist for marginalized populations,” Avent said. “Oftentimes, that starts with helping students simply see themselves as community members who belong here and not as imposters.”

While the centers represent recent advancements at Virginia Tech, the spirit of community behind them is not new. Nowhere is the link between the past, present, and future more evident than in the university’s Corps of Cadets.

“Today’s corps is far more than just a quant reminder of the past, but actually lives and personifies the goals of Beyond Boundaries, the spirit of service that is embodied in the university’s motto, Ut Prosim (That I May Serve), and the mission of a land-grant institution,” said corps commandant Maj. Gen. Randal D. Fullhart.

The spirit of service that leads cadets to give up some of the creature comforts their fellow students enjoy, such as sleeping late or living off campus, affords them a uniquely intense and diversified learning experience.

Annually, some cadets travel all over the world, including to places like Central America where they work with indigenous people, assist with economic and social inequality, and political instability, for example. “We are preparing students to become more socially conscious and to critically think about how education and technology can assist in alleviating some of the social ills that currently exist for marginalized populations,” Avent said. “Oftentimes, that starts with helping students simply see themselves as community members who belong here and not as imposters.”

“Instead of going through different subjects, you’ll perform different roles on the project,” he said. “He believes this structure would allow students to understand the types of workplace relationships necessary to cultivate achievements. Blythe is also developing a new practice-based stream in the Ph.D. program that is unlike others in the nation. It will be rooted in the Washington-Alexandria Architecture Center.”

Richard Blythe traveled to Blacksbury from the Land Down Under with the aim of turning student learning at Virginia Tech upside down. Since the award-winning architect and educator took over as dean of the College of Architecture and Urban Studies in October 2017, he’s been working to advance the college by infusing student learning with big projects that solve real-world problems.

“We want to use the college as a change agent for societal, economic, and environmental good,” he said. “That starts with project-based partnerships to tackle the most pressing issues of our time: climate change, overpopulation, economic and social inequality, and political instability, for example.”

Freshmen would sign up for a project, rather than adhering to a traditional discipline or curriculum, and stick with it through graduation. Along the way, they would rotate through roles and responsibilities, work alongside leading international industry partners and experts, and cultivate the experience needed to move directly into the workforce.

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Shifts away from the norm is the norm for Julia M. Ross, who joined the university in July 2017. The first female dean of the College of Engineering, Ross feels that challenging some of the restrictive traditions in higher education is key to growing the best 21st-century problem-solvers.

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Ross was drawn to Virginia Tech by initiatives, such as the Clarke Scholars, that are aimed at increasing student diversity, and she believes that a diverse faculty is key to recruiting underrepresented students. She is also committed to ensuring that once those students arrive, the learning experience is one that empowers them to grow toward success rather than simply survive the program.

“I believe in excellence and high quality and rigor, but I do not believe in reaching excellence through exclusivity,” Ross said. “When you have that kind of attitude, sometimes you weed out and exclude people who are very capable.”
Some students find their passions during a classroom lecture or in a lab in Blacksburg. But that discovery could even happen under a giant kapok tree in the Ecuadorian rainforest.

“It was there, as a Quechuan guide spoke of how deforestation has changed the way his family survives in the jungle, that [one of my students] fully appreciated why she flew south of the equator this summer to study food security,” said Ozzie Abaye, recalling one student’s “aha” moment.

Such empowering experiences drive Abaye, a professor of crop and soil environmental sciences, to organize international programs for students. “I strongly believe that students must be exposed to an environment that is different from their own,” Abaye said. “Faculty must provide occasions that open opportunities for students to cast their nets wide.”

In places like Ecuador, Senegal, and South Africa, students encounter the problems associated with food insecurity firsthand, becoming acutely aware of the magnitude of the challenge. In areas where roadside stands serve as magnets for harmful bacteria and most homes lack refrigeration, the problem extends far beyond food production, and solutions must involve addressing social norms, infrastructure, and access to education.

“Most importantly, it helps students see that the issues involving food security, social and cultural issues, as well as economic relationships are not isolated by national boundaries or in particular disciplines,” Abaye said. “That realization is central to the fruition of Virginia Tech’s efforts to pave the way for a multicultural sensitivity, and the understanding of interdependent systems that operate in today’s world.” Abaye said.

**PAVING THE WAY**

Ella Rak thought she was headed straight for the Virginia-Maryland College of Veterinary Medicine, but a call to service led her down a different path.

“It wasn’t until I talked to some of my professors that I realized how important it is to learn outside of the classroom,” Rak said.

After earning bachelor’s degrees in dairy science and animal and poultry science in 2017, Rak joined the Agriculture Peace Corps. Today, she is an international volunteer, helping farmers in the villages of Grand North in Cameroon, Africa. Rak evaluates farming practices, hosts agricultural trainings and vaccination campaigns, and teaches in local schools.

“To me, Ut Prosim is an ideology,” Rak said. “I don’t necessarily need to be in another country or speaking a new language because to me, Ut Prosim is just being blessed with the opportunity to do meaningful work.”

For more than a century, alumni like Rak have moved into careers and professions that bolster the university’s tradition of service. Equipped with a strong educational background, a commitment to hard work, and a can-do, lunch-pail attitude, their work positively impacts communities, the country, and the world. They are Virginia Tech’s ambassadors, reaching out and bringing back to provide the inspiration and insight that advances the direction of the university and inspires its future students.

For Darryl Settles ’84, a Boston-area restaurateur, property developer, and civic leader, Tech offered the experiences that helped shape him into not only a successful entrepreneur, but a leader dedicated to improving the quality of life in his community.

“I have always been involved with organizations that do quality work to improve the lives of others,” Settles said. “I take to heart that we should make positive differences in the world while we are here.” That spirit drove his decision to transfer to Virginia Tech as a sophomore, and it would later influence his move from engineering to entrepreneurship.

Professionally, Settles, who majored in industrial and systems engineering, operates a real estate development firm and investment company, Catalyst Ventures Development, as well as two restaurants, Darryl’s Corner Bar and Kitchen and Slade’s Bar and Grill. The restaurants are known as places where good food, good music, and good friends come together. When Settles first landed in Bean Town, he missed such hangouts, so he chose to fill the niche himself.

But it’s his work in the Boston community that he lists atop his accomplishments. During the past three years, Settles’ efforts have focused on issues of inequality within minority communities. He co-founded the Black Economic Council of Massachusetts, which is helping to influence public policy at both the city and state levels to encourage an equal playing field for minority-owned businesses.

Joyal Mulheron of Dumfries, Virginia, found her role working with another marginalized population—parents coping with the deaths of children—in an unexpected place.

For the 1999 English and biochemistry graduate, visiting Virginia Tech always seemed like a good idea, but a game in Lane Stadium shortly after her daughter’s death in 2010 had particularly profound impact.

“I suppose you never know what someone else is going through, but feeling Hokie pride that night gave us a glimmer of hope that we could feel happiness again,” Mulheron said. Although Mulheron didn’t realize it right away, that moment would take her life in a new direction.
A few years later, in 2015, she left her job as chief strategy officer for the Partnership for a Healthier America, the private offshoot of former First Lady Michelle Obama’s “Let’s Move” campaign, to launch the nonprofit Evermore. The organization helps people grappling with the death of a child and advocates for policies, like paid leave, that recognize the grief in such situations.

As a student, Mulheron had learned about answering the call to serve, investing hundreds of hours with the Special Olympics and the Chi Delta Alpha sorority in Blacksburg, earning the university’s Volunteer of the Year award just prior to graduation. Today, she finds her call to fill the unmet needs of others amplified even more.

“From families whose children have been murdered, or who have died by accident, or suicide, or cancer, or war, I have had the opportunity to serve them in hopes of changing our nation’s policies for bereaved families of all walks of life,” Mulheron said.

Years after being a student and years before launching her nonprofit, she realizes the day in Lane Stadium was a small moment, but one that served as a microcosm for the university’s role in her entire life.

“I would not be where I am today without the experiences and life changes that began at Virginia Tech,” Mulheron said. “Once a Hokie, always a Hokie. There’s nothing more to say.”

CONTINUING TO BUILD THE FUTURE: ONE STORY AFTER ANOTHER

During the spring of 2016, Michael Webb (pictured top right), then a senior studying forestry, discovered several infestations of the invasive emerald ash borer on campus. Although 35 campus trees were beyond assistance, the remaining 30 trees were treated and closely monitored to ensure their long-term survival.

Just over a year ago, Joe Scalea ’02 (pictured middle right), a liver, kidney, and pancreas transplant surgeon, was tasked with expanding the University of Maryland Medical Center’s pancreas transplant program in Baltimore as its new director. Under his leadership, patient evaluations for potential pancreas transplants have grown seven-fold, and the pancreas transplant rate is up 116 percent.

Scalea traced his accomplishments with the hospital’s transplant program back to his Virginia Tech education, “All of this progress is a direct result of the skills I gained while a business information technology major at the Pamplin College of Business,” said Scalea.

Saving human lives isn’t always in a veterinarian’s job description, but Lauren Dodd, of Sugar Land, Texas, resident of clinical nutrition in the Department of Large Animal Clinical Sciences and master’s candidate in the Biomedical and Veterinary Sciences and Public Health Program, has been doing just that through her work with Mission Rabies in Blantyre, Malawi. Dodd participated in the second block of a month-long rabies vaccination drive (pictured bottom right). Combined, the two blocks successfully vaccinated 34,078 dogs, educated 137,635 children in 53 schools about rabies prevention, and facilitated lessons on rabies for 3,086 teachers. Rabies is responsible for killing an estimated 61,000 people annually, with 99 percent of all human cases caused by dog bites.
WHEN MAJA LEHNUS ARRIVED AT VIRGINIA TECH IN 1979, she was one of a small number of women pursuing an engineering degree—she remembers six in a class of about 300. Lehnus has blazed a path ever since.

As an undergraduate, she participated in a cooperative program that placed her in a scientific and weapons research job within the CIA the summer after her first year at Tech. She alternated between attending classes in Blacksburg and working with the CIA in Washington, D.C. Lehnus obtained her security clearance during her first co-op tour with the CIA, which led to a full-time position with the agency immediately following graduation.

At the CIA Lehnus has made a practice of breaking so-called glass ceilings—not once, not twice, but six different times. Now, in her newest job as associate director for talent, she’s assisting a new generation in climbing the ranks.

"Maja is committed to building expertise," said Jane Fletcher ’82, who worked with Lehnus in three different divisions within the agency. "She [Lehnus] worked with weapons of mass destruction for several years, and as she got new jobs less familiar to her, she took it upon herself to go to conferences, to learn about other groups inside government as well as outside."

Lehnus attributes her success to supportive mentors who helped her navigate what was a heavily male environment.

"Every boss that I had took an interest in my development," Lehnus said. "They gave me great opportunities. As one of the only female analysts, I was highly visible. When I performed well, everyone noticed."
“The key has been that my husband is so there for me,” Maja Lehnus said. “When I moved to my first really executive level position and the demands of the hours became significantly more, he said, ‘Something’s got to give. How about I back off my hours?’”

Maja Lehnus has been able to balance her career and family life through setting and holding boundaries. “You want to be 100 percent for work and 100 percent for home, but there’s only one of you,” she said. “Sometimes I’ve had to say, ‘No, I can’t do that. Tomorrow I’m going on a field trip with my child.’ You have to do some soul searching, figure out where the red lines are, and share those with managers.”

Lehnus still lives by the Ut Prosim (That I May Serve) ethic at the heart of the Virginia Tech experience. “I have devoted my career to serving the nation,” Lehnus said. “My desire to serve was very much influenced by the fact I grew up overseas as the daughter of a foreign service officer. When you live in countries that don’t have the liberties and protections that we have, it really makes you appreciate America. By the time I arrived at Virginia Tech, I was already a fervent patriot and had the desire to serve. The Virginia Tech environment facilitated that.”

Although male coworkers often made jokes or comments to fluster and antagonize her, Lehnus focused on the exciting, positive aspects of her job, and she excelled.

As her career advanced, Lehnus encountered even more challenges. “I was selected for my first management position in 1991. I recall overhearing a male colleague saying that I had only been selected because the division needed some gender diversity in the leadership team. The comment certainly hurt my feelings, but I focused on mastering the new career of managing and leading people and doing my job well.”

Lehnus and her husband, David Lehnus ’84, whom she met at Virginia Tech, also found time to raise a family. This year marked their 31st anniversary, and they have a son and daughter.

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As her career advanced, Lehnus encountered even more challenges. “I was selected for my first management position in 1991. I recall overhearing a male colleague saying that I had only been selected because the division needed some gender diversity in the leadership team. The comment certainly hurt my feelings, but I focused on mastering the new career of managing and leading people and doing my job well.”

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ALL ABOARD

In January, a Virginia Tech Magazine writer and photographer made tracks to the Big Apple. Like many Hokies, they were surprised to find how easy it is to travel up and down the Eastern Seaboard. Taking the train from Roanoke, they reached New York City’s Penn Station in just nine hours.

The service, which arrives daily at Virginia Tech’s front door, Squire’s Student Center, via bus service to and from the Roanoke, Virginia station, began in October 2017.

Riders can book both train and bus travel to and from Blacksburg directly on the Amtrak website.

Concurrent with Roanoke’s Amtrak service, a group in Virginia’s New River Valley has been working hard to extend passenger rail service to the region. New River Valley Rail 2020 is a partnership of business, municipal, and legislative leaders as well as Virginia Tech. A group of students from the university volunteered to help the initiative by developing a promotional video.

NRV 2020 has aligned legislative support, and the commonwealth of Virginia has allocated $350,000 for an operational study. A station site in Christiansburg has already been selected.

A market demand study conducted by NRV 2020 shows strong rider usage from a station in this region. However, Amtrak and the state’s decision to support a new service will be based, in part, on actual usage. After three months service from Roanoke, Amtrak said ridership is meeting expectations.

NEW YORK CITY IS LOCATED JUST UNDER 500 MILES FROM BLACKSBURG. THE differences between the tree-lined, campus community and Manhattan’s towering skyscrapers are obvious, but Virginia Tech and the city share a common connection: Hokies.

Growing numbers of Virginia Tech graduates live and work in the city, and current students are frequent visitors, pursuing opportunities for metropolitan studies and urban internships.

During their recent visit to the city, the Virginia Tech Magazine team visited Tech graduates at work, gathered for a Hokie happy hour, and spent a little time taking in the sights, sounds, and smells of the city.

Their mission: to discover how Manhattan Hokies transfer their Virginia Tech spirit to the city that never sleeps.

To break the ice, Virginia Tech Magazine posed the following question to each Hokie: “How’d you get from where you were to where you are?” Their answers were as varied as the Hokies themselves. Read them all online at virginiatechmagazine.com and check us out on Instagram (#HokieTracksNYC) to view even more photos from the trip.

We’d also like to hear from you. Send us a note or an email with your answer and a recent image. You may just find yourself in print or online.

#HOKIETRACKSNYC

Manhattan Hokies: (left to right) Nick Cullen ’91, Steve White ’97, Amanda Gurtis Davis ’09, Jeremy Davis ’09, Lauren Rummerman ’06, Patrick Farrell ’07, Tara Petrucci ’13, and Sean Herlihy ’06. (At left) Union Station in Washington, D.C. (Top right) A view of Philadelphia from the train.
named as designer of the American Residential Design Awards by the American Institute of Building Design, also received multiple awards in the residential, multifamily, and conceptual design categories.

**CAREER**

Thomas A. Sachs, Alexandria, Va., retired after more than 40 years in public service as associate director of business services with the U.S. Department of Transportation, Office of the Secretary.

78

**CAREER**

Thomas Keith Ferguson, Richmond, Va., is director of business services for the United Network for Organ Sharing.

79

**CAREER**

Joseph A. Blount Jr., Houston, Texas, was named president and CEO of Colonial Pipeline Co.

82

**CAREER**

John E. Geauda, Germantown, Md., is an aviation project manager at Bunge, Waggoner, Summerton, and Cannon Inc.

83

**CAREER**

Melissa H. Weaver, Alexandria, Va., retired after more than 40 years as Kentwood’s mayor and elected to another 4-year term as Kentwood’s mayor.

88

**CAREER**

Michael D. Enke, Greensboro, N.C., was appointed to the Dean’s Council on Advancement for the Virginia Tech Carilion School of Medicine.

89

**CAREER**

Randall M. Boll, Hokies’ All-American and co-captain of the Hokies’ 1984 Rose Bowl team.

95

**CAREER**

Kevin B. Carnes, Blacksburg, Virginia, received the Burl Osborne Award for Editorial Leadership from the American Society of News Editors and a Sigma Delta Chi Award for Editorial Writing from the Society of Professional Journalists.

99

**CAREER**

Josh A. Voran, San Diego, Calif., and his wife, established an architecture firm.

00

**WEDDING**

Kevin B. Carnes, Blacksburg, Virginia, received the Burl Osborne Award for Editorial Leadership from the American Society of News Editors and a Sigma Delta Chi Award for Editorial Writing from the Society of Professional Journalists.
TRAVEL TOURS

MAKE A MEMORABLE TRIP BETTER, TRAVEL WITH FELLOW HOKIES.

FOR MORE THAN 41 YEARS, THE VIRGINIA TECH ALUMNI ASSOCIATION HAS OFFERED TRAVEL OPPORTUNITIES FOR ALUMNI, THEIR FAMILIES, AND FRIENDS. EACH YEAR THE ASSOCIATION HANDPICKS MORE THAN 20 TOURS TO INSPIRE TRAVELING HOKIES.

June 8-20
Easy Company:
England to the Eagle’s Nest

July 6-14
Town and Country Life

July 16-24
Breathtaking Bordeaux

July 17-30
Affluence of Culture

Aug. 11-19
Village Life:
Around the Italian Lakes

Aug. 14-23
Majestic Great Lakes

Aug. 16-27
Majestic Frontiers of Alaska

Sept. 3-17
Wines of the Pacific Northwest

Sept. 13-23
Autumn Inspiration:
Canada and New England

Oct. 1-8
Alpine Countries Oktoberfest

Oct. 15-26
Pathways of the Peninsula

Oct. 26-Nov. 5
Cuban Tropical Rhythms

May 30–June 8, 2019
D-Day 75th Anniversary:
An Iconic Journey of Remembrance – The National WWII Museum

Honor the 75th anniversary of D-Day, which was June 6, 1944, with this 10-day trip designed by renowned historians and authors. This trip will retrace the Allies’ triumphant return to, and liberation of, Europe, and includes luxury accommodations on the six-star Regent Seven Seas Navigator.

From $9,999 per person, double occupancy (airfare not included)

Pictured: Port-of-call Bruges, Belgium.

ALUMNI.VT.EDU/TRAVEL

For more information about this trip and other Alumni Association travel tours, go to alumni.vt.edu/travel.
AT VIRGINIA TECH, STUDENTS LEARN that individuals can come together to form a whole that is stronger than its parts. Beyond the classroom, many Hokies put that knowledge to work in their professional lives and through participation in team sports that continue well past graduation.

Four Virginia Tech alumni have seen that team-oriented mindset play out at the highest levels of one of America’s most hard-hitting amateur sports: roller derby. Since roller derby arrived in western Virginia in 2007, Virginia Tech students and alumni have skated with the New River Valley (NRV) Rollergirls of Blacksburg; the Star City Roller Girls of Roanoke, Virginia; or more recently with the combined team known as the Valleys All-Stars.

Some Tech alumni have gone on to compete in the Women’s Flat Track Derby Association’s (WFTDA) “Big Five” tournaments, which decide the association’s champion each year. One has found her place among the pioneering women who now play men’s derby. All have overcome obstacles and continuously adapt to a sport that is still evolving, while pursuing careers in fields that range from architecture, mechanical engineering and insurance, to auto manufacturing safety.

"You’re in it with other people... that makes it very collaborative and fun." — Kacey Huntington M.Arch ’10

MAKING STRIDES
HOW HOKIES ARE CHANGING THE FACE OF MODERN ROLLER DERBY

Stephanie Beeman M.S. ’11, Ph.D. ’15, who skates under the name Bettie Lockdown, joined the NRV Rollergirls in 2010, during her first year as a Virginia Tech graduate student.

“I showed up at practice and then got hooked,” Beeman said. “Skating came somewhat naturally. I liked the team aspect, working with other people and having that network.”

Roller derby functions as a do-it-yourself amateur sport, organized by skaters, for skaters. Beeman took an active role in the workings of the league. As she pursued her degrees, she also learned about how to run an organization and put on sporting events.

In 2017, Beeman moved to Ann Arbor, Michigan, to become a regulatory engineer at the Hyundai Kia America Technical Center Inc., a job that entails overseeing company compliance with state and federal regulations. She also transferred to the Ann Arbor Derby Dimes, which was ranked No. 30 in the world.

“This team is a really good fit for me because they have this overall, team-first approach,” Beeman said. “It’s not about one person; it’s about the collective. We all are able to provide feedback to what we want as a team, and then we can achieve those goals.”

BY MASON ADAMS

YOU’RE IN IT WITH OTHER PEOPLE... THAT MAKES IT VERY COLLABORATIVE AND FUN.”

Kacey Huntington M.Arch ’10

ON TRACK: Kacey Huntington M.Arch ’10 skated with Baltimore’s Charm City Roller Girls under the name I.M. Pain.

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This year she skated in a Division 2 playoff tournament. Elmore tried out and quickly rose through the ranks, competing last year in the Houston team’s ranks, analyzing how successful skaters used their vision.

As she learned about herself and where they focused their shoulders and where they turned their bodies, including how they turned and the number of skaters. Leveling up forced her to reinvent her game.

In 2010 to pursue her professional goals—first with architectural engineer- ing firm Nika Architects and Engineers in Rockville, and later with architecture, landscape architecture, planning, and interior design firm Hord Coplan Macht in Baltimore, she tried out with the Charm City Roller Girls, a perennially competitive team. She quickly became a primary jammer. Since joining the team, Huntington has competed in six playoffs and three championship tournaments. "Architecture is especially known for long hours in the studio and a lot of hard work, but it’s really fun," Huntington said. "You’re in it with other people in that same situation. You’re working on individual projects, but everyone is so willing to help or work through a problem together. That makes it very collaborative and fun. And that also explains how it is with derby, too.”

Tori Elmore, ‘09

HIGH SCORER: Tori Elmore ‘09 skates with Houston Roller Derby as Arrak-Kiss.

...IT WAS DEFINITELY A COMMUNITY OPEN TO PEOPLE, MAKING SWEEPING LIFE CHANGES AND LETTING PEOPLE EXPLORE THEMSELVES ...

Tori Elmore ‘09, who skates as Arrak-Kiss—a reference to Frank Herbert’s epic sc-fi series “Dune”—is another former member of the NRV Rollergirls who achieved new success with a transfer to a new league. Last year, she moved to Houston to work as a mechanical equipment reliability engineer for a pharmaceutical manufacturer Syngenta.

To jump full time into rollder derby, Elmore moved to Clayton, North Carolina, near Raleigh, where she joined up with the Carolina Roller Girls. In August of 2015, she started playing with a men’s league, Collision Men’s Derby.

"I wanted a fun way of exercising to keep off weight and have something for myself—maybe get a little aggression out," Stern said. "I showed up for practice and fell in love with it. It’s real important for mothers in general, but especially for young mothers staying at home, to have something just for them that’s not fit for the men’s game.”

The stylistic shift challenged her in a way that enthralled her and forced her to evolve her game.

Men’s derby tends to be faster and more physical," Stern said. "I enjoy the teamwork, the camaraderie and the movement. Men’s derby is blazing a trail that’s entirely hers.

Jen “Slingin’ Gritz” Stern ’97, meanwhile, has skated in more WFTDA tournaments, sweeping life changes and letting people explore themselves and not just stick to convention,” Elmore said.

The Virginia Tech alumna who probably has skated in more WFTDA tournaments than any other is Kacey Huntington. M.Arch. ’10, who skates as I.M. Pain, a name that pays tribute to famed architect I.M. Pei. She applied to Virginia Tech as her “reach” school and was excited to get in. A competitive speed skater since age 5, both as an amateur and professional, she was recruited by the NRV Rollergirls in 2009.

When Huntington moved to Maryland in 2016 season. She remains involved on Charm City committees.

For Stern, the decision to attend Virginia Tech was a simple one. Her grandfather, E. George Stern, pioneered wood sciences at the university during his four-decade tenure as a professor. In 1997, the Stern Fastener and Pallet Research Laboratory at the Thomas M. Brooks Forest Products Center on campus was named for him.

While at the university, Jen Stern was a member of the Marching Virginians. After graduating, she married and started a family. In 2008, she found the NRV Rollergirls.

"I wanted a fun way of exercising to keep off weight and have something for myself—maybe get a little aggression out," Stern said. "I showed up for practice and fell in love with it. It’s real important for mothers in general, but especially for young mothers staying at home, to have something just for them that’s not centered around being a mom, being a wife. Roller derby kept me sane during those years.”

Stern found a supportive network within the derby community, too. “I liked the team aspect, working with other people and having that network.”

JAMMING Read more about how Hokies are changing the face of modern roller derby at virginia.edu

JESSICA MCANDREW

with Houston Roller Derby as Arrak-Kiss.

"As I started learning more about myself and who I really am, it was definitely a community open to people making sweeping life changes and letting people explore themselves and not just stick to convention,” Elmore said.

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With the exception of a February 2017 state team tournament, Huntington retired from competitive play after the
ACROSS THE POND

MORE THAN 3,000 MILES FROM Blacksburg Virginia Tech’s mission is clear. “Our community is one that spans the globe,” said Matt Winston, the university’s chief alumni officer, addressing a group of international alumni in London last year. “We are Hokies, and wherever we go, our commitment to service, to each other, and to the global community unites us.”

Winston, Virginia Tech President Tim Sands, and other university representatives traveled across the Atlantic Ocean for Hokies in London, a gathering of European alumni, university partners, and students that was more than a year in the making. Bolstering the university’s international presence is a critical task, and Hokie alumni play a key role, according to Vice President for Outreach and International Affairs Guru Ghosh. “If we are to be a top-100 global university, we need to develop a multifaceted engagement strategy with our alumni overseas,” Ghosh said.

Sunil Vaswani ‘02, who earned a degree in accounting and information systems, Dan Kendall ‘94, a graduate of the College of Engineering, and Taylor Rogers M.Arch. ’09 have been instrumental in connecting Hokies abroad. When Vaswani first moved to England in 2007, he struggled to find fellow alumni and sensed a lack of school spirit among those with whom he did connect. He said he felt called to work towards a change.

For Kendall, who lives outside of London, it was a mission fueled by a visit to Blacksburg eight years ago. “It had changed so much. I even got lost on campus. I couldn’t quite figure where I was going,” he said. “There was just something about that visit back that really drove the message of service home again. Now, with the addition of the medical school and the VTCRC, Virginia Tech has an even bigger opportunity to make a global impact.”

A contribution from Paco Garcia helped provide the financial support to organize the event and unite international Hokies. Garcia, a resident of London, had a brief stint at Tech, but one that was no less impactful. In 2006, Garcia came to Blacksburg from Spain as a part of one-year International Student Exchange Program. He said he wants to help raise Virginia Tech’s international presence.

“I feel that I’m in the position I am at the moment, in part, because of the one year I spent at Virginia Tech,” he said. “I’d like [the event] to grow,” he said, “and become a strong community that drives some of the important technical and business areas internationally.”

Submit a nomination or vote for the Alumni Association Board of Directors by May 1! Visit alumni.vt.edu/nomination to learn more.

By Mason Adams
Today, Virginia Tech’s Cave Club membership requires completion of a rigorous training program. Many members work with the Blacksburg Volunteer Rescue Squad’s Cave Rescue Group, and the club is involved in efforts to fight white-nose syndrome, a fungal disease that has devastated bat populations. Alumni of all ages maintain contact with current student members, forming mentorships through an extended network linked by exploration, education, adventure, and camaraderie.

FIVE VIRGINIA TECH STUDENTS formed a club around their shared love of exploring the world underground in September 1942. Four months later, in January 1943, the Cave Club celebrated its 75th anniversary. Founded on a leader-oriented system, it focused heavily on safety, becoming one of the leading cave rescue groups on the East Coast.

Today, Virginia Tech’s Cave Club membership requires completion of a rigorous training program. Many members work with the Blacksburg Volunteer Rescue Squad’s Cave Rescue Group, and the club is involved in efforts to fight white-nose syndrome, a fungal disease that has devastated bat populations. Alumni of all ages maintain contact with current student members, forming mentorships through an extended network linked by exploration, education, adventure, and camaraderie.

GOING UNDERGROUND: A VPI Cave Club member rappels down a wall at the Cueva Huliente Cave in Giles County in the 1950s. (Right, from top:) The 1947 VPI Cave Club, the 1948 VPI Cave Club, and a member at the entrance to the Catawba Murder Hole near New Castle in May 1949.

TO Shine a Light in Darkness

DANIEL L. COOPER

Sarah Wilkerson Sabin, Roanoke, Va., a son, 5/28/17.
CHILDREN
Katie M. Breden-Kamp and Benjamin Matthew Bredenkamp, Mount Pleasant, S.C., a son, 7/17.
CHILDREN
Mary E. Johnson and Anthony D. Johnson, Goose Creek, S.C., a daughter, 7/17.
CHILDREN
Lorraine A. Trilles, Honolulu, Hawaii, a daughter, 9/16/17.
CHILDREN
Juliette P. Wilson, Washington, D.C., was admitted to the Virginia State Bar by the Virginia Supreme Court.
CHILDREN
Katherine Mason Fink, Ellicott City, Md., a daughter, 5/18/17.
CHILDREN
Jordyn A. Dailey, Newburg, Md., was appointed vice president of the North Carolina Association of Women Attorneys.
CHILDREN
Khalid A. Ibrahim, Alexandria, Va., son, 7/9/17.
CHILDREN
Robin K. Swanson, Harrisonburg, Va., a son, 10/30/17.
CHILDREN
CHILDREN
Brandon L. Frye, Falls Church, Va., a daughter, 1/17/17.
CHILDREN
Ashley N. Duncan, Etters, Pa., is project engineer at Barton & Loguidice.
CHILDREN
Jill E. Fink, Omaha, Ne., a daughter, 3/17/17.
CHILDREN
Bryan B. Fink, Savannah, Ga., a daughter, 10/22/17.
CHILDREN
CHILDREN
Aarkeif R. Robinson and Renan Elizabeth Robinson, 15, Christiansburg, Va., a son, 9/15/17.
CHILDREN
Kareem S. Ibrahim, Alexandria, Va., son, 2/10/17.
CHILDREN
Heather D. Reaske, Virginia Beach, Va., a son, 10/11/17.
CHILDREN
Marion P. Fink, Ellicott City, Md., a daughter, 5/18/17.
CHILDREN
Kathleen D. Fink and Joseph Alexi Tornes 16, Baton Rouge, La., 6/5/17.
CHILDREN
Darren W. Smith, Henrico, Va., was promoted to vice president of public affairs for the Virginia Realtors Association.
CHILDREN
Katherine P. Patri, Greensboro, N.C., was appointed vice president of the North Carolina Association of Women Attorneys.
CHILDREN
Philip A. Johnson, Greenville, S.C., a daughter, 4/7/17.
CHILDREN
Tessa M. Strickland, Virginia Beach, Va., a daughter, 4/7/17.
CHILDREN
Kelly D. Gentry, Falls Church, Va., a son, 7/17/17.
CHILDREN
Brendan L. Fry, Myrtle Beach, S.C., a daughter, 9/17/17.
CHILDREN
Kristen Westover, Fairfax, Va., a daughter, 5/15/17.
CHILDREN
Fairfax, Va., a daughter, 5/15/17.
CHILDREN
Fairfax, Va., a son, 8/5/17.
CHILDREN
Lisa M. Hall, Virginia Beach, Va., a daughter, 10/11/17.
CHILDREN
CHILDREN
Jonathan W. Fink and Rachelle Claire Fink, Roanoke, Va., a son, 9/11/17.
CHILDREN
Joel D. Fink, Falls Church, Va., a son, 5/20/17.
CHILDREN
CHILDREN
Lindsey H. Childress and Daniel Clay Childress ’06, Richmond, Va., a daughter, 7/10/17.
CHILDREN
Matthew L. Cooper, Raleigh, N.C., a son, 7/17.
CHILDREN
CHILDREN
Alison R. Matthies-Levine and Peter Craig Matthias, Roanoke, Va., a son, 7/17.
CHILDREN
David B. Heisler, Dallas, Texas, was promoted to vice president of public affairs for the Virginia Realtors Association.
CHILDREN
Richard P. Kennard and Cynthia Lee Abbott ’06, Farmers Branch, Texas, 11/7/17.
CHILDREN
Joshua M. Pink and Katherine Mason Pink, Ellicott City, Md., a daughter, 5/7/17.
CHILDREN
Amy C. Hall, Atlanta, Ga., a daughter, 10/22/17.
CHILDREN
Cory S. Sutier, Falls Church, Va., a son, 7/17/17.
CHILDREN
Anthony B. Ready, Henrico, Va., was promoted to vice president/policy of operations for the Virginia Realtors Association.
CHILDREN
Damen W. Smith, Washington, D.C., expanded his company and developed a mobile app for gamified city exploration.
CHILDREN
Matthew A. Benz, San Diego, Calif., a son, 9/21/17.
CHILDREN
Lindsey H. Childress and Daniel Clay Childress ’06, Richmond, Va., a daughter, 7/10/17.
CHILDREN
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CHILDREN
结算

Mario Calixte ’10, M.A.Ed. ’12 heads to his day job in the bustle of motorbikes, pedestrians, and burros jockeying for space in the morning traffic in Port-au-Prince.

The sun won't be fully out for several more hours when Marie Calista ’10, M.A.Ed. ’12 heads to his day job in the bustle of motorbikes, pedestrians, and burros jockeying for space in the morning traffic in Port-au-Prince.

Calista, works at the Ecole Superieure d’Infotronique d’Haiti (School of Infotonics of Haiti), where he advises students and develops curriculums.

In his "off hours," Calista travels throughout the country setting up computer labs and teaching elementary and high school instructors basic computer and Linux operating system skills.

"It’s encouraging, and I know I am making a difference in the students’ ability to succeed intellectually, academically, and professionally," said Calista.

GOING UNDERGROUND: A VPI Cave Club member rappels down a wall at the Cueva Huliente Cave in Giles County in the 1950s. (Right, from top:) The 1947 VPI Cave Club, the 1948 VPI Cave Club, and a member at the entrance to the Catawba Murder Hole near New Castle in May 1949.

ALL IN A DAY'S WORK

In Haiti, the workday starts early, at 4 a.m.

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BY MASON ADAMS

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which often stretched over weekends and involved 20 or more members. Although the club invested in equipment, members often explored in street clothes with relatively limited safety gear when compared to modern caving. During the early years, due to the extreme nature of the sport, the club recorded several accidents, including a fatality in 1958, when a rappelling rope broke. As the club matured, members focused heavily on safety, becoming one of the leading cave rescue groups on the East Coast.

Today, Virginia Tech’s Cave Club membership requires completion of a rigorous training program. Many members work with the Blacksburg Volunteer Rescue Squad’s Cave Rescue Group, and the club is involved in efforts to fight white-nose syndrome, a fungal disease that has devastated bat populations. Alumni of all ages maintain contact with current student members, forming mentorships through an extended network linked by exploration, education, adventure, and camaraderie.
JORDAN ARBUCKLE MIGHT BE RACING across the Drillfield to class, but one glance at her backpack, and she’s transported back to the summer she spent in Barcelona, Spain.

“By carrying my bag, I feel like I’ve connected Spain’s lifestyle of relaxation to Virginia Tech,” said the junior studying human nutrition, exercise, and fitness. “When I typically feel stressed out due to exams, with my backpack, I am reminded of a simpler life, and it almost calms me.”

That feeling was what Tech alumni Jack and Alley DuFour of Blacksburg, Virginia, had in mind five years ago.

“In February 2015, the altruistic business model earned the husband and wife team a spot on the reality television show, “Shark Tank.” The national exposure created such a surge in demand that the DuFours turned to fellow travelers, like Arbuckle, to expand their access to fabric. For their efforts, each supplier earns a free tote created from the fabric and a commission for the additional totes sold.

Michael Hamsch ’16 took advantage of the opportunity during a study-abroad trip to Rwanda.

“You throw your bag over your shoulder, and you can remember all of the experiences and people you met,” Hamsch said.

The DuFours agree that being Hokies provides the foundation for their success.

“The Virginia Tech community was our incubator, giving us everything we needed to start Taaluma,” said Jack DuFour.

And the idea really snowballed from there,” Alley DuFour said.

The couple returned to Blacksburg with an inspiration, but without the skillset or expertise to make a bag or launch a business.

From the legal paperwork to the actual crafting of their first marketable tote, an extensive network of mentors and around the university helped bridge the gaps.

“I think without the Virginia Tech community we would have just left it as an idea, but instead there were people there who helped us turn it into a reality,” said Alley DuFour.

Through careful planning, the DuFours ensured a quality, marketable, cost-effective product for consumers. They also fulfilled a personal commitment to give back.

Twenty percent of the profits from the sale of the totes are returned to the country of origin as a microloan for a small business or farm. The no-interest loans are managed through the San Francisco-based Kiva Lending Team.

The no-interest loans are managed through the San Francisco-based nonprofit Kiva Lending Team. When the funding is paid back in full within a year, the DuFours reinvest it, buying additional fabric from the country.

“We’re trying to connect the world in a subtle, but significant way. Giving people a nudge to wander off the beaten path in search of fabric often leads them to their most authentic experiences. These authentic and genuine interactions with local people connect us in a way that typical tourist attractions don’t,” Jack DuFour said.
1 “Now that’s Hokie! We flew the minister from Virginia to perform the ceremony; he’s a Hokie. Yes, there is a Hokie tattoo under that dress. The bride took the groom to Virginia Tech for our first Christmas together.” —Laura Stanley Trilles ’06 who married Charlie Trilles, Honolulu, Hawai‘i, 8/19/17.

2 “What could be better than two Hokies who met at school, fell in love, and then got married on campus, too? Hokies for life!” —Janice Leigh Ryerse Overton ’15 who married Matthew C. Arnold ’12, Blacksburg, Va., 10/22/16.

3 “Raising her right with some Hokie Spirit! My wife, Susan, and I can’t wait to bring her to Blacksburg!” —Robert M. Brooke ’88, Fairfax, Va., who welcomed a daughter, Addison Grace, 5/6/17.

4 “Nothing beats marrying your best friend in the best place; right where our story began!” —Ashley Nelson Dustin ’15 who married James Dustin, Los Angeles, Calif., 7/26/17.

5 “Danielle, our little Hokie cheerleader, is already an avid Hokie fan.” —Brian Wilkerson ’96, who welcomed a daughter, Danielle Elise, 9/27/16.

6 “We met in physics lab. Chemistry quickly turned into biology, which blessed us with Charlotte—our newest Hokie.” —Morgan Hankin ’10, who along with Ashley Hankin ’10, Baltimore, Md., welcomed a daughter, Charlotte, 9/1/17.

7 “Our love story started in Blacksburg, traveled across four states, and landed us in our new home of New Braunfels, Texas, where our family, friends, and fellow Hokies joined us to celebrate our marriage.” —Taylor Hurms Jimerson ’12, who married Max Jimerson ’11, New Braunfels, Texas, 9/3/17.

8 “Brooke has already enjoyed a full season of cheering on the Virginia Tech football team.” —Chris DeMay ’02, who along with Bonnie Williams DeMay ’00, Chantilly, Va., welcomed a daughter, Brooke Florence, 7/26/17.

9 “Clark Shuman loves supporting the Hokies and his daddy, who is associate director for VT football strength and conditioning.” —Meredith Hawkins Shuman ’10, who along with Ryan Shuman ’08, Roanoke, Va., welcomed a son, John Clark, 11/6/17.

10 “George was born early, but he made it home on Feb. 5, 2017—just in time to watch the Super Bowl! Both mom and dad graduated from Virginia Tech, so he’s destined to be a Hokie fan, too. In fact, he’s already a member of the Hokie Kids’ Club.” —Sara Lovejoy Pennington ’01, who along with Neil S. Pennington ’95, MBA ’99, Richmond, Va., welcomed a son, George Alexander Pennington, 1/14/17.
SINCE 2014, OUR UNIVERSITY community has been asking: What is next? The Beyond Boundaries visioning process challenged us to think about what it looks like to be a leading institution confronting the most challenging problems of the commonwealth, the nation, and the world.

Our vision for the future is clear. Planning and implementation are under way. In four years, we will commemorate the 150th anniversary of the founding of Virginia Tech.

Our goals position us to be a stronger university as we march toward our sesquicentennial in 2022. It is an extraordinary time to be a Hokie.

As alumni, you have an important role to play in supporting Virginia Tech and helping achieve our bold and ambitious objectives. Spend time on campus. Learn about where we are headed—and why. Become inspired.

There are two opportunities to do just that coming up soon.

In April, we will hold our biennial Black Alumni Reunion. This year’s theme is Raising the BAR: Celebrating Black Excellence at Virginia Tech. This reunion is a chance for alumni to honor past milestones, celebrate current successes, and engage with Virginia Tech as we move forward. More than 500 alumni returned to campus for our last Black Alumni Reunion, and we hope to see even more Hokies on campus this year. Join us April 13-15.

In June, we will launch our first-ever summer reunion weekend. Reunion 2018 welcomes Hokies back for four days of unique on-campus experiences, with new ways to connect with fellow alumni. Attendees will enjoy dinners on the Drillfield, behind-the-scenes campus tours, seminars with top faculty, and more. Please return to campus June 7-10. And when you do, we encourage you to give back, too.

Spend time with students to share your expertise. Volunteer on a board or committee. Make a gift.

There is power when the Hokie Nation gathers—and gives back—together. We can’t wait to see you!

Matthew M. Winston Jr. ’90, senior associate vice president for alumni relations
IN MEMORIAM

'43
Everett F. Eldred Jr., North Chesterfield, Va., 8/2/17.
Hermon R. Ogden Jr., Richmond, Va., 7/14/17.
Marta P. Waybright, Blacksburg, Va., 8/7/17.

'48
James M. Cole, Abingdon, Va., 9/15/17.
Robert E. Wicks, Simpsonville, S.C., 9/7/17.

'49
Melvin E. Manice, Norfolk, Va., 8/9/17.
Roy L. Scales, Kingswood, Texas, 7/18/17.

'50
Wayne G. Brancome, Wilmington, N.C., 8/27/17.
William A. Headley Jr., Orlando, Fla., 7/22/07.
Tony W. Hogue, Pittston, Pa., 2/11/17.
Howard E. Jones, Virginia Beach, Va., 8/22/17.
Leon S. Talmage, Garrett Valley, Pa., 8/21/17.

Franklin R. Taylor, Millersville, Md., 8/12/17.
Allan R. Teppert, Kemeneau, Ga., 7/26/17.

'51
Walker Lambert Jr., Richmond, Va., 8/18/17.
Richard L. Martin, Collerville, Tenn., 6/22/17.
Mildred Price McCuffee, Roanoke, Va., 7/1/17.

'52

'53
William B. Atkinson Jr., Roanoke, Va., 7/16/17.
Everett A. Huffman, Lanham, Md., 8/27/17.
Albert E. Smith, Severna Park, Md., 7/26/17.

'54
Marlyn E. Ambler, Hampton, Va., 8/13/17.
James Rosati Jr., Langa, Fla., 8/15/17.

Hayden J. Silver Jr., Williamsburg, Va., 8/28/17.
Stephen E. Whitney, Ashburn, Va., 8/18/17.

Richard N. McGuire, Christians- burg, Va., 9/14/17.
C. Harry Stanley, Damascus, Va., 6/16/17.

'60
James B. Brown Jr., Fredericksburg, Va., 8/30/17.
Robert L. Lovely, Greensboro, N.C., 7/26/17.
William J. Story III, Warrenton, Va., 7/14/17.

'61
Humphre J. Ross, Potomac, Md., 9/19/17.
Patricia Traum Field, Annapolis, Md., 8/31/17.
Lamar "Chip" H. Houston Jr., Chesapeake, Va., 7/22/17.

'62
James H. Bradley Sr., Danville, Va., 8/10/17.
Lyle G. Hall Jr., Newport News, Va., 7/14/17.

'63

'64
Samuel R. Carter III, Salem, Va., 8/18/17.
Thomas E. Falgout Sr., Lafayette, La., 8/21/17.
Maren W. Parker Jr., Newport News, Va., 9/1/17.

'65
George S. Gilks, Atlanta, Ga., 9/21/17.
Irwin J. Wright, Alexandria, Va., 5/31/17.

'66
Claude E. Messenmore Jr., Saint Peters, Cumbria, 9/18/17.
Audrey P. Ward Jr., Columbus, Md., 7/15/17.

'67
Dean R. Hanson, League City, Texas, 7/23/17.
David E. Sawyer, Chesapeake, Va., 8/28/17.
Howard M. Sisson Jr., Wirtz, Va., 9/12/17.

'68
John E. Apostolidis, Richmond, Va., 7/16/17.

'69

'70
Steve Pyko, Fort Washington, Md., 7/14/17.
Gary D. Spaldie, Home, Pa., 9/21/17.

'71
William L. Herring Sr., Kearney, Pa., 3/15/17.
Harriet H. Miller, Sterling, Va., 9/24/17.
Lonnie White, Whitewood, Va., 8/31/17.

'72
Charles E. Fraker Jr., Richmond, Va., 5/24/17.
Joseph H. Gillmer, Lebanon, Va., 7/24/17.
Phil P. Laster, Radnor, Ohio, 8/14/17.

'74
Wayne L. Atkins, Myrtle Beach, S.C., 7/20/17.
William A. Herron, Cape Coral, Fla., 8/14/17.
John Cairns Jr., a University Distinguished Professor Emeritus of Environmental Biology, died Nov. 5, 2017. Cairns joined the faculty of Virginia Tech in 1968, teaching more than 20 courses before his retirement in 1995. His research focused primarily on ecotoxicology, ecological restoration, protozoan community dynamics, and the sustainable use of the planet. In 1991, Cairns was named to the National Academy of Sciences and received the Virginia Lifetime Achievement in Science Award.

Col. Wesley L. Fox, a Medal of Honor recipient, U.S. Marine, and former deputy commander for the Virginia Tech Corps of Cadets, died Nov. 24, 2017. On Feb. 22, 1969, while serving as the commanding officer of Company A, 1st Battalion, 9th Marines, 3rd Marine Division in A Shau Valley, Vietnam, Fox’s unit was attacked. Despite injury, Fox led his men as they advanced through heavy fire. They eventually forced the North Vietnamese troops to retreat. Wounded again in a final assault, Fox continued to refuse medical attention and instead ensured that other wounded Marines were tended to and evacuated. Fox was presented the Medal of Honor by former President Richard Nixon. Fox also earned a Purple Heart and a Bronze Star, among other recognitions.

Barry Robert, university veterinarian and director of the Office of Animal Resources, died Nov. 12, 2017. As a veterinarian and professor for 30 years, he worked at universities and medical and research centers throughout the country. In 2014, he arrived at Virginia Tech, where he oversaw the management and clinical care of animals used in teaching and research in Blacksburg and in Roanoke at the Virginia Tech Carilion Research Institute.

James E. Turner Jr. ’56 of Suffolk, Virginia, a distinguished and devoted alumnus who served on the university’s Board of Visitors from 1994 to 2002 and was rector from 1997 to 2002, died Dec. 27, 2017. A native of Virginia’s Isle of Wight County, Turner earned his bachelor’s in agricultural engineering.

A native of Virginia’s Isle of Wight County, Turner earned his bachelor’s in agricultural engineering. While a student at Virginia Tech, Turner spent two years in the Corps of Cadets, played football, and was a member of the Tau Beta Pi and Phi Kappa Phi honor fraternities. After graduation, he went on to work for Newport News Shipbuilding, and over the next 43 years, he held positions of increasing responsibility at that company, Westinghouse, and General Dynamics, from which he retired as president and chief operating officer in 2000. Along with his wife, Elizabeth, Turner was a charter member of the President’s Circle within the Ut Prosim Society of Virginia Tech’s most generous donors.

In recognition of his accomplishments, service, and contributions, the university in 1994 presented Turner with the University Distinguished Achievement Award. He received the Alumni Distinguished Service Award in 2003, and the university’s highest award, the William H. Ruffner Medal, in 2004.
In November 2017, the Council of International Student Organizations presented “Dance of Nations.” The event, held in the Graduate Life Center auditorium, showcased performances from countries and cultures around the globe. The dances were performed by students and community members associated with international groups at Virginia Tech. Odiney Alvarez-Campos (pictured) performed a traditional Greek Romani (Gypsy) dance. Alvarez-Campos, a native of Costa Rica, is a doctoral student in crop and soil environmental sciences. Photo by Christina Franusich.
CONSTRUCTION WAS JUST UNDER way on campus when I came to Roanoke to interview for the position of founding executive director of the Virginia Tech Carilion Research Institute (VTCRI).

At the time, I was chair of the Department of Neuroscience and director of neuroscience initiatives at the Baylor College of Medicine, an academic health science center at the Texas Medical Center in Houston, the largest medical complex in the U.S.

I parked near the construction and walked around. Melting snow was turning into puddles on the ground. Not many people were in sight. One really had to exercise the imagination to get any sense of what it might be like moving forward.

However, my confidence in the plans to create an innovative medical school and research institute grew as I met then-university President Charles W. Steger ’70, M.Arch. ’71, Ph.D. ’78 and then-Carilion Clinic President and CEO Ed Murphy. It wasn’t long before I understood that this could really be something spectacular.