The perfect combination of professional experiences has prepared Timothy D. Sands to be the next president of Virginia Tech.
Training Ground: The education of Virginia Tech’s next president
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On the cover: Timothy D. Sands, soon to be the 16th president of Virginia Tech, stopped by the Holtzman Alumni Center Library during his orientation visit in January. Photo by Jim Stroup.

At right: Limestone isn’t the only material being extracted from the working limestone mine (pictured here) underneath Giles County, Va. In a laboratory 1,400 feet down, researchers are studying subatomic particles away from the background radiation that saturates the earth’s surface. Learn more in the How Tech Ticks section on page 16. Photo by Jim Stroup.
A letter to the editor

Halting crop destruction in India

Virginia Tech researchers who first discovered a devastating pest in India and devised a natural way to combat it have now assigned an economic value to their countermeasure up to $1.34 billion over five years. These figures represent the amount of damage that the papaya mealybug would have wreaked on farmers and consumers in India without scientists’ intervention.

The papaya mealybug had ripped through crops, including papayas, eggplant, and tomatoes, in southern India—causing molded and stunted growth—before Rangaswamy “Muni” Murukkani of Virginia Tech identified the pest and spearheaded the natural control program. The intervention, which cost a relatively modest $200,000 in its first year, prevented a total of between $524 million and $1.34 billion in crop damage over five years, reported Murukkani and other scientists in the February issue of the Journal of Crop Protection.

Editor’s note:

Exactly two years ago, we rolled out a redesigned magazine with a markedly different look on the cover and inside pages. Since that time, we’ve conducted readership surveys in which you’ve told us that the publication accurately represents the university’s brand. We’ve also made subtle adjustments throughout the magazine as we familiarized ourselves with the new template. However, in order to keep the design fresh, we decided to revisit the covers—and we’re already seeing how its configuration will give us more flexibility as we tell the Hokie Nation’s stories. As always, thank you for reading Virginia Tech Magazine!
High-speed Internet for rural areas

Wireless@Virginia Tech is testing new technologies that will make it possible for high-speed Internet to reach more Virginia homes and businesses through a project called the "Spectrum Management Research Testbed—Self-Sustaining Broadband Network.

Traditional broadband access by wireless Internet service providers relies on increasing the number of end users to recover infrastructure costs and realize a profit. Because rural areas have a lower population density, however, there is little incentive for service providers to build there. As a result, the absence of broadband limits business and education growth for the region.

Over the past several years, the government has made additional radio frequency spectrum available for sharing among government, commercial, and public wireless systems. One of the benefits will be the availability of new spectrum for providers to improve access in rural areas.

Sponsored by the Dominion Foundation, a philanthropic unit of the energy company based in Richmond, Va., it is the Commonwealth’s highest honor for university faculty, acknowledging commitment to excellence in teaching, research, knowledge integration, and public service.

Feng, who also holds professorships with the Virginia Tech Bradley Department of Electrical and Computer Engineering and the Virginia Tech Faculty of Health Sciences, is internationally recognized for his research in energy-efficient parallel computing.

Research overturns assumption about mercury in the Arctic

For years, scientists have assumed that if mercury is high and increasing in fish in the North American and European Arctic, the same is true of fish elsewhere in the Arctic. But a team of scientists from the U.S., Russia, and Canada has discovered that assumption is wrong in much of the continental Arctic.

In addition to differences in mercury processes as a result of diverse atmospheric, geologic, and biological conditions, “it turns out that the economic decline of the former Soviet Union, which collapsed in 1991, appears to have been good for the Arctic environment in that part of the world,” said Leandro Castello, assistant professor of fish and wildlife conservation in the College of Natural Resources and Environment and the first author of a paper about the finding.

Castello’s paper was published by Environmental Science & Technology, a journal of the American Chemical Society.

Seattle Seahawks strong safety Kam Chancellor ’10 was one of three Hokies experienced the game on the field instead of in front of a TV.

W ith 111.5 million viewers, Super Bowl XLVIII became the most-watched telecast in U.S. television history—but three Hokies experienced the game on the field instead of in front of a TV.

Kam Chancellor (human development ’10), the strong safety for a brutal Seattle Seahawks secondary known as the “Legion of Boom,” continued to capitalize on a playing style developed at Virginia Tech. “I think a lot of my game became more elite in college,” he said. “I think that’s pretty much how I got my craft.”

On media day before the game, Chancellor, among the tallest, heaviest safeties in the league, said, “At the hard hits show how much I love this game and how you’re supposed to play the game. It’s just a matter of proper tackling. Then you can get your feet set and explode through anybody.”

Exploite he did, racking up 10 tackles, two defended passes, and a key interception. In fact, Chancellor played such a crucial role in Seattle’s domination of Denver’s vaunted offense that many proclaimed the safety should have been named the game’s most valuable player.

Joining Chancellor on the Seahawks sidelines was Nick Sorensen (business and marketing management ’13), a Hokie quarterback and defensive back who played several seasons in the NFL before going on to become Seattle’s assistant special teams coach. Sorensen praised Chancellor’s performance and the work ethic he built at Virginia Tech. “He’s still a hardworking, Hokie-type guy,” Sorensen said of Chancellor. “He brings his lunch pail to work every day, just like he did at Virginia Tech.”

The big game was Sorensen’s third shot at a championship. He played on the 1999 Virginia Tech team that lost the national title to Florida State in the 2000 Sugar Bowl. Then, in his rookie season in the NFL, he was a member of the St. Louis Rams team that lost to the New England Patriots in Super Bowl XXXVI.

“The joke in my family was the third time is a charm,” said Sorensen, who points to Virginia Tech Coach Frank Beamer’s emphasis on special teams as a driving force in his pro career. “I owe Coach Beamer a lot of credit because I understood the importance of special teams,” said Sorensen, who saw action on several NFL teams. “That’s how I made it every year.”

On the other sideline, Winston Painter ( apparel, housing, and resource management ’13) wore the Denver Broncos’ orange and blue. Although he didn’t play in the game, the rookie tackle is proud to be on the Bronco’s roster.

“It was a fun ride. I’d never been to the national championship in college, so this was that big game,” Painter said. “I’d never been to the NFL and getting drafted was satisfaction enough, but going to the Super Bowl just topped off an amazing year. A lot of things you dream about as a kid happened to me this past year.”

Feng honored with outstanding faculty award

Wi Feng, professor and Elizabeth and James Turner Fellow in the Department of Computer Science in the College of Engineering, was named a 2014 Outstanding Faculty Award winner by the State Council of Higher Education for Virginia. The award, sponsored by the Dominion Foundation, a philanthropic unit of the energy company based in Richmond, Va., is the Commonwealth’s highest honor for university faculty, acknowledging commitment to excellence in teaching, research, knowledge integration, and public service.

Feng, who also holds professorships with the Virginia Tech Bradley Department of Electrical and Computer Engineering and the Virginia Tech Faculty of Health Sciences, is internationally recognized for his research in energy-efficient parallel computing.

New men’s basketball coach announced

Marquette University’s Buzz Williams is the Hokies’ new men’s basketball coach.

“I am extremely excited about welcoming Buzz Williams to the Hokie Nation,” said Virginia Tech Athletic Director Whit Babcock. “Buzz is a proven winner who has earned his way up through the ranks with a strong track record of success. I am confident he will energize our fan base and help make Virginia Tech basketball competitive in the Atlantic Coast Conference. I know he will recruit at the highest level.”

“IT’s never easy to leave a great school like Marquette, where I spent seven wonderful years, six as the head coach,” Williams said. “But this is a special situation to work at a place like Virginia Tech. I’ve heard tremendous things about this terrific institution and this is an outstanding opportunity to build a program. My family and I look forward to becoming a part of this great university community, and taking on the challenges associated in succeeding in the ACC.”

Williams comes to the Hokies following six seasons as the head coach of the Marquette Golden Eagles. At Marquette, Williams had a record of 139-69 and led the team to five NCAA appearances, including a trip to the regional finals in the 2012-13 season, the same season the team won the Big East Conference regular-season title.

His coaching career has included stints as an assistant, associate head, and head coach. He has been at the NCAA D-I level for 19 seasons, and the 2013-14 season was his seventh campaign as a head coach. Williams succeeds James Johnson, who was relieved of his duties on March 17.
Sugar power
Imagine refilling a dead battery with sugar to rejuvenate it, setting off a reaction akin to our metabolism. In as soon as three years, according to Y.H. Percival Zhang (above right), associate professor of biological systems engineering in the College of Engineering, conventional lithium-ion batteries could be replaced by bio-batteries that run on sugar—and are cheaper, refillable, and biodegradable.

“Sugar is a perfect energy storage compound in nature,” Zhang said. “So it’s only logical that we try to harness the natural power in an environmentally friendly way to produce a battery.” While other sugar batteries have been developed, Zhang’s has an energy density an order of magnitude higher, allowing it to run longer before needing to be refueled.

The findings, which Zhiguang Zhu (M.S. biological systems engineering ’09, Ph.D. ’13) (above left) published in the journal Nature Communications, could help keep hundreds of thousands of tons of toxic batteries from ending up in landfills. And our world of battery-powered devices could be refueled in an order of magnitude higher, allowing it to run longer before needing to be refueled.

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Human genome sequencing benchmark set

Led by biomedical engineer Justin Zook of the National Institute of Standards and Technology, a team of bioinformaticians from Harvard University and the Virginia Bioinformatics Institute at Virginia Tech has presented new methods to integrate data from different sequencing platforms, thus producing a highly reliable set of genotypes that will serve as a benchmark for human genome sequencing.

“Understanding the human genome is an immensely complex task, and we need great methods to guide this research,” Zook said. “By establishing reference materials and gold-standard data sets, scientists are one step closer to bringing genome sequencing into clinical practice.”

The methods put forth by the researchers make it increasingly possible to use an individual’s genetic profile to guide medical decisions to prevent, diagnose, and treat disease—a priority of the National Institutes of Health. The team’s research was published in the Feb. 16 issue of Nature Biotechnology.

Preparing for their senior design project, mechanical engineering students Garret Burks and Ashley Taylor (top left) traveled to Malawi in summer 2013 to learn more about the country, its people, and its hospital resources. The team is designing and building an infant respirator that can be used without electricity. Photos courtesy of Ashley Taylor.

Student team aims to help newborns breathe

Virginia Tech mechanical engineering students Garret Burks, of Harrisonburg, Va.; Jamie Cabaleiro, of Cary, N.C.; Megan Cash, of Felton, Del.; Lisa Gonzalez, of Fairfax, Va.; and Ashley Taylor, of Fort Chiswell, Va., wanted to work together on a senior design project that could have an immediate impact.

The team’s mentors, Al Wicks, associate professor in the Department of Mechanical Engineering, and Dr. Andre A. Muelenaer Jr. (biological sciences ’75, M.S. zoology ’79), associate professor of pediatrics at the Virginia Tech Carilion School of Medicine and adjunct professor at Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences, pointed the students toward the need for an infant resuscitator that could function without electricity, which can be unreliable in underdeveloped countries.

And the Global AIR (Assistance of Infant Resuscitation) team was born.

In order to see such need firsthand and to assess local resources that could be used to develop a sustainable neonatal resuscitator, two of the team’s members traveled to Malawi. Drawing from information gathered during the month-long stay, the students selected to use parts available in Malawian hardware stores so that the resuscitator “can be fixed there and sustained,” Burks said. They also aim to keep the total cost under $100.

Global AIR carries on the legacy of livesaving work initiated by former Virginia Tech professor Leon Arp, who mentored Muelenaer and whose infant respirator was profiled in the fall 2012 edition of Virginia Tech Magazine.
Allegiance: The university’s upward trajectory is best illustrated by the Hokie Nation’s steady growth—and its loyalty. In our fall 2012 magazine readership survey, 39 percent reported recommending the university to a family member or potential student, besting the national average. And in a nationwide study by Alumni Factor, Virginia Tech was ranked No. 1 among alumni who said they would personally choose the university again.

On pages 48-49, you’ll find a list of the fall 2014 homecomings and reunions.

To find an alumni chapter in your area, visit www.alumni.vt.edu/chapters. And on page 53, take a look at some chapter activities around the nation.
To the untrained eye, a herd of spotted black-and-white Holstein dairy cows may seem like perfect copies of each other, save for the varied Rorschach-like patterns that dot their hides.

But Mackenzie Moore, a senior sociology major from Cobleskill, N.Y., and her three dairy-judging teammates know better. When Moore judges cows, she quickly scans the four immense animals before her, notebook at the ready. First, she looks for large udders that ride high and full and tuck neatly underneath a cow’s haunches. Then it’s on to the feet and legs. She’s looking for a square angle from the rump to the feet. The spacing of the ribs is also key. Award-winning dairy cows display a visible rib cage and very little fat, indicators that most of their energy is going into the task of producing milk.

Moore has just 15 minutes to consider these factors and to take copious notes in order to verbally defend her choice hours later in front of an individual judge. “You have to think critically and evaluate the cows in a short amount of time,” said Moore, who plans to graduate in May and hopes to return to her home state of New York as an Extension specialist.

These detail-intensive tasks are second-nature by the time the Virginia Tech dairy judging team takes center ring to competitively judge cattle on the national stage. Moore and her teammates, including Elizabeth Davis, a sophomore pre-med and dairy science major from Union Bridge, Md.; Mandi Ramsburg, a senior dairy science major from Walkersville, Md.; and Lyndsey Royek, a senior agricultural and applied economics major from Corry, Pa., swept the awards at the World Dairy Expo in Madison, Wis., last year. It was the fourth national contest victory in eight years for a Virginia Tech team, with past wins coming in 2006, 2008, and 2009.

Judging, however, is more than a bovine beauty pageant. The training to judge a dairy cow takes uncommon commitment. Every weekend from August to October, mandatory practices are conducted at dairy producer sites across eight states, where students learn how to evaluate cows quickly, weigh judging criteria, defend their decisions, and handle criticism. The learning process is so rigorous and focused that cell phones are banned when the team trains.

“These students learn not just to evaluate the cows, but also to make decisions and accept and respond to criticism,” said Katharine Knowlton, a professor of dairy science in the College of Agriculture and Life Sciences who co-coaches the team with professor emeritus of dairy science Mike Barnes. The process is rigorous, to say the least. “An alumnus once told me that practicing judging was like chewing glass,” Knowlton said.

Davis said the critical-thinking skills she gained from judging will help her in medical school. “These skills will also give me confidence to defend my decisions as a medical professional,” she said.

Over the years, the team has welcomed members who were not dairy science majors and had no previous dairy experience. In addition, dairy judging has helped recruit students to Virginia Tech. Three-quarters of dairy science students come from out of state, a testament to the department’s excellence.

“Dairy judging teaches important professional skills,” said Knowlton. “The cows are just the bait to attract students to learn these skills.”

Amy Loeffler is a science writer and marketing communications specialist with the College of Agriculture and Life Sciences.

Virginia Tech’s national titles in dairy judging

2006 2007 2008 2009 2010 2011 2012 2013

Going the distance, judging for speed

Virginia Tech’s dairy-judging team has claimed four out of the last eight national titles.
High-Tech Harvest

How the Center for Geospatial Information Technology is helping eastern U.S. wineries find their niche

by ANGELA CORREA

The wine industry in the eastern U.S. is poised to become a world-class producer of notable wines, but the climb hasn’t been an easy one. The climate of the mid-Atlantic states is almost always too wet, too unpredictable, and too frost-prone for many of the more delicate grape cultivars (a grape variety resulting from selective breeding). On the East Coast, success depends on the experience and audacity of growers who must balance a host of viticultural and climatological factors with tight harvest and bottling schedules, as well as the variable expectations of consumers.

Unlike wine regions in France and California, which have been in production for centuries, the eastern U.S. offers interactions among geography, geology, climate, and vine genetics that growers still are teasing out. “The knowledge of these interactions, known as terroir, is extremely important to the success of a vineyard,” said a project collaborator, a spatial analyst. “To grow good grapes and make good wine, one must know as much as possible about the environment the grapes are rooted in. Kelly uses ECVS to evaluate grapes brought in under contract from other vineyards. He can effectively evaluate growing conditions even at vineyards he has never visited, helping to identify crops with the potential to balance the character of grapes harvested at Rappahannock Cellars. More importantly, he can rule out grapes grown in unfavorable conditions. “I have seen growers who have planted the very worst varieties for their soil types.... A few mistakes like that can turn someone’s dream of owning a vineyard into a nightmare,” Kelly said. “The tool is helping these growers to understand their land better and make fewer of these costly mistakes. Every successful vineyard in the mid-Atlantic helps the whole industry.”

Brent Sams (M.S. geography ’12) is a research viticulturist with E. & J. Gallo Winery in Modesto, Calif. “Unlike in California, where the biggest concern is negotiating water rights, growers in the East face a completely different set of challenges,” he said. Regarding the ECVS tool, he added, “Growers have never really had access to a tool that brings it all together. The tool multiplies and magnifies the services traditionally delivered by Extension agents and private vineyard consultants and puts the best information available into a user-friendly app for growers all over the mid-Atlantic.”

As use of ECVS increases across the region, patterns in varietal selections will emerge into a user-friendly app for growers all over the mid-Atlantic. The ECVS currently integrates 15 layers of spatial data, including the five shown above, and covers the eastern U.S. from Georgia to Maine, going as far west as Memphis, Tenn. “Aspect” is the direction a slope faces.
Thirty minutes up U.S. 460 from the Virginia Tech campus and another 20 minutes down a rocky underground road, researchers around the country conduct physics experiments to boost national security and help explain the nature of the universe.

Operated by the Virginia Tech Department of Physics, Kimballton Underground Research Facility (KURF) sits in a cavern near the bottom of a working limestone mine in Giles County. Most experiments there focus on particle physics involving neutrinos and other subatomic particles. The roughly 1,750 feet of rock between the lab and the mountain’s surface help filter cosmic rays that bombard the Earth’s surface and obscure subatomic interactions. KURF’s relatively low levels of background radiation provide a clearer picture of subatomic particle interaction.

The experiments at KURF include a pair of attempts to detect the presence of dark matter—the subject of much debate and disagreement in the physics world—by observing how particles behave when colliding in liquid argon and crystal germanium. Another project seeks to analyze background radiation to develop sensors that can detect from an offshore location whether rogue states are manufacturing nuclear weapons.

A Virginia Tech team uses KURF as a test site for its Low Energy Neutrino Spectroscopy (LENS) project (described at right), which will measure the sun’s low-energy neutrino spectrum. The project—currently in a demonstration test phase—may ultimately help answer questions about the sun’s energy production.
Stephen Edwards
Computing Creativity
by STEVEN MACKAY
photo by AMANDA LOMAN

Stephen Edwards, associate professor of computer science with the College of Engineering, loves to create. Some paint with a brush or write poetry with a pen. Edwards builds with a computer. Not buildings or animated films, but educational tools for students. Edwards’ most prominent project is called the Web-based Center for Automated Testing, or Web-CAT, a flexible, tileable, Web-based automated grading system that has been adopted by 75 institutions nationwide and is the most widely used open-source grading tool of its kind in the world. For his efforts, Edwards was named an Outstanding Faculty Award winner by the State Council of Higher Education for Virginia.

How is computing a tool for creativity? Computing is about creating new solutions or new ways of doing things that transform how we work and live. Many of us love expressing our creative side in different ways, but computing is one area where what you can create is limited only by your imagination and how you envision what you are creating, rather than by the physical skills of your hands or your senses. This aspect of computing can speak to the “builder” or “maker” in all of us. … The thrill of creating something new, using just the power of your mind, and seeing it work for the first time—that is the cool part of computing that grabbed me from the very start.

Talk about the success of Web-CAT.
When I talk to people outside of computing about Web-CAT, I describe it in terms of students self-checking their own work. That’s something all educators believe in; but prior to Web-CAT, there was no readily available way for computing educators to reinforce this practice or give students feedback on how well they were checking their own work. Few computing educators talked about how to introduce more systematic self-checking into their courses. Since the introduction of Web-CAT, these ideas have moved from the fringe into the mainstream. Most major educational conferences in computing regularly include papers or presentations where people share their experiences using this approach or even share their research results on how requiring people share their experiences using this approach regularly include papers or presentations where we work and live. Many of us love expressing our creative side in different ways, but computing is one area where what you can create is limited only by your imagination and how you envision what you are creating, rather than by the physical skills of your hands or your senses. This aspect of computing can speak to the “builder” or “maker” in all of us. … The thrill of creating something new, using just the power of your mind, and seeing it work for the first time—that is the cool part of computing that grabbed me from the very start.

What inspires you?
I get a lot of my inspiration from the creativity and enthusiasm of other people. One of the great things about working at a university is the number of students and colleagues you run into who are passionate about their own projects or ideas. The volume of new ideas or innovative solutions is amazing. There’s never a shortage of inspiration for great new directions to explore.

What’s your dream job?
It would be really fun to spend some time working as a Lego Master Model Builder. I played with them constantly as a child. My son and daughter have played repeatedly with a classic set I still have from my childhood. More recently, once my children were in elementary school, I started coaching for the First Lego League, a program to engage students with science and technology by having them build and program robots made from Legos. I coached elementary and middle school teams in Blacksburg for six years. Stevens Mackay is the College of Engineering’s communications manager.

What drew you to this field?
I completed medical school in China with intentions of becoming a surgeon. I briefly practiced medicine part-time, then enrolled in a microbiology graduate program where I worked in a virus research institute. I became totally fascinated by viruses, the smallest and simplest form of life on earth. Why should we care about emerging and zoonotic virus diseases?
Many animal virus diseases are zoonotic, which means they not only infect animals, but can transfer from animals to people as well. In fact, the majority of human emerging virus diseases can be traced back to an animal origin. For example, the deadly SARS virus came from the horseshoe bats, and the current pandemic H1N1 influenza virus is of swine and chicken origin.

What classes do you teach?
I teach emerging infectious diseases, as well as molecular virology classes. I also help team-teach a veterinary virology class, which I really like because of the incredible veterinary students we have in the college. They are very mature, their questions are right on point, and they are scary smart. It really keeps me on my toes.

Any regrets that you never pursued your surgical dreams?
No, there are major risks associated with surgery as a profession. If you mess up in the lab, you can lose a life. If I mess up in the lab, I can just do it again. My mother, however, has never been truly impressed with my decision to forego becoming a surgeon to work with animal diseases. When I see her, sometimes she asks me, “I sent you to medical school, right? Are you still working with pigs and chickens?”

[Dr. X.J. Meng] said he’s not the only one to hold pigs in high regard. “Sir Winston Churchill once said, ‘I am fond of pigs. Dogs look down on us. Cats look down on us. Pigs treat us as equals.’”

What’s your dream job?
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Your lab is considered one of the world’s leading hepatitis E virus research centers, and you discovered two new viruses. Yes, we serendipitously discovered the swine hepatitis E virus from pigs, then two years later discovered avian hepatitis E virus from chickens. Both were very important because they infect across the species barrier, and the swine virus also infects humans. We also study several other emerging viruses that cause economically important diseases in pigs. Indeed, the vaccine we developed for swine is considered a major advance for veterinary medicine. When I see her, sometimes she asks me, “I sent you to medical school, right? Are you still working with pigs and chickens?”

Dr. X.J. Meng is trained in both human medicine and veterinary science and is a professor of molecular virology at the Virginia-Maryland Regional College of Veterinary Medicine. The Qingdao, China native was named a University Distinguished Professor in 2013, the first from the veterinary college to hold the prestigious title. In addition to his teaching duties, he researches antiviral vaccines and the molecular biology of viruses.

What drew you to this field?
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Your lab is considered one of the world’s leading hepatitis E virus research centers, and you discovered two new viruses. Yes, we serendipitously discovered the swine hepatitis E virus from pigs, then two years later discovered avian hepatitis E virus from chickens. Both were very important because they infect across the species barrier, and the swine virus also infects humans. We also study several other emerging viruses that cause economically important diseases in pigs. Indeed, the vaccine we developed for swine is considered a major advance for veterinary medicine.
John Boyer, the Plaid Avenger

by Jesse FULL, photos by LOGAN WALLACE

John Boyer, the Plaid Avenger

Visit www.vtmag.vt.edu to watch Boyer’s Semester at Sea video lectures, his recent TEDxVirginiaTech presentation, and more.

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of Virginia’s Top Retirement Town

professor profiles

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Virginia Tech Magazine spring 2014

To call John Boyer (geography ’96, M.S. ’98) colorful would be an understatement. The senior instructor of geography in the College of Natural Resources and Environment teaches a World Regions class that sometimes approaches an enrollment of 3,000, and he has a knack for landing guests who are household names—including a video message from the king of Jordan and a visit from Martin Sheen and Emilio Estevez. His alter ego, the “Plaid Avenger,” fights ignorance of global issues from the pages of a comic book.

You spent fall 2013 traversing the globe and teaching in the Semester at Sea program. Why take to the boat?

Because they asked me! I’m also passionate about bringing the world into the classroom. I’m convinced that’s the future of the classroom. I took students to the European Commission in Brussels, to Normandy Beach. The real experiment for me was that I still taught a couple thousand students at Virginia Tech. For the first time ever, the World Regions class was entirely online, and I peppered it with live reports from the field.

What’s the Plaid Avenger avenging?

Global ignorance. Any philosopher will tell you that if you sit down and check out the world, what you will quickly realize is that people are the same everywhere. They want to provide a better future for their children. That’s the human condition. The rest—the differences—are petty. If we want human- ity to survive the problems of the next 100 to 1,000 years, we’re going to have to do a lot better at bringing people together. All the people. Everywhere.

Why plaid?

Most politicians and pundits want to crystallize the world into black and white. “Us and them, or you’re against us.” But there are many threads—social, religious, geographical, political, historical, cultural. That’s the weaving together, the plaid, of any place. What I try to do is reate out those threads. That’s how I try to teach people: It’s a way of understanding the world.

The average student-faculty ratio at Virginia Tech is 16:1. Your World Regions class is a bit above average. Why?

For the same reasons that movie theaters will never go away. A comedy is always funnier if there are 500 people laughing with you. There’s something to be said for communal experience—to laugh together, ask questions together, get confused together, work together. I like the scale of it, I like the power of it. … I believe the future iteration of what I’m going for is a hybrid model—an online course with a couple thousand people. I’ll do podcasts from around the world, country, and commonwealth, and pull in speakers by going to their offices. And then we’ll maintain that physical sense of community by getting together in Burruss Hall auditorium for some play or class or movie every couple of weeks.

Your class Skyped with Nobel Peace Prize winner Aung San Suu Kyi.

She’s an awesome human being, and she can even convey that through Skype. I still remember students walking out of class tearful-eyed, saying their lives had just changed. That’s what we’re here for. That’s what the university’s about: opening eyes and changing lives. Teaching is a seriously undervalued profession. I’ll debate it with anyone. If you want your society to be the greatest and have the most success, then invest everything in education.

Characterize your style of performing ... er, teaching.

I’m totally fearless in the classroom, inventing new ways to connect with students. I fail a lot. I do stuff some people don’t like. But I refuse to stop trying. We’re in an age that’s all about change in education. We have real-time access to every corner of the planet, to every human being, and we’re not doing nearly enough to harness that to bring it into the classroom.
The education of Timothy D. Sands, Virginia Tech’s next president

by JESSE TUEL

Timothy D. Sands in the Torgersen Bridge

Virginia Tech Magazine spring 2014

www.vtmag.vt.edu
From within an expansive mural entitled “The Spirit of the Land-Grant College,” Abraham Lincoln presides over the stream of students who pass through Purdue University’s Stewart Center.

In Lincoln’s hands is a document whose significance anchors the parables for Purdue students who pass through Purdue University’s Stewart Center.

Like Virginia Tech, Purdue University evolved as the premier land-grant institution in its state, historically specializing in disciplines such as engineering. The parallels between the peer institutions are many, and in many instances—from enrollment and rankings to research funding and endowed market value—Virginia Tech may well want to look to Purdue’s lofty numbers for inspiration and motivation.

Ask around at Purdue, and you’ll begin to uncover those parallels. Ask around some more, and you’ll begin to understand why Purdue Provost Timothy D. Sands, after a dozen years at an ideal training ground, is a great fit,” said Vic Lechtenberg, special assistant to the Purdue president and former vice provost for engagement, whom Sands regards as a mentor and credits with instilling in him the values of a land-grant institution. “It’s an institution that’s a lot like Purdue.”

As the presidential search unfolded in Blacksburg, the search committee and Virginia Tech Board of Visitors (BOV) felt the same. “Dr. Sands impressed many from the start and garnered even more support after our personal interviews,” said Mike Quellen (civil engineering ’70, M.S. ’71), BOV rector, in a statement released at the Dec. 6 press conference announcing the selection. “He has stellar academic credentials and administrative experience from some of the nation’s outstanding land-grant and public research universities. We were particularly impressed with Tim’s sense of the modern research university’s role in advancing American society and its economy.”

The transition

On an unseasonably warm mid-March day, in West Lafayette, Ind., Laura Sands paused in front of the academic building where her husband spent his early years on Purdue’s campus. Gazing toward the Engineering Fountain, a 38-foot monument in front of Hovde Hall, the main administration building, she explained that Purdue students run through the fountain before graduation.

From his office window in Hovde Hall, Timothy Sands—who will become the third consecutive Purdue provost to “graduate” into a university presidency—has an iconic view of the fountain and the Engineering Mall, a view that will soon be replaced by Burruss Hall windows framing the Drell Field. The transition is now in full swing. In mid-March, the incoming president had recently returned from Virginia Tech’s National Capitol Region on his third orientation visit (a total of seven or eight are planned before he takes office on June 1).

The Sandses’ first orientation visit was in late January. They thought they had flown away from Indiana’s brutal winter, only to spend their first day in a Blacksburg snow storm. In a jam-packed, five-day schedule, Timothy Sands was shuttled across campus for briefings that ranged from information-technology initiatives and research computing to development efforts and enrollment management. Meanwhile, Laura Sands, the Katherine Birck Professor of Nursing at Purdue, met with faculty members in Virginia Tech’s Department of Human Development, of which she’ll be a part, and interacted with a number of others.

Timothy Sands said the orientation sessions were more about getting to know the people and the issues than remembering specific facts. By the time he takes office, Sands expects to have an understanding of where Virginia Tech wishes to go. And the sessions, spaced out over the weeks and month, allow the Sandses time to digest an onslaught of new information.

Amid the beginning of a new chapter at Virginia Tech, the end of Sands’ time at Purdue coincides with the usual hectic schedule for the provost: a band spent his early years on Purdue’s campus. Gazing toward the Engineering Fountain, a 38-foot monument in front of Hovde Hall, the main administration building, he explained that Purdue students run through the fountain before graduation.

Gesturing toward the fountain, Sands said with a laugh as he looked around his office.

Two office mementos are certainly on his packing list: pictures of his grandfather, who Sands regards as a mentor and credits with instilling in him the values of a land-grant institution. “It’s an institution that’s a lot like Purdue.”

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T i m e t o  W e s t  L a f a y e t t e

Five Ph.D. students gathered in Birck Nanotechnology Center on a Tuesday afternoon in March, awaiting Timothy Sands, their faculty advisor. Home to one of the largest academic clean-room nano-technology facilities in the world, Birck is the largest of 10 centers in Discovery Park, a hub that houses Purdue’s large-scale interdisciplinary research efforts.

About 12 years ago, Purdue came knocking at the university sought to bolster its nanotechnology capabilities, and the Sandes left California. In 2006, Sands was named director of Birck, which opened in July 2005. He was charged with transforming it into a smoothly operating research institute, defining and guiding its strategic vision, and building a community of researchers. Today, approximately 150 affiliated faculty members and 200 gradu-ate students call Birck home.

Whether or not Sands’ students fully understood the role that their mentor had played in the creation of the center in which they sat, they laughed out loud to hear him described as an “administrator.” To them, he’s their reference point, their sounding board, for all things nano-tech.

As a listener, Sands tends to lean back in his chair, relaxed, shifting his weight onto his left elbow and armrest. He claps his hands and maintains eye contact, offering the speaker frequent “mmm-hmms” affirma-
tions. “He’s a phenomenal listener. He has probably the best active listening skills that I’ve ever seen,” said Morgan Burke, the long-time Purdue athletic director who has worked alongside Sands in the president’s cabinet and under Sands when the provost served as acting president. “Even if he’s not really enthused about the conversation, you won’t know it. I think that’s a beautiful trait.”

Opening the research group discussion, Bivas Saha, a Ph.D. student in mate-
rials engineering examining the growth, characterization, and plasmonic and ther-
mo-electric applications of nitride metal/semiconductor superlattices, presented his most recent findings to Sands. As Saha spoke, Sands teased out the significance of an unexpected spike in the data and referred back to literature on the topic, grounding the students in what was known and how to prioritize the next steps. Sands encouraged Saha, saying that the student’s findings likely represented a significant addition to the field’s base of knowledge.

Sands clearly cherishes his time with students, a feeling reinforced when he reentered the academic world after Bellcore. “It’s great to be on the frontlines of discovery. It’s great to build things that people can use. But in the end, the main reason you’re doing this is to bring the next generation along. And that cannot be replaced. That’s something that’s very special,” he said.

Initially, Sands thought he would have give up a research group to take on a presidency, but his early conversations with Virginia Tech’s nanotechnology experts have him reconsidering. “I still think it’ll be a challenge, but I am going to try to stay in touch with my field.”

The “ignition point”

Sands brought an industrial mentality to his role as director of Birck. At the time he left Bellcore, the CEO there emphasized that he wanted the researchers to be “market-savvy technologists,” and it’s a descriptor Sands has embraced. When discoveries have practical applications, pursue those applica-
tions. “A lot of institutions do … either problem-inspired research or curiosity-
driven research. What I see at Virginia Tech is a great blend of the two,” he said.

Sands’ experience with Birck reinforced the human element of research and how to cre-
ate an environment for interaction among disciplines. “One of the successes of Discov-
er Park was getting faculty and students from 12 different disciplines together in the same building,” he said. “You see them create new ideas, new research directions, just by bouncing into each other.”

“I’ve always viewed Tim as a very grace-
ful, presidential type person.”

—David J. Williams, University Senate president at Purdue
Sands also found that graduate students, eyes wide open, are more willing to cross disciplines, whereas faculty members may worry about treading on another person’s area. “Usually [the student interaction] was the ignition point for something new,” Sands said.

Mixing disciplines is at the forefront of the incoming president’s mind. Said Sands, “I typically find myself reading books about science and entrepreneurship and connecting them to other fields in the humanities and the arts—which actually is interesting because that’s the way I see Virginia Tech. It’s very well connected between the disciplines.”

The Sands children

Amanda, 28, is finishing her dissertation in nutritional epidemiology at Harvard’s School of Public Health. Her undergraduate degree from Purdue is in nutrition science.

KC, 25, graduated from Purdue’s School of Management. He is now working for Goldman Sachs and taking M.B.A. classes at the University of Chicago.

Kathryn, 23, earned her nutrition science degree from Purdue and will soon finish the accelerated nursing program to earn her second bachelor’s degree.

Hailey, 20, is a junior at Purdue, studying political science with minors in psychology and forensics.

Sands’ ability to unify people has lived on in the Birck center, said Al Rebar, the senior associate vice president for research and executive director of Discovery Park, who hired Sands into the director’s role. “I think his greatest contribution to Birck without a doubt was not so much a tangible research focus as creating a community of researchers who were able to work together unselfishly,” Rebar said. “And he’s a consensus builder. He brings people together, he’s able to lead discussions rather than arguments, I think he’s very good at diffusing emotions with good common sense.”

When problems arose at Birck, whether in research direction or personnel, Sands relied on an analytic approach. “The first thing he’ll do is take a step back rather than react,” said Rebar. “He’ll analyze and redirect. He won’t shoot from the hip. And at the same time, he’s not overly careful. His legacy is that he builds confidence—you have confidence that this is a person you can follow.”

The interdisciplinary collaboration, similar to the path pursued by Virginia Tech, has yielded tremendous growth in research dollars for Purdue. Rebar and Sands have been a part of a paradigm shift from single-investigator to multiple-investigator research grants. “Honestly, I think he’d tell you if you asked him why he came to Purdue, he saw that that was in the cards,” said Lechtenberg, the athletic director.

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The provost

Sands’ performance at Birck paid dividends. “That’s really what gave him, frankly, the visibility and the credentials to be considered as a provost,” said Lechtenberg, the special assistant to the president who reported to Sands as vice provost for engagement.

Sands can sit atop an organization and see all of its inflection points. “He has the ability to conceptualize what appear to be different issues, different concepts, and all of a sudden say, ‘Wait a minute, those four things in different quadrants of the university all connect; there’s a synergy there. Does anybody notice that?’” said Burke, the athletic director.

Dale Whittaker, Purdue’s vice provost for undergraduate academic affairs, noticed certain qualities in Sands’ questioning and feedback. He has a “driving curiosity, and he’s totally unpoliticized,” Whittaker said. “When he asks a question, there is no second agenda behind it. It’s a scientific question.”

Added Laurel Weldon, Purdue’s interim vice provost for faculty affairs, “You don’t feel like he’s driving his agenda, even when he is driving his agenda. When you work with some people, you feel like they have a lot of ego invested, and it’s hard to communicate with them. You can’t critique their idea. I just never even think about that at all [with Sands].”

Weldon said Sands offers “constructive and empowering feedback without squelching your idea. He never says just ‘no.’”

“He also almost never says yes,” Whittaker added. “And what I mean by that is you always get a balanced view from him. He’ll always support what he sees as the positives and bring up the what-if or the risks, and it’s in a very diagnostic way.”

Credentials, continued

1993-2002: Professor, Department of Materials Science and Engineering, University of California, Berkeley

1997-99: Chair, executive committee, Applied Science and Technology Graduate Group, University of California, Berkeley

2002: Director, Integrated Materials Laboratory, University of California, Berkeley

2002 to present: Basil S. Turner Professor of Engineering in the School of Materials Engineering and School of Electrical and Computer Engineering, Purdue University

2006-10: Director, Birck Nanotechnology Center, Purdue University

2009: Fellow of the Materials Research Society

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Meeting of the minds: (directly above) In late January during the Sandses’ first orientation visit at Virginia Tech, they toured the Virginia Tech Carilion School of Medicine and Research Institute with (from left) James Keith, the school’s chief of staff; Provost Mark McNamee (second from right); and Dr. Cynda Johnson, dean of the school.

(Right and above) In mid-March in Purdue’s Birck Nanotechnology Center, Sands met with his research group of Ph.D. students, including (from left) Amir Mohammed (leaning back), Amirkoushyar Ziaabari (leaning forward), Bivas Saha, Meng Long Hao, and Yuefeng Wang.
Describing Sands as “fast-driven,” Burke said he always shared data with the acting president ahead of their regular meetings. “Particularly if there were spreadsheets, he’d remember the direction of the numbers and what it meant, and that [condensed] might be a 20-minute conversation into five minutes.” He didn’t have to repeat things. A month went by, and I came back to a topic and,” Burke said, snapping his fingers, “he’d remember what we talked about.”

In his time as provost, Sands led efforts to elevate student success that enhanced what we talked about.”

Sands had been the provost for a couple of years when the search began for a Purdue president. Sands noted that Virginia Tech and Purdue have similar attitudes toward the academic side — namely, fundraising, alumni relations, and athletics. Lechtenberg said Sands “became much more stump-comfortable” as a provost and then acting president, able to relate to all sorts of audiences.

Meanwhile, serving as acting president rounded out Sands’ professional credentials, giving him broader experience in the areas in which he had not had as much exposure — namely, fundraising, alumni relations, and athletics. Lechtenberg said Sands “realized that we could have impact beyond our regular jobs in a role that was really rewarding,” Sands said.

Sands’ time as provost gave him an extra measure of visibility. “People warned me,” Sands said. “They said, ‘Now that you’ve done this, search firms are going to come after you.'” It happened a few months after I came back to the provost’s position. … I remember getting a call from someone representing Virginia Tech, and that’s where things started clicking.”

When he was introduced to the Virginia Tech community and members of the media at a press conference on Dec. 6, Sands got a laugh when he said the driving tour of campus during the secretive interview process — hiding him in a “tinted-window vehicle”— obscured how beautiful the campus was.
When Sands stepped up to the podium at the Dec. 6 press conference, he pulled out a napkin onto which he’d scribbled his notes. Cliché, right? He thought so. Still, his impressions onto which he’d scribbled his notes. Cliché, right? But I just grabbed it, and wrote a few things down. I don’t remember if I looked at it.

“That was how I used to study when I was a student. I would write detailed notes, and then I would condense them and condense them and eventually I would have three words on a page or three lines—and then I wouldn’t use it.”

“When I’ve been in a role like this before, starting an administrative position with a new organization, it’s taken a while to get the pulse of the organization. The thing that was different this time was that I felt so connected to the institution. Even without having spent time on campus, I just felt like I knew what it was to be a Hokie, based on all the interactions I’d had with the search committee and what I’d read, so it was a natural process of saying what I thought was important.”

From the heart

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“I had quite a bit of time over a couple of months before Dec. 6 to get to know the institution, so [the speech] really was from the heart. I didn’t feel like I had to do a lot of preparation. What happened is I had jotted out some notes, it might’ve been a page of notes. Right before we left [for the press conference’s room], I had 10 or 15 minutes by myself, and I thought, “You know, I don’t want to take a big piece of paper up on the podium. ‘The closest thing to me was a napkin, I thought, ‘Well, this is kind of ridiculous; that’s cliché,’ But I just grabbed it, and wrote a few things down. I don’t remember if I looked at it.”

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As unmanned aircraft begin to elevate commerce and transportation, Virginia Tech’s experts are leading the way.

by JOHN PASTOR
Humans made their first forays into the sky with kites. Gliders, hot-air balloons, and airships were followed by the Wright brothers’ flight of 1903, the mass production of helicopters in the 1950s, and then the first jet airplanes.

Today, a new type of craft is taking to the air. Known by many names—drones, remotely piloted vehicles, unmanned aerial vehicles, and radio-control aircraft—these new machines can be smaller than a model airplane or have a wingspan as large as a Boeing 737’s.

Only six elite test sites in the U.S. are sorting out the issues to integrate unmanned aircraft into the airspace—and Virginia Tech is leading one of them.

First in flight
Like most test pilots, Kevin Kochersberger expects the unexpected.

A research associate professor in the College of Engineering, Kochersberger was chosen by the First Flight Centennial Commission for a 2003 re-enactment of the Wright brothers’ historic adventure at Kitty Hawk, N.C.

His task was to fly a replica 1903 Wright Flyer and land it in front 35,000 attendees, including then-President George W. Bush and actor and pilot John Travolta.

“I had mentally made that flight a thousand times,” Kochersberger said. “I thought it would be routine. It wasn’t until I got in the plane, looked up, and saw thousands of people surrounding me in a circle that was about 800 feet in diameter [that] I thought, ‘What other pilot ever had to get off the ground and land again in 600 feet?’”

Fast-forward more than 10 years, and Kochersberger again found himself pouring over the last-second details of a test flight.

The setting was a remote section along the Roanoke River. No packed grandstands. No noise, no power. Just Kochersberger’s flight team from the Virginia Center for Autonomous Systems, which is a research arm of the Institute for Critical Technology and Applied Science and the College of Engineering.

As with the First Flight Centennial, the aircraft was rare, but it was no replica of a treasured antique. It was an unmanned 250-pound helicopter.

Equipped with cameras—provided by industry partner American Aerospace Advisors Inc.—that detect ultraviolet, visible, and infrared wavelengths, the autonomous aircraft was charged with helping its flight crew of mechanical engineering students learn whether useful visual data from five acres of tobacco could be acquired.

Agriculture is fertile ground for the unmanned aerial vehicles industry, and the flight was Virginia Tech’s first under the auspices of the Mid-Atlantic Aviation Partnership, a collaboration led by the university and academic and industry partners with a goal to safely develop unmanned aircraft systems.

The chopper rose, and the autopilot was activated. Infrared, long-wave infrared, and ultraviolet cameras whirred to life.

“I don’t always sleep well the night before a flight operation, especially one in a remote location with no power, but absolutely nothing went wrong,” Kochersberger said. “The helicopter started, the flight control system worked, we didn’t have wind issues, the images were all taken, [and] the exposures were all correct. All of the systems we rely on, every one, worked perfectly. That’s because our students are as good at unmanned flight operations as any team from any large corporation out there.”

Chosen one
Unmanned aircraft operations come naturally to Virginia Tech’s cadre of experts. Their crowning moment arrived in December 2013 when the Federal Aviation Administration (FAA) selected Virginia Tech to operate one of six unmanned aircraft systems research and test sites across the country.

The proposal, spearheaded by Jon Greene, interim director of the Mid-Atlantic Aviation Partnership and an associate director of the university’s Institute for Critical Technologies and Applied Science, was picked after a rigorous 16-month selection process involving 25 proposals from 24 states.

With plans for the University of Maryland to join the effort, university leaders in Blacksburg, along with partners at Rutgers University in New Jersey, welcomed the FAA’s decision.

“Integrating unmanned aircraft into the national airspace is a great responsibility, one that our faculty members and government, university, and industry partners take very seriously,” said Virginia Tech President Charles W. Steger. “We are ready to meet this challenge,” he added. “We are convinced that Virginia, teamed with New Jersey and Maryland, is poised to make the mid-Atlantic region the leader in unmanned aircraft system research, development, testing and evaluation, and manufacturing. I’m proud of our faculty… for providing vital expertise in autonomous systems.”

Sending unmanned aircraft into the national airspace is a painstaking process. The congressionally mandated test sites will help pioneer rules to safely introduce unmanned aircraft to the skies. The FAA has until 2015 to develop regulations aimed at ameliorating safety and privacy concerns.

Economic heights
Much is at stake. Although Virginia Tech receives no federal funding for the effort, introducing unmanned aerial vehicles to U.S. skies could add more than $13.6 billion to the national economy by the end of the decade, with totals reaching as high as $82.1 billion by 2025, according to the Association for Unmanned Vehicle Systems International.

Moreover, the association ranks Virginia eighth among states with the most to gain from unmanned aircraft systems. By 2017, unmanned aircraft systems-related work is expected to inject $463 million into the commonwealth’s economy, produce $4.47 million in additional tax revenue, and add more than 2,300 jobs.

In a recent economic study, the Virginia Department of Aviation, the Virginia Economic Development Partnership, the Center for Innovative Technology, and Virginia Tech concluded that Virginia is well positioned to meet the needs of unmanned aircraft manufacturers because of the commonwealth’s manufacturing capacity and because 300,000 people already work in related fields.

“Virginia already has a ready-made workforce for technology development in unmanned vehicles systems,” said Jennifer Shand, senior economic development specialist with the Office of Economic Development, part of Virginia Tech’s Outreach and International Affairs.
Flight plan

As for the technology itself, partnership members expect that unmanned aircraft will be useful for pipeline inspections, search-and-rescue missions, disaster response, and wildlife management. Creativity will no doubt lead to more novel applications.

For example, College of Agriculture and Life Sciences researchers David Schmale, an associate professor of plant pathology, physiology, and weed science, and Boris Vinatzer, an associate professor and geneticist, are part of an international team running DNA analyses on millions of microbes in raindrops, many of them captured by unmanned aerial vehicles from the clouds themselves.

Meanwhile, the news is filled with stories about businesses that want to find ways to capitalize on the technology, whether to ship merchandise or even deliver pizzas. If commerce ever comes to those uses, safety hurdles must be overcome.

“We are creating technologies that could transform transportation, agriculture, emergency response—a wide variety of activities,” said Craig Woolsey, an associate professor of aerospace and ocean engineering with the College of Engineering and the director of the Virginia Center for Autonomous Systems. “When people realize what they will gain through autonomous technology, we are going to see a drastic paradigm shift in the way we approach these activities. As happened with cellular devices, new industries will crop up, and new infrastructure needs will evolve. The economic impact will be enormous.”

“We with our partners, we firmly believe we can introduce this new technology the right way,” Greene said. “Separately, the team members have flown unmanned aircraft systems for thousands of hours, and now we have joined together to conduct unmanned aircraft systems research, development, and test and evaluation activities.”

The partnership is crafting its next set of operations and has plans to continue with simple, low-risk testing until there is confidence in its procedures and processes, Greene said.

“Once the partnership and the FAA are convinced it is time to move to more-complex operations with larger, faster, and higher-flying aircraft, we will move forward,” Greene said. “Our mantra will be that whatever happens, we want to make sure that it is at least as safe as the manned aircraft operations that are already occurring in the National Airspace System.”

By February 2017, we expect that the small UAVs’ rules will be on the books and will permit some use of small UAVs—probably limited to 55 pounds or less—for commercial purposes,” Greene said. “There could be hundreds, even thousands, of UAVs in the skies at that point.”

Drones may be unmanned, but it’s safe to say that even the Wright brothers would be intrigued by this next frontier in flight.
Performing with the Metropolitan Opera in New York City is one of the highest goals that a singer can set, and one that is rarely achieved. So when Danielle Talamantes (vocal performance, music education ’98) received a phone call from the opera company, her initial reaction was skeptical.

“When I got the phone call for the audition, I thought maybe it was a joke,” Talamantes said. “The Met doesn’t generally call you, but they did.”

A native of Vienna, Va., Talamantes spent her first two seasons on the Met roster as a covering artist, essentially an understudy; but in her third season, she debuted in a small role in Strauss’ opera “Die Frau ohne Schatten,” which ran for six performances in November 2013. In February, she was offered the role of Frasquita in Bizet’s “Carmen” for the 2014-15 season. Entailing a good amount of stage and singing time, the role is “a huge break for my performance career, and I’m still floating from the news,” she said.

Opening her voice

Performing at the Met is quite a leap for someone who chose to attend a state university over a traditional conservatory route. Although Talamantes pursued double majors at Tech in vocal performance and music education, she realized that the front of the classroom was not for her, deciding that there were others better suited to teach. Indeed, she found several such people in the Tech music department who helped shape her vocal performance skills. Dave McKee, director of the Marching Virginians, was Talamantes’ freshman aural skills professor and recognized her talent early on.

“With a kid like that, you take a deep breath and say, ‘Wow, I’m in the presence of somebody who’s really got a lot of talent and a great work ethic, and we’ll see where she goes,’” McKee said. “And in her case, she’s certainly gone to the moon, hasn’t she?”

Talamantes also had private lessons with Nancy McDuffie, who taught at Tech for close to 30 years before stepping down as an assistant professor of voice. Like she did with all students, McDuffie started out slow to diagnose Talamante’s voice, but she quickly saw her potential.

“With Danielle, it was just obvious from the start that this voice of hers just had easy production with very few problems,” said McDuffie. “She was a fun voice to work with because whatever I asked her to do, she would just do it.”

While training with McDuffie, Talamantes began her foray into the operatic style.

“I ended up going to Virginia Tech, and I loved it,” Talamantes said. “It was the perfect blend of a big school and football games, and then this small music department that was like a family and very nurturing.”

Although Talamantes pursued double majors at Tech in vocal performance and music education, she realized that the front of the classroom was not for her, deciding that there were others better suited to teach. Indeed, she found several such people in the Tech music department who helped shape her vocal performance skills. Dave McKee, director of the Marching Virginians, was Talamantes’ freshman aural skills professor and recognized her talent early on.

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—Danielle Talamantes ’98

Hitting the high notes

After leaving Virginia Tech, Talamantes attended graduate school at Westminster Choir College, then returned to her hometown and opened a private voice studio. She also began auditioning and performing in regional operas and competitions, which ultimately led to her position at the Met. Although the Met keeps her busy, Talamantes has found time to take on other performances, including the lead role in the debut of “The Lost Childhood,” an opera based on the memoirs of an 11-year-old Polish Jew at the time of the Nazi takeover in Warsaw. The show’s world premier was in Washington, D.C., the same week as Talamantes’ debut at the Met, which she laughingly refers to as the busiest week of her career.

“The fact that these two things were happening at the same time was totally dizzying,” Talamantes said. “Really, really exciting, but kind of stressful because I was going back and forth.”

Talamantes also has a debut album, “Canciones Españolas,” which will be released soon.
Fields, a successful opera performer who won a singing competition and is currently in production and is slated to rehearse for his voice to be heard, said that the chance to share the stage with Talamantes again is a testament to sharing the stage with Talamantes in his own right, said that the fact they have done so well post-graduation is a testament to his own talent and dedication.

Looking Ahead

A career in music is never a certainty. Although Talamantes has already scored many victories, the future holds many more challenges. However, he believes that his hard work and dedication will help him succeed. "I would say the best is yet to come," he said. "I think she's just made it, and people are going to discover what she's all about." Said Talamantes, "I can't believe that I get to do what I love ... and I know it's what I'm supposed to be doing. It's absolutely the best thing in the world."}

Rachel Cline, a senior majoring in communication and sociology, was an intern with Virginia Tech Magazine.

Produced with friend and pianist Henry Dehlinger, the album features a range of classical Spanish music, touching on their shared Latin roots. The album’s production was funded via Kickstarter, which raised more than $12,000 between June and July 2013. The album is currently in production and is slated to appear soon in Amazon and iTunes stores.

Performing at Tech

As part of the inaugural season of Virginia Tech’s new Moss Arts Center, Talamantes will return to campus in May as the soloist for the performance. Talamantes will join the Roanoke Symphony Orchestra. Choral, the university choirs, and the oratorio, featuring the Blacksburg Master Chorale, the university choirs, and the oratorio, will return to campus in May as part of the inaugural season of Virginia Tech’s new Moss Arts Center. Talamantes has debuted with the Roanoke Symphony Orchestra.

McDuffie said. “If you have a star player or a winning team for a season or two, it automatically brings a winning team for a season or two, it automatically brings attention to the program.”

According to McDuffie, boasting graduates like Talamantes and Fields may help grow the music program at Tech even further.

“Performing at Tech”

For a selection of audio and video performances by Talamantes, visit www.vtmag.vt.edu.

“Singing for one:”

For Generations to Come

When Clinton W. Baber graduated from Virginia Tech, the United States was in the grips of the Great Depression, and the international community was marching toward World War II. The average car cost $625. Monopoly was the newest board game sensation.

Seventy-nine years later, the world has certainly changed, but in 2014, the Virginia Tech tradition that Baber (chemical engineering ’35) held dear continues to encourage success and inspire innovation, reinforced through a generous scholarship.

“They loved young people,” attorney W. Scott Street said of Clinton and Lucille Baber, his longtime friends and clients. “They believed that their work was important and would have a lasting impact on the world. They wanted to provide that opportunity to younger generations, with the hope that they, too, would be inspired to give back.”

Judging from comments by Megan Sirbaugh, a senior majoring in meteorology and geography who also holds the scholarship, Street’s philanthropic legacy has influenced others, just as he hoped. “I can’t begin to express how much this scholarship means,” said Sirbaugh, of Winchester, Va. “I only hope that I will have the opportunity to help someone else someday the way this has helped me.”

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For Andrea Burcham (English ’12), the scholarship served as a launching pad for a career in law. “I didn’t have to worry about the financial pressures of school, so I was able to get involved with different projects, I did an internship with the Montgomery County commonwealth’s attorney,” said Burcham, who is now attending the Charlottesville School of Law.

A native of Fluvanna County, Va., Clinton Baber was elected to multiple honor societies at Virginia Tech. Following an impressive U.S. Army career, during which he attained the rank of colonel, he held leadership roles in both the tobacco and the paper industries before shifting to real estate. Lucille Baber passed away in 2001, and her husband in 2003. The Clinton Wiley Baber Scholarship they established covers full tuition and is awarded annually to an in-state student who has been enrolled at least a year, maintained academic excellence, and demonstrated financial need.

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Philanthropy

Tools of the Trade

by ERICA STACY

While hard hats and high tech may seem like unusual partners, the building professionals of tomorrow will be just as likely to count laptops, smartphones, tablets, and 3-D printers among their tools as they do hammers and nails.

At Virginia Tech’s Myers-Lawson School of Construction, the new Bishop Favrao Build Lab opened in 2013 to prepare students for a more technologically driven industry.

“The construction industry is, in effect, experiencing its own renovation and remodel,” said David Goldsmith, a visiting assistant professor who coordinates the lab. “Applying new technologies to gold-standard building practices results in improved efficiency, seamless communication, and increased opportunities for innovation and customization.”

Support for the Build Lab was provided by the Yvan Beliveau Endowment for Excellence, which funded recent renovations to the Build Lab in Bishop Favrao Hall.

George B. Clarke IV ’82 helped establish the Yvan Beliveau Endowment for Excellence, which funded recent renovations to the Build Lab in Bishop Favrao Hall.

To celebrate recently expanded facilities, the lab hosted the first Class of the Trade event in June.

“Today’s graduates need to be ready to adapt to a changing work environment,” said Preston White, who founded Century Concrete. “The confidence to apply new technologies, which are moving very quickly, is essential. I think the most important things a university can teach a student today are flexibility and self-worth. Give me someone with that, and I can teach them the rest.”

Yvan Beliveau, the former building construction department head for whom the endowment that funded the lab was named, said the generosity of the Whites and Clarke “enables us to enrich and enhance opportunities for our faculty and students by supporting initiatives such as the Build Lab.”

“We established the endowment,” said Clarke, president of MEB General Contractors, “to provide the financial support to take innovative ideas and put them to work, making a difference for the students at Virginia Tech and, ultimately, the building and construction industry.”

While numerous students benefit from the lab, several also participated in its construction this past summer. “We were responsible for everything except the electrical aspects,” said Matt Harrington, who expects to graduate in 2015 with a dual degree in building construction ‘63 and Catharine White, as well as George B. Clarke IV (civil engineering ’82).

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Now that the lab is operational, Harrington continues to benefit from it. “I have been able to take the concepts from my classes and apply them to projects in the Build Lab,” he said. “I have built furniture and used lasers for cutting and engraving different materials. Right now, I am working on developing a new style of nail gun.”

Access to high-tech equipment is one benefit of the lab, but the facility also provides an environment for collaboration, allowing students to learn from each other, Goldsmith said. “If someone asks you about your project or a piece of equipment, we require that you stop what you are doing and explain it to them,” he said. “The connections that our students create in the classroom, in the lab, and with their teachers and peers are the most important elements of their education.”

Erica Stacy is the publications editor with University Development.
Whether you were last on campus as a student or as a visiting alum, Virginia Tech has more to see than ever.

This year is a perfect time to visit campus and take in some rather spectacular additions and visitor attractions. The coming football season offers seven home games and quite a few events specifically for alumni to reconnect with each other and see the campus. Separate homecomings for each of our eight academic colleges; reunions for six anniversary classes; a young alumni reunion; and homecomings for the Corps of Cadets, Highty-Tighties, Marching Virginians, graduate degree alumni, Student Alumni Associates alumni, former Student Government Association officers, and Order of the Gavel members are spread out across the football schedule. Event schedules are on page 48-49, along with a website address for details and registration information.

While on campus, stay at the beautiful Inn at Virginia Tech and enjoy the connected Holtzman Alumni Center. Check out the new Visitor and Undergraduate Admissions Center near the inn.

Among the must-visit sights are the new Moss Arts Center, the Signature Engineering Building, Theatre 101, and Turner Place Dining Hall at Lavery Hall. With its distinctive presence where Shultz Dining Hall once stood, the Moss Arts Center has dramatically changed the appearance of the Alumni Mall entry off Main Street (Shultz is incorporated into the new facility). The Signature Engineering Building faces Prices Fork Road in the parking lot behind Derring, Cowgill, Whittmore, and Durham halls. Like the arts center, the engineering building is an impressive addition, complete with a Rolls Royce jet aircraft engine suspended four stories high in the central lobby.

Theatre 101 is a black box theatre with flexible performance space. It sits on a recently renovated College Avenue streetscape that includes more pedestrian walkways and outdoor dining space for restaurants. With eight separate restaurants and a main dining room, Turner Place is the latest award-winning dining facility on campus.

Several exhibition spaces have been created in recent years to display historical and athletic memorabilia. The Holtzman Alumni Center’s museum houses various items showcasing the university’s 142-year history. As corps housing is modernized and expanded on the Upper Quad with ongoing construction, a Corps of Cadets display has been assembled in Newman Library. Athletic exhibits are showcased in Lane Stadium, the Merryman Center, and the recently dedicated Hahn-Hurst Basketball Practice Facility. All four offer professionally designed exhibits open on weekdays and some weekends.

There is plenty to see when you return to campus. Why not make that visit in 2014?

Tom Tillar ’69
Vice President for Alumni Relations
2014 reunions

Hokie football games add flavor to class reunions and homecomings

2014 class reunions
- Class reunions from the 25th through the 50th anniversaries are held at five-year intervals. Each reunion includes optional campus tours, an afternoon presentation by current students, a Friday evening meal, and plenty of time for reminiscing and dancing. Saturdays feature a morning brunch and pregame festivities. The exception to the typical Friday/Saturday reunion agenda is for a Thursday evening game, when the banquet follows on Friday. Special seating is arranged for the reunion registrants at Tech’s sold-out games, and rooms are set aside at The Inn at Virginia Tech.

2014 homecomings
- Homecomings are hosted throughout the football season. Programs for the eight academic colleges are spread across the home schedule, along with other special homecomings for graduate-degree alumni and Corps of Cadets alumni. Homecomings are open to all alumni of the host groups, regardless of graduation year. In each case, there is a game-day gathering, pregame tailgate food, and the opportunity to reunite with friends, faculty, and staff. Lodging and game tickets (if needed) are available to registrants on a first-come, first-served basis, so it’s best to register early.

Aug. 30 – William & Mary Veterinary Medicine Graduation School
Sept. 13 – East Carolina Corps of Cadets College of Natural Resources and Environment College of Liberal Arts and Human Sciences
Sept. 20 – Georgia Tech College of Agriculture and Life Sciences
Sept. 27 – Western Michigan (Homecoming Parade) Alumni Center Open House and Tailgate College of Engineering Student Affairs SGA and Order of the Gavel Highty-Tighties Marching Virginians
Oct. 23 – Miami College of Science
Nov. 1 – Boston College Pamplin College of Business
Nov. 28 – Virginia College of Architecture and Urban Studies Young Alumni Reunion

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For more information on the 2014 homecomings and reunions, visit www.alumni.vt.edu/reunion/index.html.
Hokie Day 2014

One hundred and eighty Virginia Tech alumni and students attended the 16th annual Hokie Day at the General Assembly. The day began with breakfast and presentations by Virginia Tech President Charles W. Steger, Vice President for Alumni Relations Tom Tillar, and others. After being briefed on university priorities, participants headed for the Capitol to visit legislators. The delegation posed with Virginia Gov. Terry McAuliffe on the Capitol steps.

Seeking nominations
Board of Directors: The Alumni Association is seeking nominations for its board of directors for the next three-year term, beginning in 2015. Nominations are due by June 1.

Multicultural Alumni Advisory Board: Nominations are invited for the board that represents the interests of multicultural alumni constituents. The board works closely with the Alumni Association and the Office for Diversity and Inclusion.

Outstanding Recent Alumni Award: The Alumni Association invites nominations for the 2014-15 Outstanding Recent Alumni Awards, which recognize professional achievement and leadership by alumni who have graduated since 2004. Nominations are due by Aug. 15.

Looking for both boards and the recent alumni award, please include the nominee’s full name, class year, address, and specific qualifications for the nomination.

Alumni Humanitarian Award: Nominations are invited for the Humanitarian Award, which is presented to an alumnus who has performed exceptional service outside his or her profession or career. The scope of service should have significant regional, national, or international impact.

The nomination form is at www.alumni.vt.edu/humanitarian.

2014 DRILLFIELD SERIES

2014 DRILLFIELD SERIES
The Drillfield Series continues in 2014 with weekends dedicated to photography, student legacies, and healthy pets, along with special opportunites to connect with fellow alumni over a round of golf, a glass or pint of your favorite adult beverage, and activities at a scenic mountain retreat. Make plans now to attend these events designed for alumni and their families and friends, and take advantage of the specially discounted accommodations available at The Inn at Virginia Tech.

Focus on Photography
The fourth year of this popular program features sessions on sports photography, taking better portraits, an introduction to HDR photography, and more. The weekend starts with a photographer’s boot camp and ends with a critique session in which presenters help you identify ways to improve your images. In addition to instruction and an information packet, participants will have time to take pictures. The registration includes dinner on Friday and breakfast and lunch on Saturday, with the program concluding late that afternoon. Accommodations are available at The Inn at Virginia Tech. • $195 per person

Top of the Mountain at Mountain Lake
Experience the new Mountain Lake Lockside Hotel Mountain Lake and enjoy a getaway adventure this summer. Registration includes a Friday dinner, Saturday daybreak and lunch, and Sunday breakfast. Learn about the history of one of only two naturally formed lakes in Virginia, and about the lake restoration project from the lake naturalist. There is a new aerial adventure course to enjoy, along with guided hikes, mountain biking, archery lessons, treasure hunts, naturalist programs, and other family-friendly activities.

• $725 per couple; $990 for children 12 and under

Hokie Classic Golf Tournament
Join fellow alumni, guests, and friends for a captain’s choice golf tournament at the award-winning Pete Dye River Course at Virginia Tech. Registration includes greens fees, cart, scoring and door prizes, a commemorative polo shirt, adult beverages, lunch, and a post-tournament dinner in the beautiful clubhouse overlooking the New River. Enjoyable for golfers of every skill level, the tournament offers prizes for all teams and will feature several varsity coaches and former varsity players from the university.

• $205 per person; VIP tent $500 per foursome

Summer Beer Festival at Virginia Tech
Virginia is for craft beer lovers. Experience a unique Saturday beer festival at the Holtzman Alumni Center with live entertainment, special guest appearances, and more than 40 local, regional, and national breweries pouring their best brews. Relax and join friends in Blackstar for frosty tastings and food favorites from local restaurants. Those arriving on Friday, June 27, may opt for a beer-pairing dinner provided by the Inn at Virginia Tech for an additional fee and reservation.

• $25 per person; VIP tent $50 per person

A Day in the Life of College Admissions
The popular annual “Day in the Life of College Admissions” is a program designed especially to assist prospective 2015 and 2016 high school graduates and their parents in navigating the college application process. Program highlights include pointers for conducting an effective college search, behind-the-scenes look at college admissions, and application preparation tips from admissions professionals.

• $70 per person; $85 for student

Drillfield Series:
For more information on the events, visit www.alumni.vt.edu/drillfieldseries/.
2014 travel tours

The Wild West and Yellowstone Family Adventure
Collette
July 26-Aug. 1 | $1,699 per adult, $1,099 per child* (air included)

Great Pacific Northwest
Go Next, American Express
July 26-Aug. 3 | $5,795*

Cruise The Waterways of Russia
AHL, River Victoria
Aug. 7-20 | $4,445*

Baltic Treasures
Go Next, Oceania Cruises’ Nautica
Aug. 21-Sept. 1 | $4,299* (air included)

Ireland - Kilkenny, Killarney, and Dublin
Go Next
Sept. 19-27 | $2,599*

Spanish Serenade
Go Next, Oceania Cruises’ Marina
Sept. 23-Oct. 4 | $3,999* (air included)

Accent On The Rivieres
Go Next, Oceania Cruises’ Marina
Oct. 3-11 | from $2,499* (air included)

Treasures of Southern Africa
AHL
Oct. 8-22 | $6,995*

Cruise The Panama Canal
AHL, Crystal Cruises
Nov. 19-30 | $3,290*

Treasures of Southern Africa
AHL
Dec. 6-13 | $2,999*

* Dates and prices are subject to change. Pricing is based per person on double occupancy without air, except as noted. Free air is based on departure from select North American gateway cities. The Alumni Association encourages all alumni to consider purchasing travel insurance. Learn more at www.alumni.vt.edu/travel/insurance.

Virginia Tech Magazine spring 2014

Something for everyone at alumni chapter events

Local alumni chapters provide opportunities for Hokies to network, socialize, and promote their alma mater. Last year, more than 115 chapters held more than 1,000 events in their local communities, with 600 alumni volunteers giving back in the spirit of Ut Prosim (That I May Serve).

Chapter events include:
• Visiting speakers from Virginia Tech
• Wine tastings
• Professional networking events
• Student send-offs
• Strong Together events
• Game-watching gatherings
• Holiday celebrations

"With the volume of events being hosted throughout the Hokie Nation, there always is something of interest for everyone," said Debbie Day, associate vice president for alumni relations. To find a chapter where you live, visit www.alumni.vt.edu/chapters and click on "Find Your Chapter."

Sports and activities

Cheering on the Hokies is as popular among chapters throughout the country as on campus. Chapters sometimes take an active approach to sports by forming local leagues. For instance, in 2013, the Chicago chapter won its first beach volleyball championship. The Manhattan Hokies gather in the summer for softball; last year they celebrated their fifth season and defeated U.Va.’s New York City alumni chapter. “It’s always better to win,” said Casey Lee (finance ’04), “but we celebrate together after each game.” The Kentucky chapter combined serious physical challenges and service last October when alumni competed in their first Tough Mudder. The globally recognized race with military-style obstacles, adapted for civilian participants, raises donations that support the Wounded Warrior Project. “We could not think of a better way to live Ut Prosim and put our Hokie Spirit to the test,” said Jordan McAuley (sociology ’12).

Community service

Many chapters coordinate service projects, including efforts connected with Virginia Tech bowl games. Last December, alumni in El Paso, Texas, joined members of the current Corps of Cadets Color Guard to refurbish planting beds at the Old Fort Bliss Replica. “We’re excited to see Virginia Tech here coupling football and service—two things that make us very proud,” said Rhylee Hulmoe (international studies ’95), who was participating with her husband, Patrick (civil engineering ’94), and three sons.

Community service in El Paso, Texas, before the Sun Bowl

A Tough Mudder race in Kentucky

Beach volleyball in Chicago

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Community events

Many chapters hold special events unique to their own communities. For example, the Eastern Shore chapter sponsors an annual oyster roast, which averages 200 attendees. The roast features a silent auction, and an admissions representative attends to meet with prospective students. Such events usually benefit scholarships for local students entering Virginia Tech.

Community events
It was white as for the eye could see. The five wives and their children sat in the tattered covered wagons, held hostage by their own fear and silence. They had already waited nearly two hours—perhaps the prelude to their execution. Daria couldn’t help but remember the cold, the restlessness, shifting from side to side in anxious anticipation of their own fear and silence. They had already waited nearly two hours—but they would not give up. They would do everything in their power to claim this life that was theirs. They belonged to no one.

They could see dim candlelight coming from inside the cabin and a smell of snowfall. The caravan sat still. They were at the front of the makeshift border patrol about a quarter of a mile away—but just far enough for the ladies to be able to remain fixed on the movements inside, yet too far to see or anything that was going on within the stone walls.

One hour in, they could take it no more. They decided to trudge through the drifts, children on their hips, and beg the guard to let them go.

Submission guidelines are available online at www.vtmag.vt.edu/books/notes to submit a book, mail it to Book Notes, Virginia Tech, 101 Draper Rd., Blacksburg, VA 24061. You can also email your name, the book’s publication date, and your address to booknotes@vt.edu. We must receive the book within one year of its publication date. Photos by Logan Wallace.
59 “J.W.” Joe” Potter (BAD), Middletown, VA, 12/15/13.

60 J. Hunter Clabaugh (BC), Greensboro, NC, 1/11/13.

61 Charles “Stu” Echols Jr. (BC), Roanoke, VA, 10/15/13.

62 Robert A. Beckmann (BC), Boulder, CO, 12/12/13.

63 Mark A. Children (CE), ’94, CE, Raleigh, NC, was inducted into the Virginia Tech College of Science Hall of Distinction.

64 Alan M. Dixon (CE), ’89, Califon, NJ, was inducted into the Virginia Tech College of Science Hall of Distinction.

65 James L. Board (CE), Richland, WA, was inducted into the Virginia Tech College of Science Hall of Distinction.


67 Craig Edward Arthur ’06 and Nikeshia Twana Womack ’07, Christiansburg, VA, 10/26/13.

68 Dwight L. Dunn (RAD), Grand Rapids, MI, was inducted into the Virginia Tech College of Science Hall of Distinction.

69 Allen W. Wright (ARCH), Blacksburg, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

70 Julius B. Bell Jr. (CE), Signal Mountain, TN, 9/1/13.

71 John W. Dick (FH), Harrison, NY, was inducted into the Virginia Tech College of Science Hall of Distinction.

72 Emily Kay Alexander Sterrett ’00, a son, Mason Boyce Karon ’88/31.

73 Charles “Ike” P. Eichelberger Jr. (CE ’61), Naples, FL, was inducted into the Georgia Tech College of Engineering’s Hall of Fame.

74 Erkan Esmer (MATH ’80), Blacksburg, VA, was inducted into the American Geophysical Union’s Hall of Fame.

75 Frederic K. Albro (CE), Columbia, SC, received an award from the U.S. Army Corps of Engineers.

76 Edward D. Tagg (ACCT), Radford, VA, is a vice president of Reserve America.

77 Richard B. Galiher (FH), Blacksburg, VA, was inducted into the International Association of Fire Chiefs’ Hall of Fame.

78 Patricia M. Dove (ART), Chester, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.


80 Michael W. Cates (MTG ’69), Ashland, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

81 Mark A. Fauske (MKTG ’83), Columbus, OH, was inducted into the American Society of Home Inspectors’ Hall of Fame.

82 Eric D. Terry (FH), Magnolia, TX, is president of the Virginia Hospitality and Travel Association.

83 Darren R. Connor (CE), Catonsville, MD, was appointed by Virginia Gov. Bob McDonnell to the State Board for Community Colleges.

84 Raymond M. Alcald (CE), Whaling, WA, 10/2/13.

85 Robert D. Cryer (CE), Eric, PA, is director of internal control and regulatory analysis for the Pennsylvania Public Utility Commission.

86 Polly E. Trammell (FH), Alexandria, VA, is a senior business analyst for Time Warner Cable.

87 John E. DeBello (BC), Mamaroneck, NY, 2/21/13.

88 Matthew J. Eick (AGRN), Magalia, CA, was inducted into the American Society of Agronomy’s Hall of Fame.

89 Robert D. Cryer (CE), Eric, PA, is director of internal control and regulatory analysis for the Pennsylvania Public Utility Commission.

90 Theresa M. Koehler (PSYC), Midlothian, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

91 Marc W. Sheffler (FH), Alexandria, VA, is a senior business analyst for Time Warner Cable.

92 Jonathan B. Haufler (FH), Blacksburg, VA, received the Award for Community College Leadership from the Virginia Community College System.

93 Thomas V. Cooney (FH), Weymouth, MA, 10/2/13.

94 Robert M. Wied (FH), Blacksburg, VA, was inducted into the American Society for Testing and Materials’ Hall of Fame.

95 Mark A. Crowder (PSY), Sparta, WI, is a senior business analyst for Time Warner Cable.

96 James L. Bland (CE), Waynesboro, VA, 11/6/13.

97 Jonathan P. Finney (FH), Lexington, KY, was inducted into the Virginia Tech College of Science Hall of Distinction.

98 Brian D. Rabb (FH), Blacksburg, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

99 R. E. “Bob” Peak (FH), Blacksburg, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

100 Charles “Stu” Echols Jr. (BC), Roanoke, VA, 10/15/13.

101 Eldridge N. Busic (FH), Blacksburg, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

102 Mark A. Fauske (MKTG ’83), Columbus, OH, was inducted into the American Society of Home Inspectors’ Hall of Fame.

103 Jean Dickinson Fielden (BAD), North Myrtle Beach, SC, 12/15/13.

104 Carl R. Herschel (FH), Mechanicsville, VA, 11/2/13.

105 Glenn E. Giles Jr. (FH), Hampton, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

106 Andrew J. N. Powell (JAGR), Lexington, KY, 10/30/13.

107 Mark M. Kimbley (MKTG ’88), Newark, DE, 11/13/13.

108 Kimberly L. Muller (GSCM), Harrison, NY, was inducted into the Virginia Tech College of Science Hall of Distinction.

109 Archdi C. Brock (FH), Chester, VA, 11/13/13.

110 S. Dicky Dao (ANSC ’70), Yokohama, Japan, 11/13/13.

111 M. H. Furin (BC ’87), Roanoke, VA, 12/13/13.

112 John E. Fuday (FH), North Myerksh, BC, 12/13/13.

113 Carl R. Turner (FH), Chester, VA, 11/2/13.


119 John B. Raymond (FH), Blacksburg, VA, 10/25/13.


121 Michael D. Spellman (FH), Chesapeake, VA, 12/12/13.

122 Jonathan P. Finney (FH), Lexington, KY, was inducted into the Virginia Tech College of Science Hall of Distinction.

123 Darrell G. Derocher (FH), Alexandria, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

124 Frankie L. Hamilton (FH), Blacksburg, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

125 Frank M. Venes (FH), Blacksburg, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

126 Diane L. LeBlanc (FH), Blacksburg, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.

127 Mary Nolen Blackwood (FH), Madison, VA, was inducted into the Virginia Tech College of Science Hall of Distinction.


129 Thomas V. Cooney (FH), Weymouth, MA, 10/2/13.

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Say hello to the future.

Imagine charging your cell phone just by walking around with it in your pocket. Justeen Olinger has researched that promising technology, and more, while studying for the electrical engineering degree she's on track to earn in May.

Though she’s responsible for paying for her own education, Justeen has made the very most of her time at Virginia Tech, because scholarships mean she doesn’t have to hold down a part-time job.

Helping talented students like Justeen was what Robert Belz (industrial engineering ‘38) had in mind when he remembered Virginia Tech in his will. Years after his lifetime, the scholarship he created is helping Justeen live up to her potential. And his gift will continue to help outstanding students for generations to come.

Create your own legacy. Learn how a gift through your will or trust can touch the future forever at Virginia Tech.

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Visit: www.givingto.vt.edu

Alumna’s research leads to protection of endangered shark

Refer to her as “the most dangerous of all sharks” by 20th-century conservationist Jacques Cousteau, oceanic whitetip sharks were long considered relatively unstudied in comparison to other large open-ocean sharks—until Lucy Howey-Jordan (biology ‘04) and her research team conducted a remarkable study.

In 2010, Howey-Jordan and a group of international scientists launched a pilot study in the Bahamas using satellite-linked archival transmitters to track the movements of whitetip sharks, which have suffered an estimated 90 percent decrease in population. The team’s findings, published in the February 2013 edition of the science journal PLoS ONE, not only received widespread press coverage, but also spearheaded a successful effort to protect the critically endangered species.

Learn more about the whitetip research at www.science.vt.edu/news/magazine/.

Lucy Howey-Jordan ’04, reaching into the water, works with oceanic whitetip sharks.
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Adaptive reuse: a family tradition
by Alex Baruch

A father-and-son duo is championing adaptive reuse in the construction industry, repurposing historic properties while continuing a family tradition in sustainable construction practices.

Although adaptive reuse has been a significant part of the family business for years, Tony Azola and Virginia Tech alumnus Ed Azola have used this concept to preserve historic properties while maintaining the modern comforts that high-end customers desire.

Family business for years, Tony Azola said Virginia Tech exposed him to the environmental concepts that influenced how he manages projects. "Forestry opened my eyes to the world. All of the garbage we make has to go somewhere, so I have to be able to rewrite old things—especially buildings. Virginia Tech opened my eyes to those concepts of reuse and recycling, and I try to bring those principles to the job every day," he said.

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Alum’s Doritos commercial plays Super Bowl, takes $1 million prize

by STEVEN MACKAY

Raj Suri (computer science ’97) had a spectacular Super Bowl Sunday. No, he didn’t bet on the Seahawks decimating the Broncos. He couldn’t have cared less about the game. The part-time actor/producer made a Doritos commercial that aired during the game, America’s most-watched annual TV event. He won $1 million for his efforts, too.

Titled “Time Machine” and inspired by the comedy classic, “Back to the Future,” the commercial featured a precocious boy using a cardboard time machine and a few slices of hand-dips to duper an adult passerby out of his bag of Doritos. The spot—short during one day and costing roughly $300, with much labor donated by friends and family—was one of five fan-made ads featured in the game.

Based in Phoenix, Ariz., Suri landed a job as a systems analyst at Intel right out of college in 1997. His hobby, however, is acting and producing.

“This whole experience is surreal. I am an amateur producer by definition. To create something that is regarded as to be a super flop in advertising is hard to wrap my head around. It’s odd that people want to talk to me. But it’s been fun. I do these competitions to create opportunities for myself,” said Suri. “I cannot wrap my mind around the fact that our commercial was seen by 111 million people… I’m extremely proud.”

Steven Mackay is the College of Engineering’s communications manager.

Coordinator for VT Engage: The Community Learning Collaborative; Steffan B. Fuhrer (PSIC), regional science, was selected as the Hokie Hero for the Maryland game.

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At Virginia Tech, collaboration is at our core. Leveraging 13 consecutive years of research growth and 866 collaborative sponsored research awards last year alone, we cooperate with business and industry partners in order to accelerate entrepreneurialism and impact economies.

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“Little Hooligan”: Jonathan H. Kim, a senior industrial design major, won the people/culture category in the 2013 Virginia Tech Education Abroad photo contest with this image, titled “Little Hooligan,” taken in Auroville, India. Said Kim, “We made a quick stop at a market for my professor to buy supplies and the boys came up to the side of our van and started goofing around and having fun.” Go to www.vtmag.vt.edu to find a link to the contest’s images.
**2014 Reunions**

*Sept. 20* – Georgia Tech  
Class of 1974 – 40th Reunion  
Class of 1979 – 35th Reunion  

*Sept. 27* – Western Michigan  
Class of 1964 – 50th Reunion  

*Oct. 23* – Miami  
Class of 1984 – 30th Reunion  
Class of 1989 – 25th Reunion  

*Nov. 1* – Boston College  
Class of 1969 – 45th Reunion  

*Nov. 28* – Virginia  
Young Alumni Reunion

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**2014 Homecomings**

*Aug. 30* – William & Mary  
Veterinary Medicine  
Graduate School  

*Sept. 13* – East Carolina  
Corps of Cadets  
College of Natural Resources and Environment  
College of Liberal Arts and Human Sciences  

*Sept. 20* – Georgia Tech  
College of Agriculture and Life Sciences  

*Sept. 27* – Western Michigan (Homecoming Parade)  
Alumni Center Open House and Tailgate  
College of Engineering  
Student Affairs: SGA and Order of the Gavel  
Highty-Tighties  
Marching Virginians  

*Oct. 23* – Miami  
College of Science  

*Nov. 1* – Boston College  
Pamplin College of Business  

*Nov. 28* – Virginia  
College of Architecture and Urban Studies  
Student Alumni Associates 45th Reunion

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**reunions & homecomings**

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[www.alumni.vt.edu/reunion]