PICTURE-PERFECT
The land-grant today
All in the Family: Holistic learning in the residential colleges
Education doesn’t end in the classroom. Virginia Tech’s residential colleges are structured to provide live-in faculty mentors to students, offer a holistic approach to education, and ensure that students get the most out of their college experience.

Picture-perfect: The land-grant today
Learning. Discovery. Engagement. One-hundred and fifty years after the Morrill Act was signed into law, the land-grant mission is alive and well at Virginia Tech. From logger safety to obesity research, faculty, staff, and students across the university are taking this mission to heart.

Full STEM ahead: Educating the next generation
In a middle school, children build small solar-powered vehicles, part of a program designed by Virginia Tech faculty to kindle excitement about engineering concepts. On campus, undergraduates gather in a lab space in their residence hall, using routers and 3-D printers to build prototypes. In a multitude of ways, scholars across campus are responding to a call for unique approaches to STEM education.
Virginia Tech among universities to receive grant to launch program for entrepreneurs

In February, the University of Maryland, George Washington University, and Virginia Tech jointly announced $3.75 million from the National Science Foundation to launch a regional Innovation Corps (I-Corps) node with one sweeping goal: find the best entrepreneurial student and faculty researchers and help them bring their discoveries to market.

I-Corps takes researchers through a seven-week program based on Stanford University’s Lean Launch Pad course, with additional elements designed just for I-Corps participants. The program emphasizes talking to as many potential customers as possible, pivoting in response to insights, building low-cost prototypes to get customer feedback, constantly adapting, and building a scalable business model.

The program is designed to foster a culture of entrepreneurship among researchers and students. Intended outcomes will include a new startup, patent, or technology license to a company.

Virginia Tech tops ‘best value’ lists

Virginia Tech has landed on Kiplinger’s Personal Finance list of the 100 best values in public education for 2012-13. The ranking cites four-year colleges and universities that combine outstanding education with economic value. Since the ranking began in 2006, Kiplinger’s has included Virginia Tech each year among the top public universities for its value in this annual survey. Virginia Tech made the list due to “its high four-year graduation rate, low average student debt at graduation, abundant financial aid, a low sticker price, and overall great value.”

Virginia Tech is also included again among “best value” public universities according to The Princeton Review Best Value Colleges for 2013 list.

Partnering with USA Today, the Princeton Review selected “best value” institutions based on its surveys of administrators and students at more than 650 public and private colleges and universities. More than 30 data points covering academics, costs, and financial aid were considered. Institutions were evaluated using data provided by each school as well as opinion data collected from students at each school.

letters to the editor

On Nikki Giovanni

Nikki Giovanni’s words enabled me, the parent of a member of the Hokie Nation, to move forward after the April 16 tragedy. They signified campus reuniting her words, “We will prevail,” gave me strength to move about the desolate campus that, in prior visits, was full of life, joy, youthfulness, and caring.

I would like to sing the praises of Will Hancock (mechanical engineering ’93). My family was stuck at a gas station near Charleston, W.Va., after having a minor wreck in Dayton, Ohio, coming through a blizzard on our way home to North Carolina. Within minutes of me raising the hood on our Pathfinder, Will walked by, noticed my VT hat, and asked if we needed help. He took me to two garages and a rental car office then went back to check on my wife and daughters. His kindness and attention literally saved the day. It speaks to a bond that I think all Hokies feel, especially following the April 16 tragedy. We will prevail, a statement repeated by the desolate campus that, in the beginning, gave me strength to move about.

I would like to add that the Corps of Cadets stands today as the most cherished part of my life at Tech, on equal footing with the quality academic education. The benefits of the corps experience have been positive beyond measure in both my military service and civilian career, and I reverie it.

Charles E. Payne (business administration ’62), Virginia Beach, Va.

A helping hand

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Charles E. Payne (business administration ’62), Virginia Beach, Va.

A ring underwater

Reading other letters of lost class rings brought to mind my own. Unlike most others, though, I know where mine is. In 1966, I was a first lieutenant being ferried in a Huey chopper a couple of miles offshore and parallel to the Vietnam coast. Catastrophic engine failure forced a crash-landing at sea that resulted in fatalities. I led the surviving passengers who didn’t have flotation gear in a hardrowing swim to shore through choppy, wind-tossed seas. About 100 yards from shore, we encountered a terrific undertow. The deadly current sucked the socks off my feet, the watch off my wrist, and my class ring off my finger.

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Early education has big payoff
Investing in high-quality early education has dramatic and sustained payoffs not just for the children directly involved, but for society as well. Think of it as a kind of educational compound interest. When children are prepared, their early success leads to more successes. But when they’re not prepared, a sliding spiral can begin. The spiral can be upward, or it can be downward.”
—Craig Hamer, professor and distinguished scholar in the Virginia Tech Carilion Research Institute, on the Abecedarian Project, a study of the potential benefits of early childhood education.

Professors Burkhart and Dove named Virginia’s Outstanding Scientists

Harold E. Burkhart, University Distinguished Professor and the Thomas M. Brooks Professor of Forestry in the College of Natural Resources and Environment (CNRE), and Patricia M. Dove, C.P. Miles Professor of Geosciences in the College of Science, have been designated Virginia’s Outstanding Scientists of 2013 by the Virginia governor’s office and the Science Museum of Virginia.

“Forest scientists consider Harold Burkhart the father of forest biometrics, which explores the theory and applications of quantitative models of forest stands,” noted Virginia Tech President Charles W. Steger. “Harold’s international leadership in this basic research vastly improved forest development, particularly in the South.”

“Professor Burkhart’s modeling methods have been adopted, extended, and applied in Virginia, across America, and around the world, thus contributing to the goal of sustainable management of forest resources,” said Paul Winistorfer, CNRE dean. “He has significantly advanced the science of sustainability.”

Dove, who in 2012 was elected as a member of the National Academy of Sciences, is the director of the Biogeochemistry of Earth Processes research group. “The College of Science is extremely proud of Professor Dove and all of her achievements,” said College of Science Dean Lay Nam Chang. “As our only active member of the National Academy of Sciences, she has become one of the world’s foremost authorities on biomaterialization. A world-class science program starts with world-class researchers like Patricia.”

Changes at the helm of business, veterinary colleges

Richard E. Sorensen, dean of the Pamplin College of Business, will retire June 30 after 31 years of service. Sorensen was appointed dean and professor of management science (now business information technology) at Virginia Tech in July 1982.

Robert T. Sumichrast, currently the dean of the Terry College of Business at the University of Georgia, will succeed Sorensen as dean at Virginia Tech on July 1.

Dr. Gerhardt G. Schurig, dean of the Virginia-Maryland Regional College of Veterinary Medicine, will be stepping down from his position in the summer. Appointed as the college’s third dean in 2004, Schurig first joined the veterinary college faculty in 1978.

X.J. Meng awarded $2 million grant to study chronic hepatitis E

Dr. X.J. Meng, professor of virology in the Virginia-Maryland Regional College of Veterinary Medicine, received a five-year, $2 million grant from the National Institutes of Health. Meng directs one of the world’s leading hepatitis E virus research centers, the Center for Molecular Medicine and Infectious Disease, where he and his colleagues have spent years studying the hepatitis E virus and are now turning their attention to chronic cases of the virus, which causes more than 20 million liver infections per year. The project seeks to develop a chronic hepatitis E model to study how the disease progresses and its possible prevention and treatment.

Tomorrow’s cruise control could have environmental features

By tapping into GPS data, a predictive eco-cruise control system being developed by the Virginia Tech Transportation Institute could save fuel and reduce emissions. Traversing steep grades isn’t fuel-efficient, and conventional cruise control applies the throttle in the pursuit of constant speed. But if a route is mapped out with GPS and grades are predicted, a vehicle can move slightly faster downhill and slightly slower uphill to achieve an average speed that saves fuel.

The system, being developed by Hesham A. Rakha, a professor of civil engineering and the director of the Center for Sustainable Mobility at the institute, along with other center researchers, students, and colleagues at other institutions, could be adapted to the wide range of passenger cars and light trucks sold in the U.S.

U.S. News hails master’s program in information technology

U.S. News & World Report has again honored the online master’s program in information technology at Virginia Tech as one of the nation’s best distance-learning courses in its recent Top Online Education Rankings. Additionally, the online master’s program in computer information technology—offered by the College of Engineering and the Pamplin College of Business—is ranked third in the U.S.

Scientific break-through opens door to understanding universe

Physicists at Virginia Tech, as part of a collaboration with U.S. and Chinese researchers, took part in one of 2012’s top scientific breakthroughs, according to Science Magazine. The team, working at the Daya Bay reactor facility in China, discovered the third and final known neutrino mixing angle.

Helmet research to draw in additional sports

Hockey, baseball, softball, and lacrosse players will soon have better information about helmet safety available to them. Stefan Duma (above), Harry C. Wyatt Professor and head of the Virginia Tech Wake Forest University School of Biomedical Engineering and Sciences, is expanding his groundbreaking research into football helmets and concussions. Ratings on hockey helmets are expected to fall in 2013, followed by youth football in 2015, and then baseball, softball, and lacrosse in 2016. During that time, all ratings for adult and youth football helmets will continually be updated and released to the public.

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The discovery was heralded by the magazine as one of nine runners-up to the discovery of the Higgs boson, a particle for which the standard model of particle physics had been developed over decades everywhere we've looked, said Jon Link, associate professor of physics. The model works so well that it is known as the standard model. In fact, the Higgs boson is very likely to be the reason why we see all the particles from neutrinos to photons. The theory describes the behavior of all particles in the universe, including the Higgs boson. The discovery may have opened exciting new doors in physics. The standard model of particle physics, which describes the behavior of all particles from neutrinos to the Higgs boson, is very frustrating, said Jon Link, associate professor of physics. The model works so well that for decades everywhere we've looked we've found things to be in agreement with the model. But in neutrino physics there may be something interesting going on. There is some evidence of a fourth type of neutrino and possibly more. For example, when we look at neutrinos coming from a nuclear reactor, like Daya Bay, we see about 6 percent fewer than we expect from calculation. This can be interpreted as evidence of additional neutrinos mixing with the three known types. Researchers study Australian track record of construction safety The National Institute of Safety and Health awarded approximately $1 million over the past five years to Brian M. Kleiner, director of the Myers-Lawson School of Construction, and his colleagues to study how the behavior of workers can be interpreted as evidence of additional neutrinos mixing with the three known types.

Virginia Tech teams with energy company to identify carbon storage alternatives

Virginia Tech's new PV Solar Park is one of the largest in the world, and it is expected to be completed in 2017. The park covers 2.5 acres and has a capacity of 6.5 MW. The park uses high-efficiency solar panels that can absorb up to 90% of the sunlight and generate up to 52% more energy than traditional solar panels. The park is expected to generate up to 1.8 million kWh of electricity per year, which is enough to power up to 500 homes.

The research is being conducted by a team of scientists from the Department of Civil and Environmental Engineering and the Department of Mechanical Engineering at Virginia Tech. The team is led by associate professor Donald L. Bone, who is leading a study on the potential of carbon capture and storage. The researchers plan to inject and store as much as 20,000 tons of carbon dioxide into the coal seams. Three new wells will be drilled to monitor reservoir pressure, gas composition, and the carbon dioxide's path. The targeted coal seams are in the Pocahontas and Lee formations and range from 900 feet to 2,200 feet in depth and from 0.7 feet to 2.5 feet in thickness. The injection will be performed during a one-year period and builds on a recently completed 1,000-ton injection test that took place in neighboring Russell County, Va., in 2009. It is expected that the coal seam will absorb the carbon dioxide and potentially release even more methane for collection and use, as occurred in the Claiborne County, Va. Three existing coal bed methane wells donated by CONSOL Energy Inc. to explore the feasibility of storing carbon dioxide in unmineable coal seams and the potential for enhanced coal bed methane recovery.

Conducted by the College of Engineering’s Department of Mining and Minerals Engineering and funded by the U.S. Department of Energy’s National Energy Technology Laboratory, the pilot project will begin this fall in Buchanan County, Va. Three existing coal bed methane wells donated by CONSOL Energy Inc. will be converted for carbon dioxide injection, and researchers plan to inject and store as much as 20,000 tons of carbon dioxide into the coal seams. Three new wells will be drilled to monitor reservoir pressure, gas composition, and the carbon dioxide’s path.
From Caterpillar to Butterfly Our community continues to grow.

The Virginia Tech Alumni Association
Hokie Classic
June 17, 2013

Join fellow alumni, special guests, and friends for a captain’s choice golf tournament at the Pete Dye River Course! Greens fees, cart, door prizes, commemorative dry-fit polo, adult beverages, lunch, and post-tournament dinner in the new clubhouse overlooking the New River. It’s all included.

Registration is limited to the first 120 golfers, so register early. Enjoyable for golfers of every skill level. $150 per person.

Learn more about the tournament and sponsorship opportunities at www.alumni.vt.edu/events.

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Nighttime, illuminated: Researchers uncover the secrets of sleep

by JEAN ELLIOTT

After 20 years of research into nighttime habits before artificial lighting, history Professor A. Roger Ekirch in the College of Liberal Arts and Human Sciences has resurrected the idea of “segmented sleep,” demonstrating that the eight hours of sleep most people strive to get goes against natural sleep cycles.

Ekirch’s research reveals that people slept very differently before the Industrial Revolution. “The nighttime slumber to which we aspire, not always successfully, is consolidated,” Ekirch said, “whereas the dominant form of sleep from time immemorial consisted of a ‘first sleep’ and a ‘second sleep.’”

For his award-winning book, “At Day’s Close,” Ekirch consulted diaries, medical texts, and court records, in which he discovered more than 500 references in a variety of languages to this bimodal sleep pattern. His findings are also supported by modern science. in a recent study at the national institute of Mental Health, subjects deprived of artificial light for up to 14 hours a day experienced the same pattern of sleep depicted in historical sources.

Ekirch, who has authored four books, said he enjoys writing about men and women “who lived on the margins.” He is currently working on a fifth book about the far-reaching impact of the most violent mutiny in the history of the British Royal Navy. Across campus, other researchers are also burning the midnight oil. Christopher Barnes in the Pamplin College of Business explored the connection between lack of sleep and ethics. He and three other scholars conducted four studies in different settings to examine the influence of low levels of sleep in decision-making situations involving ethical considerations. “We consistently found that people were more likely to behave unethically when they were short on sleep,” he said.

in 2011, the Arlington Innovation Center: Health Research, in Virginia Tech’s National Capital Region, received a $1.5 million cooperative research and development agreement from the U.S. Army for neuroimaging studies of human performance. “The central scientific effort of this project will be to improve our understanding of how the brain stem and thalamus regulate sleep in humans, and how these systems are affected by stress and sleep restriction,” said Seong K. Mun, director of the center and a professor of physics.

To read the full story on Ekirch, written by Jean Elliott in the College of Liberal Arts and Human Sciences, visit www.vtmag.vt.edu.
As students bear down to meet the requirements of graduation, university staff members are hard at work on commencement. A few of these self-described “commencement junkies” filled us in on what it takes to pull off such a massive ceremony.

Charged with coordinating and planning the ceremonies, the University Commencement Committee is an all-volunteer group, said Dan Taylor, a professor of agricultural and applied economics, who started as a commencement usher about 25 years ago and now heads the committee.

In the Office of the University Registrar, it’s standard practice for staff members to pull all-nighters, checking and double-checking that the right forms are in place and that each potential graduate’s credits add up.

Commencement speakers are chosen by the Office of the President with input from undergraduate representatives. One long-standing tradition is to invite the Virginia governor to speak in the year after a gubernatorial election.

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Leading up to commencement, grounds employees put in four 10-hour days to prepare the campus for visitors. Every lawn is mowed, every street swept. More than 30 facilities workers put in five eight-hour days—that’s more than 1,200 work hours—to set up spring commencement. Immediately after the ceremony, workers spend about three hours taking everything down.

Chairs—3,000 to 5,000 of them—are rented. Each chair is fixed to the field by two anchors.

About 30 to 40 volunteer marshals help direct students to their places, while about 120 volunteer ushers help parents and well-wishers reach their seats in time.

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More than 30,000 people descend on the Blacksburg area for a typical spring commencement.

Security is ever present. For first lady Michelle Obama, one of the spring 2012 commencement speakers, members of the U.S. Secret Service joined additional university police officers, and facilities workers began their day at 4 a.m. in order to pass through security.

A Roanoke company sets up the stage and sound equipment.

As the Corps of Cadets’ Color Guard is shuffled to and from the various ceremonies across campus, the university provides them with quick meals.

Unless weather conditions become dangerous, the ceremony will continue as the rain falls. There isn’t a rain site, and rescheduling is out of the question.

For spring 2012 commencement highlights, see a video at www.vtmag.vt.edu.

Jesse Steele is a graduate assistant with the marketing and publications unit.
Outside of academics, Webster is an avid runner who often can be spotted on the Drillfield. He also plays guitar and sings in a folk band called "Simple Gifts of the Blue Ridge."

Webster grew up doing hands-on research with his father, who was a biology professor. Today, this style of learning sets Webster apart. In most of his classes, he takes his students into the field on a nearly weekly basis.

Beth Cheever (Ph.D. biological sciences ’12), a postdoctoral researcher in the biology department at Trent University in Ontario, Canada, and one of Webster’s former Ph.D. students, recalls Webster’s field trips. “He was always really excited to be in the field and show science from a hands-on perspective,” Cheever said. “You can tell he really enjoys being outside and sharing his research interests with his students.”

Over the years, teaching helped Webster to evolve as a researcher. “What you teach influences what you get interested in researching and vice versa; they feed each other,” he said. He expanded his interests from ecosystem modeling—using abstract representations to examine the interactions of living organisms with their environment—to also include stream ecology, which explores the ecosystem interactions within a stream. His current research projects include organic matter dynamics in streams, the impact of nitrogen and phosphorus in streams, stream ecosystem responses to disturbances, and river-floodplain interaction.

Webster said the greatest change in his career has been becoming more comfortable both with the material he teaches and with how to communicate with students. “I think the most important thing to be a good teacher is you have to know what you’re talking about,” he said. “Students have to recognize that you’re an authority and you’re not just reading it out of a book. Trying to communicate that takes a lot of practice, a lot of learning from other people. I co-taught courses with some really good teachers over the years, and I learned a lot from them.”

Webster said he has learned what to realistically expect from his students as well as how to inspire their best work. Students appreciate the high expectations he sets for them, he said, and they succeed because they feel like they’re being pushed.

In 1978, a teaching collaboration between Webster and Fred Bestfield, professor and associate head of the Department of Biological Sciences, led to the creation of the Stream Team. What started out as two professors joining graduate research labs with common interests evolved into a more official group that includes five faculty members and about 11 graduate students per year. The ecosystem research team travels to sites around the region, conducting studies, applying for grants, and writing articles.

Brenda Winkel, professor and biological sciences department head, recognizes Webster’s worth in both researching and teaching. “He is always doing more than is absolutely required of him. I think it’s because he loves to teach and loves to interact with students in a classroom setting,” she said. “I can’t think of a time when water wasn’t important [to the world, and] that’s what makes [his work] effective. He can relate the subject in incredible ways to what’s going on in the world and he gets people out in the field.”

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www.vtmag.vt.edu

—continued on page 14
Remember the time what’s-his-face was guarding that guy on that other team? And that one guy took that shot — was it a two- or three-pointer? And boom! He drained it and the crowd went wild. I’ll never forget that!

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Outside of academics, Webster is an avid runner who often can be spotted on the Drillfield. Although he doesn’t compete in as many races as he once did, he still makes time for one each year. He also plays guitar and sings in a folk band called “Simple Gifts of the Blue Ridge.” The band has recorded four albums.

As the field and lab ecology students trekked back through the stream, laughing about the salamander they found, Webster walked quietly behind them, navigating through the rocks and thorns, obviously more comfortable here than he was in his office detailing his career accomplishments. In the van on the return trip to campus, Webster stopped to point out sinkholes and coal deposits—proving that his range of knowledge and desire to teach are never-ending.

Jenn Bates, a junior communication major, is an intern with Virginia Tech Magazine.
“Up to that point, they had been so polite and thoughtful and formal,” said Jennifer. “The exchanges I had with students in the laundry room were wonderful. They began to see us not as disciplinarians, but as [colleagues] there to support and facilitate the community.”

By history, temperament, and philosophy, the Saxes are a great fit to lead the holistic learning and community-building efforts at the residential college at West AJ. Ben Sax is assistant professor of Judaic studies in the religion and culture department in the College of Liberal Arts and Human Sciences. Jennifer Quijano Sax is interim director for education abroad in the Office of International Research, Education, and Development. Before coming to Virginia Tech in 2008, the couple spent four years as live-in faculty in one of the 38 residential colleges at the University of Chicago. It was a positive experience for the Saxes, and they longed to once again be part of the lively intellectual environment that results from living with people of different ages, interests, backgrounds, and goals.

The Saxes also bring a surprising element to the multigenerational mix of the residential college: two children, Sarai, age 7, and Avishai, age 4. They also have two cats, Falafel and Monty, who, like the children, get a lot of attention, love, and treats. “[The] students are smart, thoughtful, creative people at a wonderful time in their lives where anything is possible,” said Ben. “It is refreshing to live with them—it reminds us of why we got into this profession, and it keeps us inspired and curious. We wanted our kids to experience that, too.”
The multigenerational environment is a place where students can be mentored and in turn mentor those who come after them. “Because I live in West AJ, I’ve had opportunities to be a part of events I never dreamed of, and [I’ve] met such a wide variety of people,” said Tara Lynn Shockley, a first-year student from San Diego majoring in human nutrition, foods, and exercise. “I am incredibly lucky as a freshman to meet upperclassmen I can look up to and who can help me find my niche on campus.”

Chief among the philosophical underpinnings of the residential college approach is that learning occurs— and does—happen everywhere, not just in the classroom. “Thinking doesn’t stop at the end of class,” Ben said. “You never switch off learning. Ideas need time to percolate.”

It’s all part of a holistic approach to learning, said Patty Perillo, vice president for student affairs. “Our challenge is to create a community that nurtures learning and growth for all of its members, across our curricula and co-curricular services and programs, and woven throughout the fabric of a student’s university experience,” said Perillo. “The residential colleges are one way we are creating the circumstances in which students are challenged and encouraged to refraime how they approach their college and lifelong learning experiences.”

The residential colleges at Virginia Tech provide places where students can realize the advantages of a small, student-centered college, along with the opportunities of a large, research-oriented university. West Ambler Johnston houses 800 students, and each member is assigned to one of four houses. A live-out associate faculty principal leads each house and is assisted by a live-in graduate fellow. In addition, 80 faculty fellows, selected from across the university and the community, participate in the daily life of the college, making sure each student has opportunities for research, service learning, and international experience.

“At Virginia Tech, the Dr dellfi symbolically separates the two parts of student’s lives—in the classroom and outside the classroom,” said Frank Shushok, associate vice president for student affairs. “Our residential colleges represent an important partnership between academics and student affairs, and the re-emergence of faculty in shaping the out-of-classroom experience.”

Faculty support makes a difference in how students experience Virginia Tech. “This is the difference between a ‘room in a dorm’ and a residential college,” said Jennifer. “You have a say, you are known, and you choose to shape your own learning experience. It’s organized serendipity. We don’t plan or tell the students what to do—we help them make their ideas happen. This is their initiative.”

Maggie Appel-Schumacher, of Mackenbach, Germany, is a senior majoring in German and international studies and a resident advisor in West AJ. “We were given the structure and the resources,” she said, “but no plan. That’s really exciting. Everyone there is intentionally committed to the community, and we are allowed to share ideas, make things happen, and foster a sense of belonging.”

residental colleges

The college at East Ambler Johnston opened in fall 2011. This multigenerational learning community quickly established service-learning programs, most notably with the Head start Association in Giles County, Va. in the program, students work in Head start classrooms to enhance the preschoolers’ education. “I have a lot of confidence in Virginia Tech students,” said Ben. “The harder I make my classes, the higher they rise to succeed. The residential college can make a difference by raising expectations, expanding the bounds of student experience, connecting them to new opportunities, and providing a safe space to think critically and learn continu— Our goal is to make it a vibrant community. We’ll fine-tune it as we go along.”

“Sandy Broughton is the assistant director for marketing and communications in the Division of Student Affairs.”

The residential college concept dates back to the 12th century. The idea evolved at Oxford and Cambridge universities, which would provide models for residential colleges in the U.S. Key characteristics of a Virginia Tech residential college include:

- **Multidisciplinary:** Students from every discipline are welcome, and this diversity is essential to the learning philosophy.
- **Multifaceted:** Students participate from all classifications, first-year through graduate, reside in the community. There are many opportunities to interact with faculty, staff, and their families (and pets).
- **Live-in faculty:** The community is led by an academic faculty member, working and living side-by-side with student affairs professionals.
- **Highly engaged faculty:** There is substantive faculty engagement with members of the community.
- **Well-established governance:** Students, faculty, and other members of the community are afforded significant opportunities to engage in decision-making.
- **Mission-centric spaces:** The physical environment provides intentional spaces that practically and symbolically communicate a residential college’s emphasis on holistic student development.

Residents may have been surprised when Ben bought 50 tickets to opening night of the biggest movie event since “The Hunger Games” leapt from the Kindle to the big screen, but his support of the midnight showing of “The Hobbit” started to make more sense when he arranged for Matthew Gabrielle, associate professor and coordinator of medieval and early modern studies, to offer a seminar before the movie. Gabrielle talked with students about the origins of monsters and why medieval times are associated with fantastical creatures.

Based on a typical semester’s course load, students spend “roughly 15 to 18 hours per week in the classroom,” said James Pfenven, associate director for academic initiatives in Housing and Residence Life. “This means they spend more time outside of the classroom than in it. We want to make this time meaningful. Our collaborative initiatives make residence halls more than just a place where students go after class.”

Initial reports from West AJ are equally as peers provided more academic support.

-Downtime was used more productively
-Physical damage to the facility was low
-Student conduct referrals were low
-Participation in events was strong
-Number of returning residents was high
-Retention increased

The opening of the residential college at West Ambler Johnston in fall 2011 followed an enormously successful first year for the 320 students in the Honors Residential College at East Ambler Johnston, the first residential college at Virginia Tech. During the 2011–12 academic year, residents

-Resident GPAs were among the highest on campus
-Retention increased
-Number of returning residents was high
-Participation in events was strong
-Student conduct referrals were low
-Physical damage to the facility was low
-Interaction with faculty increased
-Downtime was used more productively
-Peers provided more academic support

Frank Shushok, associate vice president for student affairs and architect of the residential college initiatives at Virginia Tech, is conducting a five-year quantitative and qualitative research project on the effect of residential colleges on student learning and well-being.

The college at East AJ opened in fall 2011. This multidisciplinary learning community quickly established service-learning programs, most notably with the Head start Association in Giles County, Va. in the program, students work in Head start classrooms to enhance the preschoolers’ education. “I have a lot of confidence in Virginia Tech students,” said Ben. “The harder I make my classes, the higher they rise to succeed. The residential college can make a difference by raising expectations, expanding the bounds of student experience, connecting them to new opportunities, and providing a safe space to think critically and learn continu— Our goal is to make it a vibrant community. We’ll fine-tune it as we go along.”

“Sandy Broughton is the assistant director for marketing and communications in the Division of Student Affairs.”

“We wanted to offer students in the residential college a real chance to engage in the local community,” said Robert Stephens, faculty principal of the Honors Residential College at East Ambler Johnston. “We wanted to create a way to serve communities that really have a need.”

**With honours:**
For more on the Honors college’s first year, visit www.vt.edu/spotlight/innovation/2012-07-02-communities/principals.html

Virginia Tech Magazine spring 2013
Cultural Awareness
Travel program benefits cadets

by Maj. Carrie Cox

“Like to think of myself as a culturally open-minded person who stays informed about current events around the world, but I learned that nothing can replace real-life experiences in another country,” said Austin Burns, a senior cadet majoring in history.

For the past seven years, the Virginia Tech Corps of Cadets has participated in the Olmsted Cadet Travel and Cultural Immersion Program to provide those international experiences. Funded by the George and Carol Olmstead Foundation, the program is designed to help prepare future military officers for international assignments and strengthen the nation’s ability to function efficiently and effectively in foreign countries.

Only two of the six senior military colleges in the United States received travel grants for the summers of 2011 and 2012—Virginia Tech and Virginia Military Institute (VMI)—and Tech earned another grant for summer 2013. Because of the quality of the corps trips, VMI asked to join Tech’s trips the past two years instead of coordinating a separate program.

Last summer, four Tech cadets and four VMI cadets traveled to Panama, where they toured the country and the Panama Canal, performed three community service projects, and met with various officials, including U.S. Ambassador to Panama Jonathan D. Farrar.

“As a soon-to-be Marine Corps officer, I will be a member at the tip of the spear that is our military,” Burns said. “This means that with any surge of troops I will be among the first to interact with the different countries and cultures wherever I should be deployed. In these crucial moments of first contact, having the proper tact is vital to the outcome of missions. My travels to Panama have been the first step to opening myself to just how different other cultures are and how to best interact with respect.”

The Olmsted foundation, based in Falls Church, Va., has a long history of supporting international educational programs for active-duty military officers, cadets, and midshipmen at the U.S. service academies. In 2004, those opportunities expanded to include ROTC cadets at the six senior military colleges.

Assigned to China in 1943 during World War II, Gen. George Olmsted interacted extensively with both Chinese and Japanese officials. That experience convinced him that American military leaders suffered from a lack of exposure and sensitivity to foreign cultures and led him to establish the foundation.

Through the foundation, the Corps of Cadets has coordinated travel to Rio De Janeiro, Brazil; Santiago, Chile; Buenos Aires, Argentina; and most recently, Panama. On two trips, the corps provided funding for a Citizen-Leader Track cadet (a non-ROTC cadet) to travel as well.

For summer 2013, four Virginia Tech cadets have been selected to travel to Panama—and once again, the quality of the corps’ trips has been recognized, as the Olmsted foundation asked Virginia Tech to take along four Army ROTC cadets from Hampton University and Norfolk State University.

Maj. Carrie Cox is the executive officer with the Corps of Cadets.
Humidity up, flu down: Researchers have discovered that the flu A virus is most viable when relative humidity is either close to 100 percent or below 50 percent, which may help explain the flu seasonality in different regions. Linsey Marr (above center), associate professor of civil and environmental engineering in the College of Engineering, Elankumaran Subbiah (above left), a virologist in the biomedical sciences and pathobiology department of the Virginia-Maryland Regional College of Veterinary Medicine, and doctoral student Wan Yang (not pictured) conducted the study.

Teaching and learning. Research and discovery. Outreach and engagement. These are the powerful forces behind Virginia Tech, the elements that inspire Hokies and define the modern-day land-grant institution. This photo essay explores a few of the ways Virginia Tech faculty are fulfilling this mission.
Cutting-edge: The SHARP Logger program—short for Sustainable Harvesting and Resource Professional—aims to train the commonwealth’s loggers in principles of sustainable forestry, environmental protection, and workplace safety. Since 1996, more than 3,500 have received the training, which is provided by Virginia Tech, Virginia Cooperative Extension, the forest industry, the Virginia Department of Forestry, and others. Program coordinator Scott M. Barrett (right), an Extension associate in the College of Natural Resources and Environment’s forest resources and environmental conservation department, is joined by Bryan Wagner, a logger safety trainer with Forestry Mutual Insurance Company.
Stage presence: In a two-semester design-build laboratory, 16 students worked under Marie and Keith Zawistowski (at right), faculty members in the College of Architecture and Urban Studies, to craft the Masonic Amphitheater in Clifton Forge, Va. In the 2011-12 academic year, the students conducted research and talked with residents and then they designed and built the structure, creating a venue that serves the town’s vision of a spurring artistic community. The amphitheater was named American Architects Building of the Year 2012, selected from among 50 buildings, many designed by well-known architects and firms.
A focus on obesity: With a goal of improving health and quality of life in Virginia and the nation, the university recently established the Fralin Translational Obesity Research Center. The center’s approach is unique. Scientists from a variety of backgrounds including human nutrition, psychology, cancer biology, economics, and pediatrics will work together to explore collaborative, translational projects with the goal of obtaining large-scale external funding to support obesity research. The center’s co-directors are Kevin Davy (left) and Paul Estabrooks (standing), both professors of human nutrition, foods, and exercise in the College of Agriculture and Life Sciences, shown here performing a muscle biopsy. Estabrooks is also a professor of family medicine in the Virginia Tech Carilion School of Medicine.

Diagnostic breakthrough: Detecting a MRSA (methicillin-resistant Staphylococcus aureus) infection now takes three days. But by coating optical fibers with self-assembling polymer layers, physics Professor Randy Heflin (above), along with Tyler J. and Frances F. Young Professor of Bacteriology Tom Inzana (not pictured), and others have developed a diagnostic test that takes less than an hour. The team is working with a company Virginia nanotech, to commercialize the technology, which has the potential to save thousands of lives each year and lead to fewer days of hospitalization and fewer unnecessary antibiotics for MRSA patients.
A mid the crinkling and rustling of paper, Robert Lang, an origami expert and former NASA engineer, guided workshop participants through a series of folds and cuts while he explained the mathematics of origami—and how the Japanese art can yield ideas for technological designs.

By the end of last summer’s workshop in the Institute for Creativity, Art, and Technology’s (ICAT) studio space, those in attendance had learned how origami’s basic principles—what Lang refers to as “the mathematics of folding”—could be applied to everything from airbags to solar-power arrays.

The workshop is but one example of activities related to science, technology, engineering, and mathematics (STEM) at Virginia Tech. From hosting small workshops to initiating broader collaborations that cross college boundaries, from encouraging children to get excited about science to creating vibrant, supportive communities for engineering undergraduates, the university leads the commonwealth in advancing the impact of STEM disciplines.
The next generation

Faculty and staff at Virginia Tech understand that both localized and transdisciplinary endeavors will be necessary in order to advance STEM disciplines and enhance the workforce. “Somebody once said, ‘The job that middle-school kids are being trained for doesn’t exist yet,’” said Bev Watford, associate dean of academic affairs in the College of Engineering and director of the Center for the Enhancement of Engineering Diversity (CEED).

Sue Magliaro, a professor in the School of Education, oversees the VT-STEM initiative, focused on K-12 outreach and education. “Whether it’s Geoscience in a Box or the Kids’ Tech University program, we’re trying to [raise] awareness,” she said.

Take, for example, the Studio STEM project, a collaboration between faculty in the College of Liberal Arts and Human Sciences’ School of Education and the College of Engineering (COE). The program delivers hands-on engineering projects to middle schools in the region. This spring, the students—with the aid of Virginia Tech engineering majors—built miniature solar cars and learned about such topics as gears, friction, and force. “The hands-on aspect of the program gives [students] confidence so that even if they don’t go into a STEM field, they still have greater faith in their problem-solving skills,” said junior mechanical engineering major Ashley Taylor.

Workforce demands for those with STEM skills occur at the local, state, and national levels, according to Whitney Bonham, a Virginia Tech economic development specialist who recently examined STEM workforce trends in the commonwealth. “What we’re trying to show is that Virginia’s STEM workforce is largely centered on supporting federal and state government in Northern Virginia. But there are also regional specializations.” For example, she pointed to a need for surveying and mapping specialists in the coalfields and a demand for engineering technicians to work in Lynchburg’s growing nuclear energy and wireless technology industries.

Bonham’s research drives home the fact that education in these disciplines is vital, even for those students who don’t go on to earn a bachelor’s or graduate degree. “We’re seeing that there are more ‘smart-collar’ jobs in [STEM] as well,” she said, naming an engineering technician position as one example of the need for STEM training across all levels of higher education, from technical degrees and certificates to advanced degrees.

STEM literacy is not reserved for future scientists, engineers, and educators, noted Magliaro. As STEM issues—from using a smartphone app to understanding how climate change intersects with public policy—affect people’s everyday lives, the ability to understand the disciplines will become more and more crucial.

Jong-on Hahm, a Distinguished Senior Fellow in George Mason University’s School of Public Policy who studies science policy, said that Virginia isn’t alone in its growing interest in STEM. “Every nation on the planet is chasing innovation. [Nations are] looking to invest in areas that will foster innovation, and most of those are in the STEM disciplines,” said Hahm, who also works with the National Science Foundation and previously served as director of the Committee on Women in Science and Engineering at the National Academies.

“I’m really heartened by the fact that there’s a lot of interest in the science and technology behind other fields,” said Hahm, naming forensics and meteorology as two examples. She is also fascinated by what the future holds. Computer science and materials science may be poised for revolutionary breakthroughs, but the timing is hard to predict. “When that hits, no one [will be able to] fill those positions fast enough,” she said.
Live. Learn. Invent.

Virginia Tech is already the commonwealth’s leading educator of engineers. In fact, Tech produces more engineers than all other Virginia universities combined. So it’s not surprising that COE faculty, staff, and students are pushing the envelope on engineering education initiatives. Much of the focus is on diversity, evident in such programs as summer camps for high school girls interested in engineering and a women’s review weekend meant to help high school seniors decide if Virginia Tech is the right fit. “We need to produce a more diverse workforce,” said Watford. “That’s a given. And that diversity is of all kinds, not just gender or ethnicity.”

Providing a supportive, inclusive environment for all engineering students helps improve retention rates, which is why the college’s living-learning communities, Hypatia (for women) and Galileo (for men), are vital, said Susan Arnold-Christian, the CEED assistant director who oversees both communities. Both programs have been proven to improve retention rates for engineering students, with a rate of more than 80 percent, compared to the national average of about 50 percent.

These communities serve as gathering places for like-minded scholars, where first-year students discuss projects, collaborate on ideas, and find mentors in upperclassmen who serve as resident advisors (RAs). “With Hypatia, when you’re surrounded by 100-plus freshmen women, it’s the perfect environment to talk about projects, homework, classes, etc. It’s a really amazing support group,” said junior aerospace engineering major Carol Geary, currently a mentor in the Hypatia community. “My job is to watch freshmen grow up,” she fondly said of her role.

Galileo RA Robert Kuczmarksi, a junior majoring in mechanical engineering and psychology, first became excited about STEM when he started driving racecars, a family hobby. He initially minored in psychology, but added it as a second major when he discovered how the study of human thinking and behavior could enrich his engineering education. “I think it will be beneficial in management-type roles,” he said.

Hypatia and Galileo reached a milestone last fall when they joined the College of Science’s residential communities, Cuse (for students studying physical or quantitative sciences) and Da Vinci (for biological sciences), in Lee Hall to form the inVenTs Residential Community. Informed by the themes of innovation and entrepreneurship, the environment offers opportunities for interdisciplinary collaboration, complete with a design and innovation studio.

The studio has proven to be one of inVenTs’ most innovative features. Students can use the room as a study space, or they can train on the machinery, building prototypes and fostering a hands-on, entrepreneurial mindset. Graduate teaching assistant (GTA) and lab supervisor Juan Folgar (industrial systems and engineering, ’11) pointed out a laser cutter, a 3-D printer, a computer numeric control router (known as a CNC router), and more. “These are the top-of-the-line machines that are out there for prototyping,” said Folgar, now a master’s student. “GM visited this space last semester, and they loved it. When someone visits from a company, they will say, ‘I wish I’d had this when I was in undergrad.’”

Joe Cuadrado (mechanical engineering, ’11), a master’s student who was in Galileo as an undergraduate and is now a GTA overseeing the lab space, was surrounded by large whiteboards for sketching out ideas, tables for spreading out tools or working on group projects, and neatly labeled shelves of equipment. “This space allows you to know how to build things and understand the restrictions of the design—the limitations of the machines, for example,” he said. “You can’t do this kind of work in a dorm room.” And when the studio is full of the hustle and bustle of students working on projects or training on the equipment, it’s clear that innovation is in the air—not just in Lee Hall, but across campus and commonwealth.

STEM degrees as economic engines

Virginia Tech isn’t alone in recognizing the value of STEM degrees. Reaffirming the commonwealth’s commitment, the Virginia General Assembly passed the Virginia Higher Education Opportunity Act of 2011, often referred to as the Top Jobs Act or simply TJ21. The legislation sprang from the Grow By Degrees Coalition formed by the Virginia Business Higher Education Council. Supported by leaders in business, community, education, and economic development, Grow By Degrees championed affordable access to higher education and investment in education as drivers of economic growth.

“Grow By Degrees was really just the first scratch of the surface, but it got everybody’s attention. It said, ‘Look, if we don’t start investing in higher education and our citizens, we’ll lose our edge,’” said Elizabeth Hooper, Tech’s state legislative liaison.

Not your typical dorm room: A design and innovation studio in the inVenTs Residential Community puts top-of-the-line equipment for prototyping and more into the hands of students. Pictured here are, at left, Jackson Cooper and Patrick Clark, both freshman majoring in general engineering; and below, Hughes Dennis, a junior majoring in industrial and systems engineering, and William Gerhard, a freshman studying general engineering.
Signed by Gov. Bob McDonnell in April 2011, the TJ21 bill created and codified a set of goals for higher education, such as incentivizing year-round utilization of physical facilities and instructional resources, promoting resource-sharing across institutions, improving degree completion for Virginia students, and increasing degree attainment in the STEM-H—within “H” standing for “health”—disciplines.

“The Top Jobs legislation is already having a significant impact in Virginia by incentivizing institutions to increase degree production in high-demand fields, such as STEM-H. I commend Virginia Tech for being a leader in this effort,” said McDonnell. “Together we are advancing the goal of 100,000 more degrees over the next 15 years. The reforms and investments we initiated are resulting in job-creating research, cost-saving innovation, and affordable access to a good college education for more Virginia students.”

Like many, McDonnell recognizes the importance of increasing STEM graduates and improving educational access—both key aspects of the legislation—in keeping the commonwealth and its citizens competitive in tomorrow’s economy. “In order to get a good job, you need a good education,” he said. “The jobs of today and tomorrow are in the STEM-H fields. We must continue to ensure that Virginia students are prepared for the high-quality, high-paying jobs of the 21st century.”

Added Hooper, “The STEM degree production [goal] ties into Virginia’s ability to be competitive with states—and, really, other countries—that are making vital investments in their own human capital.

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Meanwhile, TJ21 represents the commonwealth’s investment in its residents and its institutions of higher education. Ralph Byers, executive director of government relations for Virginia Tech, noted the unique expenses associated with training and educating students in the STEM disciplines. “Generally speaking, STEM degrees are more expensive because of the equipment and labs that are required for STEM education, so we were pleased that the governor and general assembly recognized this in the Top Jobs legislation,” Byers said.

And though STEM education might be a natural fit for the university, the arts will never be overlooked. While Hooper understands the vital role of STEM degrees in the commonwealth’s economic future, she said that Virginia Tech won’t turn its back on its commitment to the arts—a commitment exemplified in the university’s Center for the Arts and ICAT. “It’s important to note that while this focus on STEM degrees is a goal for the common wealth and Virginia Tech, we’re not going to abandon our commitment to the liberal arts. We do recognize that we have to educate the whole person,” Lang, the origami expert, demonstrated perfectly the aesthetics of STEM during his workshop on campus as he explained the fundamentals of flat-folding origami. When the paper is flattened and cut, a design emerges. “If I use this structure in a larger pattern, I can make a network of these creases,” Lang said as he held up a design. “That moves us out of ‘magic tricks’ to create real-world structures.”

The mean annual wage for all STEM occupations was $77,880, and only four of the 97 STEM occupations had mean annual wages below the U.S. average of $43,460.

In the commonwealth, the percentage of any other institution.

Among its goals, the Top Jobs legislation aims to confer approximately 100,000 cumulative additional undergraduate degrees on Virginians between 2011 and 2025.

The amount in the commonwealth’s 2012-14 biennial budget dedicated to new, reform-based investments in Virginia’s colleges, universities, and community colleges.

Every dollar spent on public higher education by the state is associated with an additional $1.39 in state revenue and an increment of $13.31 added to Virginia’s gross domestic product.

The mean annual wage for all STEM jobs is expected to increase 17 percent, compared to 9.8 percent growth for non-STEM jobs.

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Much like a design emerging in origami, Virginia Tech’s multifaceted approach to STEM education is reshaping the commonwealth’s future.

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Tried and True
Alumnus leads criminal investigations after 9/11
by JESSE TULL

If the normal criminal investigative process is turned upside down, there is no neatly compacted crime scene from which an investigator collects evidence, talks to eyewitnesses and the suspect, and builds a case.

Instead, there is the World Trade Center in New York City. There is a field near Shanksville, Penn. There is the U.S.S. Cole, bombed in a Yemeni port. Inside a small room in a temporary building at Guantanamo Bay, there is a terrorism suspect of completely unknown identity who reveals nothing.

The suspect’s interrogation is one of the more than 10,000 interviews conducted in Cuba as part of more than 1,400 criminal investigations in the global war on terror in the three years following 9/11. The interrogations—and the nation as a whole—are tainted with the desperate urgency to uncover the next seemingly imminent attack.

Those interrogations are what retired Col. Britt Mallow (sociology ’77) oversaw as commander of the Department of Defense’s (DOD) Criminal Investigative Task Force (CITF), an entity comprised of investigators from the Army, Navy, Air Force, FBI, and other agencies. Formed in the aftermath of 9/11, CITF sought justice by building cases destined for military tribunals, and its jurisdiction spanned sites of terrorist acts around the globe. Prosecution, though, took a back seat to intelligence-gathering, and Mallow and his colleagues found themselves fighting against interrogative methods widely deemed as torture.

Taking command

Raised in a military family, Mallow was a natural fit for the Virginia Tech Corps of Cadets, and knowing he wanted to go into the military police, he majored in sociology. Mallow’s career in military law enforcement, spanning 29 years, afforded him plenty of continuing education, including two master’s degrees.

Commanding U.S. Army military police units of increasing size and responsibility, Mallow was often overseas, directing police functions at Army installations and antiterrorism operations for all Army forces in Europe. In an Arabic-language course in the mid-1980s, he met his wife, Lynda, then an intelligence analyst working for the Air Force. In 1990, when the couple was working for the U.S. government in Europe in the middle of the first Gulf War, their daughter, Kathleen, was born.

In 2000, Mallow became deputy commander of Army Criminal Investigation Command (CID). After 9/11, he was tapped to lead CITF and shape the legal process for investigating al Qaeda. (He was CITF commander until 2005, when he retired.) Early on, Mark Fallon, then a Naval Criminal Investigative Service (NCIS) special agent, met with Mallow to determine how NCIS would engage with CITF.

Fallon stayed on as Mallow’s deputy commander, helping to design CITF’s reporting structure and facilities, training, and personnel needs. Launching CITF was a colossal task. For instance, whereas the FBI had been the primary investigative agency for domestic terrorism, CITF drew in multiple agencies, and the prosecuting venue shifted from the Department of Justice to military tribunals. On all fronts, Mallow displayed incredible “political savvy,” Fallon said.

A high-stakes puzzle

One suspect is seated in a room at Guantanamo Bay. A special agent and a translator are inside, possibly with Mallow and a behavioral consultant watching through a window or on video surveillance. All are adept at reading people, watching for cues in body language, and establishing rapport. In the oral tradition of Arab cultures, even a rant signals a suspect’s desire to tell his or her side of the story.

In Cuba, even a preliminary step such as establishing a person’s true identity was shrouded in mystery. “Most of [the suspects] were captured with just scraps of paper, or nothing. You had to go by what they were doing when you captured them, what they said, what pieces of physical evidence [they had], and the circumstances other people might describe,” said Mal- low. “You’re given somebody, and you don’t know what their name is. You don’t know with whom they were involved. You suspect that they were involved in some terrorist acts, and you have to sort all that out with very, very thin bits of evidence. … Everything was a puzzle.”

All the while, angst in the national security community was decidedly high following 9/11. “We were all concerned that there was going to be another attack. It was imminent, and we needed to stop it. The … pressure was intense,” Mallow said.

In this atmosphere, the tension between criminal investigators and intelligence officers was palpable. The criminal inter- rogators had experience in conducting adversarial interrogations within a specific legal environment, but intelligence interrogators were in the driver’s seat.

“We were dealing with challenges created by individuals who had no experience in interrogations or al Qaeda, pushing for what some will call enhanced interrogative techniques and what others will call torture—tactics that DOD has since disal-
manned, who launched a computer-crimes
agency exclusively. There, he helps agen-
ties with diverse perspec-
tives together to work
on big problems.” The
sheer velocity of global
change worries Mallow
more than another 9/11,
and he’s encouraged to
see “that folks are really
thinking about problems. That’s probably
the best legacy and the best chance for us
in the long term, he sees himself helping
university administrators and other leaders I
the opportunity to interact with students
in a larger scale, that would be a dream for
and the other leaders I
learned from each other. Analysts
began to think like cops, and vice versa.
They created what I like
to think of as … a new
sort of culture of national
security, where people
will look across discipline
boundaries,” Mallow said.
“If, in some part, myself
and the other leaders I
worked with were able to
contribute to that gen-
eration of smarter people,
that’s probably the best
thing we did.”

Reconnecting with Vir-
ginia Tech, Mallow—who
recently joined the Col-
lege of Liberal Arts and
Human Sciences Alumni
Advisory Board—praised
such efforts as the Center
for 21st Century Studies
and the Center for Peace
Studies and Violence
Prevention for “putting
people with diverse per-
spectives together to work
in the public and private sectors.
“Our mission came second behind the
intelligence mission,” Mallow said. “We
really thought there was some wasted effort
trying to cast around for a new way to get
these people to talk rather than sticking to
the tested methods that our investigators
were using. It was very frustrating when we
were pushed aside. Although we talked
to some high-level officials, we couldn’t
change the way everyone would operate.
And you know it’s not right—but beyond
that, you know it’s not likely to work,”
Mallow said.

Still, Mallow kept CITF above reproach;
Fallon called him a “true patriot.” “The
principled, centered leadership that Britt
brought to the table helped ensure that
CITF personnel fulfilled their responsibili-
ties and did it honorably,” said Fallon. “We
would tell them, ‘History will look back on
how we performed during this war with al
Qaeda, and [we want you] to be sure that
your children and grandchildren are proud
of the way you served your country.’”

Leaving a legacy
Now retired from the military, Mallow
works at MITRE, a noncompetitive
systems engineering corporation that
manages federally funded research-and-
development centers and serves federal
agencies exclusively. There, he helps agen-
cies, including federal law enforcement
entities, address system-wide challenges
related to information technology, infor-
mation security, intelligence programs,
and more.
At MITRE, Mallow reports to Jeff Hor-
mann, who launched a computer-crimes
unit in the Army CID under Mallow’s
command in the late 1990s. “He so
impressed everyone [at MITRE] that it
was essentially a no-brainer to hire him,”
Hormann said. “I still consider him a
mentor and a great leader.”

Mallow is certain that Americans are
safer today than they were prior to 9/11,
chiefly because of a sea change in thinking
in the national security community. The
CITF brought together law enforcement,
intelligence, legal, and IT experts, all of
whom learned from each other. Analysts
began to think like cops, and vice versa.
“Thinking about problems. That’s probably
the best legacy and the best chance for us
to be safer in the future, is to harness that
kind of brainpower,” he said.
Mallow is clearly energized by academia.
In the long term, he sees himself helping
students prepare for the national-security
challenges of tomorrow. “If we were to have
the opportunity to interact with students
on a larger scale, that would be a dream for
me,” Mallow said. Un-
leashed—[and] dealing with them at a time
in our nation’s history when passions were
inflamed,” said Fallon, now the director of
ClubFed LLC, offering strategic consulting
in the public and private sectors.

Virginia Tech Magazine spring 2013
Healthy curriculum
Delta Dental foundation advances oral health education

At the second annual Delta Dental of Virginia Oral Health Lecture at the Virginia Tech Carilion (VTC) School of Medicine earlier this semester, one of the introductory speakers, third-year VTC student Robert Brown, conceded that the connection between oral health and general health was “something I did not fully appreciate before I came here.”

Then he shared with the audience the story of a terminally ill oral cancer patient whom he and other members of his class met during a visit to Carilion Clinic’s dental facility. Brown described how, despite the advanced state of her disease and what must have been severe pain, the patient couldn’t stop smiling as she shook students’ hands and congratulated them on being part of the school’s groundbreaking new oral health program.

“According to her daughter, it was her strong desire to meet us and help to teach us that kept her going,” Brown recalled. “She told us that she wanted us to be the best doctors.”

The VTC School of Medicine, which welcomed its first class of students in fall 2010, is one of the few medical colleges in the U.S. to include an oral health component in its training for all students. The program was launched with philanthropic assistance from the Delta Dental of Virginia Foundation, which recently followed up with a $1 million endowment to help sustain the oral health curriculum. Funds from the endowment will also be used to support clinical rotations, service-learning projects, research scholarships, and the development of standardized patient cases.

“The oral health program positions the Virginia Tech Carilion School of Medicine as a thought leader and an innovator in the educational process,” said Dr. George A. Levicki, president of the Delta Dental of Virginia Foundation Board of Directors. “It represents a true advance in the practice of medicine and how to incorporate the growing body of evidence that suggests important links between good oral health and good overall body health.”

In the evolution of medical practice, general and dental health care have experienced a somewhat on-again, off-again relationship. Delta Dental Lecture keynote speaker Dr. Peter Lockhart, chair of oral medicine and director of the Institute for Oral Medicine at Virginia Tech Carilion School of Medicine, described a model best when she said that it had connections between oral health and other medical conditions, ranging from coronary artery disease and diabetes to low birth weight in newborns. The VTC curriculum “establishes the intercollaborative aspect of medicine and dentistry on patient management” for a new generation of practitioners, according to Dr. Charles “Bud” Conklin, associate professor in the Department of Surgery at VTC and section chief for dentistry at Carilion Clinic.

“Most physicians have anywhere from no training in oral health and oral medicine to maybe four hours, tops,” said Conklin, who has been with Carilion for 33 years and is one of the chief architects of the new program. “In the Virginia Tech Carilion School of Medicine curriculum, we’re looking at 32 hours of both clinical and didactic exposure in the first two years, plus testing to make sure they have mastered the skills.”

One major reason for creating the oral health curriculum was to improve oral cancer survival rates. Conklin noted that about 40,000 people in the U.S. develop some form of oral cancer each year, but many cases are diagnosed late. This is largely because the elderly are at highest risk but dental visits tend to fall off after age 65, often for financial reasons. However, physician visits by older patients tend to remain steady, so if a doctor is trained to spot the signs of oral cancers, early diagnosis is more likely to occur, and more lives are likely to be saved.

VTC’s oral health program comprises three basic components. First-year students learn oral anatomy and how to do an oral examination. In the second year, students take part in a comprehensive week of oral medicine training, using a case-based learning approach. This immersive experience includes examining a variety of oral pathologies, analyzing cases in depth, and even drilling into mock-ups of good and bad teeth to feel the difference. In years three and four, students will have the option of taking electives to gain more advanced knowledge.

Ultimately, Conklin hopes that doctors will add the patient’s mouth to the standard physical exam repertoire that includes the head, eyes, ears, nose, and throat. This approach may already be gaining traction at Carilion Clinic.

“One of our faculty members, a family practice physician, captured the value of this model best when she said that it had led her to change the way she performs her own patient exams,” said Dr. Cynda Johnson, VTC dean. “We hope this innovative program will continue to inspire physicians to perform oral exams and ultimately improve health outcomes for patients everywhere.”

It has certainly resonated with VTC students like Brown, who concluded his remarks at the lecture by emphasizing: “To be the best doctors, we must understand oral health.”

Christina Koomen was a writer with University Development.

Dr. Charles “Bud” Conklin (above left) in an instructional setting.
submission guidelines are available online at www.vtmag.vt.edu/bookreview.html. To submit a book, mail it to Book Notes, Virginia Tech Magazine, 205 Media Building, Blacksburg, VA 24061. You can also email your name, the name of the publisher, the genre, and a brief description of the book to booknotes@vt.edu. We must receive the book within one year of its publication date.

photos by Amanda Loman.

books by alumni

nonfiction


Tom Hood (marketing ’78), et al, “Richmond, One of America’s Best Tennis Towns,” sports, Dementi Milestone Publishing.

Nathan Jones (business information technology ’05), et al, “Professional IOS Network Programming: Connecting the Enterprise to the iPhone and iPad,” app development, Wrox Press.

books by faculty/staff


Matthew Vollmer, “Inscriptions for Headstones,” essays crafted as epitaphs, Outpost19.

featured author

Rob Dietz (M.S. environmental science and engineering ’00) is the coauthor, with Dan O’Neill, of “Enough is Enough: Building a Sustainable Economy in a World of Finite Resources.”

With an unconventional background in economics and environmental science, Dietz has come to question a widely accepted assumption—that the economy has to grow. He contends that we can overcome environmental crises and improve quality of life by changing the economic focus from more to enough. Below is an excerpt from “Enough is Enough,” reprinted with the author’s permission.

A game of checkers offers very little insight into how to solve the world’s interwoven environmental and social problems, or so I thought.

I was playing against my 5-year-old daughter when we decided it would be more fun to see how high a tower we could build. At first, we recklessly plopped down two or three checkers at a time. But as the tower grew, we changed our approach. With the steady hands of a surgical team, we added one checker at a time. By this point, our formerly straight tower had taken on a disconcerting lean. On our final attempt to increase its height, the mighty tower reached the inevitable tipping point and came crashing down to earth. My daughter’s reaction: “Sometimes when things get too big, they fall.”

She somehow summarized the root cause of humanity’s most pressing environmental and social problems: Our economic tower has grown too large, and it’s threatening to collapse under its own weight.

Beyond that, it’s threatening the integrity of the checkerboard and the well-being of the players. But we can build a better economy. We can meet our needs and care for the planet at the same time. This is our checkerboard, after all, and we don’t have to play by the old rules anymore.
The Lyric Theatre
An iconic building in the heart of Blacksburg

For more than a century, one place close to campus has been a source of entertainment for countless Virginia Tech students—the Lyric Theatre.

After its establishment in 1909 as a venue to offer silent films to the local community and as an escape for students, the Lyric occupied three locations before, in 1929, a group of local businessmen partnered to build a grand cinema for “talkies.” Their vision would become the current Lyric Theatre on College Avenue, a majestic Art Deco building adorned with two distinctive masks over the marquis that welcomed students for less than $1.

The new Lyric seated 900 people and had an orchestra pit in front of the stage for occasional theatrical productions. (After several renovations, however, the seating has been reduced to about 500, with what I suspect are far more comfortable seats than those in earlier days). The Lyric was one of three sound motion-picture theatres in the state at the time, and it was especially a treat for students whose hometowns didn’t yet have a movie theatre. For decades, the Lyric hosted many first-run films, even as several other movie theatres appeared in Blacksburg in the 1970s and 80s. However, the advent of the area’s first multiplex in Christiansburg offered too much competition for the Blacksburg theatres, and all eventually closed their doors. The Lyric ceased showing movies in 1989. Over the next five years, the theatre was leased off and on by Virginia Tech for class instruction and by the Student Union film program while Squires Student Center was undergoing a renovation.

In 1994 a group of local Blacksburg citizens formed a nonprofit organization, the Lyric Council. The council raised more than $600,000 to renovate and revive the iconic theatre, and it reopened in 1996. The renovation restored the beautiful red silk tapestries that cover the walls, which are lit by elegant lanterns designed for the theatre when it first opened. Seats were upholstered and a new sound system was installed, and the current building owner granted a 30-year rent-free lease.

Today, the theatre is staffed mostly by community volunteers, including students. Second-run films are featured, along with some festival-winning films, musical artists, and the occasional theatrical performance. Conversion from 35mm film equipment to more modern digital projection is the highest priority for the theatre. Lyric Council volunteers have embarked on a project to document the story of this Blacksburg icon with a book that interweaves history, photos, and special memories. They’re seeking your input. Do you have a fond memory of the Lyric you’d like to share? Learn more about this special publication and how to share your memories at www.thelyric.com.

Tom Tillar ’69
Vice President for Alumni Relations

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Tom Tillar ’69 Vice President for Alumni Relations
Dave Hunt Communications Director
Shirley Fleet Class Notes Editor
Multiple homecomings are hosted throughout the football season to coincide with home games. Eight academic college programs are spread across the home schedule, along with special homecomings for graduate alumni, Corps of Cadets alumni, and other groups. Homecomings are open to all alumni of the host groups, regardless of graduation year. In each case, there is a game-day gathering, plentiful 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.

### 2013 Homecomings

**Sept. 7 - Western Carolina**  
College of Liberal Arts and Human Sciences homecoming  
*Special Event: Alumni Chapter Officers Forum*

**Sept. 21 - Marshall**  
College of Agriculture and Life Sciences homecoming  
Corps of Cadets homecoming

**Oct. 5 - North Carolina**  
(traditional parade)  
College of Engineering homecoming  
*Special Event: Highty-Tighties homecoming*  
*Special Event: Recreational Sports homecoming*

**Oct. 12 - Pittsburgh**  
College of Science homecoming  
College of Natural Resources and Environment homecoming

**Oct. 26 - Duke**  
Graduate Degree Alumni homecoming  
College of Architecture and Urban Studies homecoming  
*Special Event: Marching Virginians homecoming*

**Nov. 16 - Maryland**  
College of Veterinary Medicine homecoming  
Pamplin College of Business homecoming

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Class reunions for the 20th through the 50th anniversaries are held at five-year intervals. Each reunion includes optional campus tours, a Friday evening meal, and plenty of time for reminiscing and dancing. Saturdays feature a morning brunch and pregame festivities, followed by the game. Seeing the Hokies play in Lane Stadium is a treat for all reunion participants. Special seating is arranged for reunion registrants at Tech’s sold-out games, and rooms are set aside at The Inn at Virginia Tech for reservation by reunion registrants. Banquets and brunches are at the inn as well.
Focus on Photography 2013

Year three of this popular program will take your photography to the next level. Instructors will cover processing and editing photos, shooting and editing video, and such topics as lenses, digital exposure, right photography, and photographic campus. A reception and most meals are included.

The Virginia Tech Alumni Association Hokie Classic

Join fellow alumni, special guests, and friends for a Captain’s Choice golf tournament at the Pete Dye River Course. The price includes greens fees, cart, door prizes, a commemorative polo, lunch, adult beverages, and a post-tournament dinner in the new clubhouse overlooking the New River. Registration is limited to the first 120 golfers, so register early. Enjoyable for golfers of every skill level. $150 per person. Visit www.alumni.vt.edu for more information.

Corps of Cadets Alumni Weekend

Calling all cadet alumni! Come enjoy Tech’s summertime campus and reunite with former cadets. Program highlights include a barbecue at the alumni center, a shooting-range contest and paintball, a Civil War presentation,反射 from veterans, and a briefing from the commandant. Most student cadets, and learn how you can help the corps in your hometown.

Women’s Getaway Weekend for Alumnae

Bring friends or former classmates for a fun-filled weekend in Blacksburg. Relax, revive, and reminisce. Take some time for yourself and indulge in a weekend especially designed for women. Program highlights include a tapas and wine reception, massages, recreational activities, a champagne brunch, insightful sessions for today’s woman, and a dinner with special guests.

Alumni Humanitarian Award

The Alumni Association is seeking nominations for its Humanitarian Award, presented to an alumnus or alumna who has performed exceptional service outside of his or her profession or career. The scope of service should encompass significant regional, national, or international impact. The nomination form can be accessed at www.alumni.vt.edu/humanitarian.

Multicultural Alumni Advisory Board nominations

The Alumni Association is looking for nominations for the Multicultural Alumni Advisory Board, which represents the interests of diverse alumni constituencies. The board works closely with the Alumni Association and the Office for Diversity and Inclusion to assist with diversity initiatives and to strengthen alumni programs, admissions programs, and general networking among constituents. Send nominations to Multicultural Alumni Advisory Board, Virginia Tech Alumni Association, Holtzman Alumni Center (0102), Blacksburg, VA 24061.

Outstanding Recent Alumni Award nominations

The Alumni Association invites nominations for the 2013-14 Outstanding Recent Alumni Awards, which recognize professional achievement and leadership by alumni who have graduated since 2003. Nominations are due by Aug. 15 and should be mailed to Outstanding Recent Alumni Awards, Virginia Tech Alumni Association, Holtzman Alumni Center (0102), Blacksburg, VA 24061.

Alumni board nominations for 2014-17

The Alumni Association is seeking nominations for its board of directors for the next three-year term, which begins in 2014. Nominations are due by June 1 and should be mailed to Alumni Board Nominations, Virginia Tech Alumni Association, Holtzman Alumni Center (0102), 901 Prices Fork Road, Blacksburg, VA 24061. Please include the candidate’s biographical information and qualifications.

The Strong Together initiative

On Nov. 13, 2012, the Office for Diversity and Inclusion (ODI) partnered with the National Capital Region chapter of the Virginia Tech Alumni Association to host the first of several “Strong Together” networking receptions. The Strong Together initiative is coordinated by ODI to promote the values set forth in the Virginia Principles of Community, which state the university’s commitment to providing a welcoming and diverse academic environment. Held at the Tower Club in Vienna, Va., the event was attended by more than 70 regional alumni, along with Vice President for Diversity and Inclusion William T. Lewis Sr. Attendees had the opportunity to meet Lewis and his staff, to learn about ODI initiatives, and most importantly, to reaffirm the values set forth in the Principles of Community.

One of the attendees, Jerome Fowlkes (finance ’88), said the occasion reminded him that “there is more that is similar in us than what separates us.” He said that regardless of skin color, ethnicity, sexual orientation, or religious beliefs, Hokies share a common hope. “Being a Hokie means us than what separates us.” He said that regardless of skin color, ethnicity, sexual orientation, or religious beliefs, Hokies share a common hope. “Being a Hokie means being among constituents. Send nominations for the Multicultural Alumni Advisory Board, which represents the interests of diverse alumni constituencies. The board works closely with the Alumni Association and the Office for Diversity and Inclusion to assist with diversity initiatives and to strengthen alumni programs, admissions programs, and general networking among constituents. Send nominations to Multicultural Alumni Advisory Board, Virginia Tech Alumni Association, Holtzman Alumni Center (0102), Blacksburg, VA 24061.

2013 Drillfield Series

The Drillfield Series continues in 2013 with weekends devoted to photography, fine dining, student legacies, and special programs for corps and women alumni. Make plans now to attend these events designed for alumni and their families, and take advantage of the specially discount-ed accommodations available at The Inn at Virginia Tech.
2013 Travel Tours

Travel Insurance:
The Alumni Association encourages all alumni to consider purchasing travel insurance. Learn more at www.alumni.vt.edu/travelInsurance.

Historic Colonial South
TTH
May 25-June 4 | $3,495
*Includes air
*With guest speaker James I. Robertson Jr., Alumni Distinguished Professor Emeritus of History

European Mosaic
Go Next, Oceania Cruises’ Nautica
June 5-13 | from $2,199*
*Includes air
*The university’s hosts will be College of Engineering Dean Richard Benson and his wife, Leslie.

Baltic Treasures
Go Next, Oceania Cruises’ Marina
July 4-15 | from $3,999*
*Includes air

Alaskan Adventures
Go Next, Oceania Cruises’ Regatta
Aug. 5-13 | from $1,999*
*Includes air

British Isles and Norwegian Fjords
Go Next, Oceania Cruises’ Nautica
Aug. 14-27 | from $4,999*
*Includes air

Discover Switzerland
AHI
Aug. 28-Sept. 12 | $3,995*

Grand Danube Passage
AHI, MS Amadeus Brilliant
Aug. 29-Sept. 13 | from $4,395*

Black Sea Serenade
Go Next, Oceania Cruises’ Nautica
Sept. 15-28 | from $4,999*
*Includes air

Pearls of the Mediterranean
Go Next, Oceania Cruises’ Riviera
Oct. 10-18 | from $2,199*
*Includes air

New! Marvels of China
Chinese Language Institute
Oct. 12-23 | $3,995
www.alumni.vt.edu/travel

Villages and Vineyards of the Mosel, Rhine, and Main Rivers
AHI, MS Amadeus Diamond
Oct. 14-22 | from $2,895*

Greek Isles Odyssey
Go Next, Ocean Cruises’ Nautica
Oct. 17-25 | from $2,199*
*Includes air

Island Escape
Vacations To Go, Royal Caribbean’s Navigator of the Seas
Oct. 12-23 | $3,995*
*Includes air

Hokie Day 2013: On Jan. 31, nearly 200 alumni and students from across the commonwealth gathered for the 2013 Hokie Day at the General Assembly—making it the largest event for legislative advocacy for higher education since Hokie Day’s inception. The day began with breakfast and a briefing, featuring President Charles W. Steger, Vice President for Finance Dwight Shelton, and Vice President for Alumni Relations Tom Tillar at the Sun Trust Bank headquarters in downtown Richmond. After a discussion on university priorities, Hokies headed to Capitol Hill to meet with their legislators. The Virginia Tech delegation was recognized in the Senate and the House, and a photo with Gov. Bob McDonnell was taken on the Capitol steps. The strong showing, which included more than 100 students, ensured that Tech’s 15th annual Hokie Day was the largest legislative gathering organized by any college or university in Virginia.

The 2014 alumni directory
An extensive effort to update records for the publication of the next alumni directory will begin this year. Alumni mailing addresses, email addresses, phone numbers, and employment information need to be updated for the publication, which will allow alumni to stay connected with each other.

The Virginia Tech Alumni Association is partnering with Publishing Concepts Inc. (PCI) to publish the print directory and CD. When you are contacted, please respond to PCI’s phone and mail surveys to update and ensure the accuracy of the information. At that time, the Virginia Tech Alumni Directory will be available for early reservation, with delivery expected in 2014. The publisher will also offer special incentives for certain category purchases. Additionally, for the first time, the 2014 directory will have the option for alumni to include photographs.

Virginia Tech columbarium
Many campuses have a columbarium where alumni and others from an extended university family may choose to be interred. Virginia Tech’s columbarium is located on the grounds adjacent to the Holtzman Alumni Center on a grassy knoll in view of the Duck Pond. The Hokie Stone-faced wall houses 60 niches that may be purchased for individual or dual interments. To date, half of the niches have been designated. Each niche is covered with a mausoleum granite face on which names will be engraved and filled with gold lettering. A walkway behind the columbarium leads to the alumni center terrace. The area is designed to accommodate expansion, with future walls bordering the terrace. For more information on the Virginia Tech columbarium, contact Josh Burnheimer at 540-231-6285 or fburnheimer@vt.edu.
Alumni, we want to hear what you’ve been doing. Mail, writing, email, and/or class notes to Alumni Notes, Virginia Tech Alumni Association, Holtzman Alumni Center, Blacksburg, VA 24061; email the news to alumni-notes@vt.edu or submit the news online at alumni.vt.edu/submit-classnote.php, where photos may also be uploaded for consideration.

Alumni mailing addresses may be viewed online at alumni.vt.edu/directory by logging in. Alumni notes can be viewed online at www.alumni.vt.edu/submit-classnote.php, where photos may also be uploaded for consideration.

For assistance, call 540-231-6265.

Ernest D. Proudman Jr.
Lucian Y. Grove
Kenneth A. Carroll
Leticia Lamie Bryant
Alvin R. Schwab
Francis H. Dobbins
B. Gordon Cromer
Ronald T. Binner
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W. William Gust
56 Virginia Tech Magazine
Grant and Deb Perry
Hampstead, N.C., 9/29/12.
Meghan E. Byrne (EPP ’06, Chelsea Kathleen Helm (BC ’11) and Edward “Tedd” Dyer (EIT ’09), Jackson Reed Farr (FIN ’02), Samuel C. Robinson (EPP), Chelsea Kathleen Helm (BC ’11) and Edward “Tedd” Dyer (EIT ’09), Roanoke, Va., 10/30/12.

W. William Gust (PSC), Springfield, Va., 6/26/12.

V. Margaret E. Byrnes (EF, CE ’07) and Joseph M. Cook, Hempstead, N.C., 9/27/12.

Douglas C. Winney (VE), Blacksburg, Va., a director of production for the Center for the Arts in Virginia Tech.

Margaret A. Knezevich (WM), Virginia Tech, 9/1/12.

Karen W. Reardon (ANS), Blacksburg, Va., named to the 2015 Board Lawyers for and Humanists in Virginia Lawyers edition.

Kara K. Ramsey (ANS), Blacksburg, Va., 9/21/12.

Brett M. Rader

Ann Palmeri Chacon (EDS) and David Chace Wittington, N.C., 6/29/12.

Dorothy B. Currey (EDS), Zachary, La., 11/12/12.

Lindsey Leather Evans (COMP ’06, Art/Arts, a daughter, Addison Kathleen, 12/21/12.

Brian M. Tanner (CE), Leesburg, Va., joined a NoVo Foundation

Monique M. Hoeflinger (FEC), Fairfax, Va., 11/24/12.

Katherine T. Willey (ENL), Stewart, Va., 1/11/12.

Vic C. Ferran (ENL), San Diego, Cal., a son, Landon, Va., 8/22/12.

Jonathan Widener (ENL), Roanoke, Va., 11/24/12.

Mary C. Gale (ENL), Region, Va., 1/11/12.

Tracy T. O’Dell (EDS), Blacksburg, Va., a master director of corporate business development at The Mandarin Group, Blacksburg, Va., 9/10/12.

Douglas C. Suggs (FIN), Roanoke, Va., 9/10/12.

Samuel C. Robinson (EPP), Richmond, Va., 10/24/12.

Wytheville, Va., 12/7/12.

William L. Fowler Jr. (CE), Natural Bridge, Va., 12/19/12.

Catherine G. Sage (EDS), Blacksburg, Va., 12/12/12.

Shannon W. Holland (GEO), Glenville, W.V., completed her Master of Geographical Consultant certification and has become a Certified Geographical Analyst.

James A. Bannister (FIN), Bedford, Va., a director of internal audit at Virginia Tech.

Jackson Reed Farr (FIN), Blacksburg, Va., 8/1/12.

Thomas R. Fox (BIOC), Chesterfield, Va., 8/1/12.

“Year of the Entrepreneur” initiative as part of Gov. Bob McDonnell’s “Year of the Entrepreneur” initiative. Among the winners named in the Roanoke-Blacksburg region, nine were Virginia Tech alumni, students or partners.

Hussein Ahmed (M.S. computer engineering ’93), chief architect, Virginia Commonwealth University's Children's Hospital building site.

Tom Latka, former student, co-founder and CEO, Heyo, Blacksburg, Va.

Peter Latzer, partner, Virginia Tech CRC, CEO of eBrown, Blacksburg.

Jack Lesko (M.S. materials engineering science ’91, Ph.D. engineering mechanics ’95), associate dean of research and graduate studies, Virginia Tech.

Caroline Pugh, a junior majoring in business information systems, College of VSU, 2013.

Doug Juanarena (electrical engineering ’75), vice president, RackSpace, Blacksburg.

John P. Gentzinger (GEO), Sammamish, Wash., completed his Master of Geographical Consultant certification and has become a Certified Geographical Analyst.

Sallie Brown Garst (HED), Roanoke, Va., 8/10/12.

Nashville, Tenn., 12/12/11.

Roger M. Sholar (ECS), Athens, Ga., 9/21/12.

Zinga L. E. Brown (ECS), Blacksburg, Va., 12/12/12.

Ernest R. Nicholas (CE), Richmond, Va., in senior project manager for Shackle at the Virginia Commonwealth University’s Children Hospital building site.

Earl D. Collins Jr. (HED), Pompano Beach, Fla., 10/26/12.

Stephen S. Engle (EDS), Pompano Beach, Fla., 9/26/12.

Lisa Benedict McCray (BIOC), Goode, Va., 9/19/12.

Christina Moldenhauer (BIOC), Luray, Va., 9/19/12.

Christopher E. DeMelo (EDS), Boca Raton, Fla., 9/21/12.

Marian L. Walker (EDS), Roanoke, Va., 10/29/12.

Frank H. Carter (BC), Blacklick, Ohio, 10/29/12.

Roger M. Sholar (ECS), Athens, Ga., 9/21/12.

Mary C. Gale (ENL), Region, Va., 1/11/12.

B. Wayne Adams (ME), Leesburg, Va., 8/11/12.


Anthony L. Kopera (ME), Parkville, Md., triplets, 12/27/11.

Stephen B. Michael (EDS), Fairfax, Va., 9/27/11.

Ronald E. Adams (MGT), Roanoke, Va., 11/9/12.

John J. Cusimano (FIN, BAD), Charlotte, N.C., 9/21/12.

Hamburg, Va., was appointed interim head

Earl D. Collins Jr. (HED), Pompano Beach, Fla., 10/26/12.

Stephen S. Engle (EDS), Pompano Beach, Fla., 9/26/12.

Lisa Benedict McCray (BIOC), Goode, Va., 9/19/12.

Christina Moldenhauer (BIOC), Luray, Va., 9/19/12.

Christopher E. DeMelo (EDS), Boca Raton, Fla., 9/21/12.

Marian L. Walker (EDS), Roanoke, Va., 10/29/12.

Frank H. Carter (BC), Blacklick, Ohio, 10/29/12.

Roger M. Sholar (ECS), Athens, Ga., 9/21/12.

Zinga L. E. Brown (ECS), Blacksburg, Va., 12/12/12.

Ernest R. Nicholas (CE), Richmond, Va., in senior project manager for Shackle at the Virginia Commonwealth University’s Children Hospital building site.

Earl D. Collins Jr. (HED), Pompano Beach, Fla., 10/26/12.

Stephen S. Engle (EDS), Pompano Beach, Fla., 9/26/12.

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The full version of this article is available at http://cnre.vt.edu/magazine/articles/2013/05/virginia-tech-claims-four-top-wildland-firefighting-awards.html.

Tom Speaks (forestry and wildlife ‘78), Mike Wilkins (forestry and wildlife ‘76), and Mike Quesinberry (forestry and wildlife ‘76) are now part of an elite group. The three alumni recently became type 1 incident commanders, the highest wildland-firefighting rank.

Such a commander leads a management team assigned to the nation’s largest, most complex fires. Only 20 people nationally hold the rank at a given time, and reaching the position requires 20 to 25 years of training, experience, and successive leadership roles.

Although they’re no longer on the front lines, all the alumni have been in tight situations. They all know what it’s like to outrun a fire, their hearts thudding in their throats. They are masters of strategy, and of reading weather, land, and risks.

“We’re very safety conscious now,” said Wilkins. “We take a step back, look at things, and strategize. We don’t put ourselves in front of a fire we can’t stop. There is no point in giving up your life for a natural resource. Risk your life for another life, but not for trees.”

The four commanders, who have been friends for decades, said the Virginia Tech firefighting crew is a special fraternity. “We’re a tight group,” said Speaks. “For bonding, nothing quite compares to the fire experience and going to Virginia Tech.”

The four alumni among ranks of elite firefighters

by Su CLAUSON-WICHER

Organization (NIMO) team in 2006, overseeing the Atlanta team. NIMO teams are smaller than standard management teams (seven people compared to about 33) and “help wildland fire agencies address issues and improve future fire management,” according to NIMO’s website.

All four alumni started their firefighting careers on forestry Professor Dick Vasey’s wildfire fighting crew.

“Firefighting gets into your blood,” said Quesinberry, who took over Ferguson’s former job as full-time commander of the NIMO team in Atlanta. “We all have our passions; some like to hike, some like to skydive—and firefighters are like the skydivers of forest service work.”

For Luke Tonia and Jacob Salter, having great chemistry teachers in high school not only got them fired up about science, it also stoked an interest in pursuing education as a career. Luke and Jacob are this year’s recipients of the ACS-Hach Land Grant Scholarship, which provides funds for college chemistry majors who want to share their passion for science with the next generation of young learners.

Sponsorship support not only enables students to focus on academics—it also empowers their dreams. To learn more about the positive impact of philanthropy on Virginia Tech, or to make your gift, please visit www.givingto.vt.edu today.

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Attention 2002 grades

After June 30, 2013, the Schleffert Health Center will destroy the medical records of all 2002 graduates. If you would like a copy of your records, please contact Paula Robertson at 540-231-9430 or medrec@vt.edu before June 1.
We set up a photo booth on our campus and asked faculty how they are inventing the future. The story featured here represents just one sample of the innovative work that is being done at Virginia Tech.

Associate Dean of Undergraduate Academic Affairs Rachel Holloway believes in helping students get comfortable as a part of Virginia Tech.

And one of the best ways for students to become comfortable is to move out of their comfort zones, meet new people, and engage in new experiences, and be transformed by the adventure of being a scholar.

“You know, I’m often asked to give advice to students about how they can make the most of their Virginia Tech experience,” said Holloway. “For me, it’s that they have to find challenges that they really don’t believe they can meet. They need to accept the challenge and go out there and do it, and they’ll surprise themselves.”

“I invent a sense of place.”

Rachel Holloway
Undergraduate Academic Affairs
Associate Dean

After Hurricane Sandy, New Jersey Hokies lend a hand

Hurricane Sandy hit the Jersey Shore with an unprecedented force. The day after was a scene taken from an apocalyptic movie. Streets were impassable due to flooding and catastrophic damage. Some neighborhoods had been completely swept out to sea. Many Hokies living in New Jersey had their homes flooded and were without power.

Among the hardest hit Hokies were Chick and Nancy Cunningham and their daughter, Emily, a clothing and textiles major, of Sea Bright, N.J. They had three flooded homes on their property, two boats out of 100 left in their marina, and sand and mud everywhere. It was a disaster. The Cunninghams would end up losing months of income from the two rental properties, and long hours out searching for his clients’ boats meant that Chick had no time to focus on restoring the damaged properties.

Clearly, the Cunninghams were Hokies in need of help. The founder of the Jersey Shore Hokies group, Todd Consolino, whose son Andrew (finance and economics ‘12) is an alumnus, and Mark Maloney (hotel, restaurant, and institutional management ‘82), president of the New Jersey alumni chapter, took on the task of recruiting New Jersey Hokies to help begin the remediation project.

More than 50 people responded. Coming and going throughout the day, the team split into groups helping to remove sheetrock, molding, insulation, and appliances. Another group concentrated on backfilling a section of the property that was washed away in the storm. With such a swift response, these Hokies successfully cleared the grounds and gutted the house, which will need to be rebuilt. Chick, who is very involved with the South Jersey Hokies, was shocked by the number of Hokies that turned out to help muck out his property. It’s amazing how much work 50 people can accomplish in one day.

Bruce L. Ciccone is the founder of New Jersey Hokies—Habitat for Humanity and a member of the Paterson Habitat for Humanity Board of Directors. His son Jonathan, a computer science major; wife, Liz, (business and textiles ’79); and four of Liz’s siblings are all Hokies. Mark Maloney ’82 is president of the New Jersey alumni chapter.

View the full story about how New Jersey Hokies helped the Cunninghams and others in the wake of Hurricane Sandy at www.vtmag.vt.edu.

Loyalty:
by BRUCE L. CICCOME and MARK MALONEY ’82

Loyalty:

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Rachel Holloway
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facebook.com/virginiatechinvents
Lasered layers: Inspired by Gothic and Islamic architectural ornamentation, Associate Professor Eric Standley layers laser-cut paper to create 3-D works of art that have generated international buzz. His pieces often involve more than 100 layers of paper and can take months of planning and drawing. Standley coordinates a program in the School of Visual Arts that teaches first-year students essential skills in creativity, conceptual sensibility, drawing, and design.

Images courtesy of Eric Standley. To read about Standley’s work and see a video, go to www.vtmag.vt.edu.
**2013 Reunions**

**Sept. 7** - Western Carolina  
Young Alumni Reunion  
Class of ’93 - 20th Anniversary

**Sept. 21** - Marshall  
Class of ’88 - 25th Anniversary

**Oct. 5** - North Carolina  
(traditional parade)  
Class of ’63 - 50th Anniversary

**Oct. 12** - Pittsburgh  
Class of ’83 - 30th Anniversary

**Oct. 26** - Duke  
Class of ’73 - 40th Anniversary  
Class of ’78 - 35th Anniversary

**Nov. 16** - Maryland  
Class of ’68 - 45th Anniversary

**2013 Homecomings**

**Sept. 7** - Western Carolina  
College of Liberal Arts and Human Sciences homecoming  
Special Event: Alumni Chapter Officers Forum

**Sept. 21** - Marshall  
College of Agriculture and Life Sciences homecoming  
Corps of Cadets homecoming

**Oct. 5** - North Carolina (traditional parade)  
College of Engineering homecoming  
Special Event: Highty-Tighties homecoming  
Special Event: Recreational Sports homecoming

**Oct. 12** - Pittsburgh  
College of Science homecoming  
College of Natural Resources and Environment homecoming

**Oct. 26** - Duke  
Graduate Degree Alumni homecoming  
College of Architecture and Urban Studies homecoming  
Special Event: Marching Virginians homecoming

**Nov. 16** - Maryland  
College of Veterinary Medicine homecoming  
Pamplin College of Business homecoming

www.alumni.vt.edu/reunion