



INSTITUTE REPORT

VIRGINIA MILITARY INSTITUTE

Volume 47, Number 8, June 2019



Class of 2019 Celebrates Graduation

The stoops of Old Barracks echo the words "One-Nine" as the Corps gathers for an Old Yell following the change of command parade. See more photos of the week's activities on page 10. To read more on this year's graduating class, see page 11.—VMI Photo by H. Lockwood McLaughlin.

'A Soldier and a Global Citizen'

Fulbright Winner to Teach in Africa

By Mary Price

Annika Tice '19 has been awarded a Fulbright grant from the U.S. Department of State to teach English in the Ivory Coast. It's the first time since 2001 that a VMI cadet has received one of the highly prestigious national awards.

Tice, a double major in Modern Languages and Cultures (French) and English, rhetoric, and humanistic studies, will defer her commission into the Army, where she's been selected to serve in the Adjutant General's Corps, to spend a year

creating lesson plans for English language learners and assisting with an after school program run by the U.S. Embassy.

"I've always wanted to teach," said Tice, who is only the sixth VMI cadet overall, and the first VMI woman, to receive a Fulbright since the program's inception in 1946. "This experience will help me as a soldier and a global citizen, just to understand people."

Named for the late Sen. J. William Fulbright, the Fulbright program is

designed to foster international exchange and cooperation. Over 1,900 Fulbright awards are made to undergraduate students each year, and more than 380,000 awards have been made over the program's more than 70-year history.

"This is one of the most widely recognized and prestigious international educational exchange programs in the world," said Col. Dave Hall '83, director

See Fulbright Winner, page 5

Peay Endowment Launch

Funding to Have Transformative Effect

By Molly Rolon, VMI Alumni Agencies, and Col. Stewart MacInnis

Funding for academic chairs, fellowships for graduates with the potential to join the faculty, and merit scholarships for exceptional current and prospective cadets are among the elements of a bold initiative to cement and bolster academic excellence at the Institute.

The first public manifestation of the initiative, the General J.H. Binford Peay III 1962 Endowment for Academic Excellence, came during a Board of Visitors' dinner on May 3, when Col. Troy Siemers, professor and head of the Department of Applied Mathematics, was named to the Major General James M. Morgan Jr. '45 Chair for Academic Excellence and Col. Gregory Topasna, professor of physics and astronomy, was named to the Commodore Matthew Fontaine Maury Chair for Academic Excellence.

Two additional chairs were announced at the Institute Awards ceremony May 14. Col. Dick Rowe, professor of biology, was named to the Bruce C. Gottwald Sr. '54 Chair for Academic Excellence and Col. Ryan Holston, professor of international studies, was named to the Jonathan Myrick Daniels '61 Chair for Academic Excellence.

Faculty members in all departments and at various points in their careers are eligible for the chairs, which are awarded based on rigorous criteria to recognize excellence. Eventually, a total of 16 academic excellence chairs will be awarded. Each recipient receives a full salary, plus an additional bonus as a nod to excellence in scholarship.

"It is imperative that we be competitive for all our faculty positions and give special recognition to our most distinguished professors," said Donald M. Wilkinson '61, chair of the cabinet for the Peay Endowment and former member of the Board of Visitors who is spearheading the fundraising effort for the multi-prong initiative. "This is a noble endeavor: A long-term effort to build a sizable endowment to ensure VMI's competitiveness in perpetuity."

Three other components of the initiative will be rolled out in the future: merit scholarships, Peay fellowships, and the Peay Academic Excellence Fund.

The merit scholars component builds on the Institute Scholars program—which is normally able to provide only partial scholarships for academically high-performing cadets. It will have the ability to provide full scholarships to top prospects who—beyond academic achievement and future potential—demonstrate qualities intrinsic to VMI: exceptional leadership, commitment to personal physical fitness, and interest in national service. The Institute also has the flexibility to designate worthy rising 2nd and 1st Class cadets as Peay merit scholars. The initiative calls for about 20 scholarships eventually active at any one time.

Peay Fellowships promote careers in academia for graduating cadets and alumni by providing funding for graduate education. Specifically, Peay Fellows will receive funding for two years of

graduate education, followed by two years of service on VMI's faculty as "Instructors in Residence." These fellowships—awarded to cadets and alumni who have demonstrated the ability, passion and potential for successful careers in higher education—will encourage alumni to seek positions within VMI's faculty. A total of four fellowships are expected to be active at any one time.

The Peay Academic Excellence Fund provides flexibility in addressing academic needs by adding funds as needed to the other three components.

The Board of Visitors passed a resolution in 2017 stating that the endowment honors the Institute's 14th Superintendent for the "exemplary qualities of character and leadership he demonstrated through a lifetime of selfless service, beginning as a VMI cadet." The resolution goes on to note General Peay's all-around "devotion to excellence" as a cadet in Corps military activities, in service on the honor court, as football team quarterback, and academically.

"Who better to exemplify the traits of well-rounded, high-achieving cadets?" said Bill Boland, president of the board. ❀



Gen. J.H. Binford Peay III '62 speaks at the board dinner May 3.—VMI Alumni Agencies photo by Micalyn Miller.



Press Box Upgrades

The press box located in Clarkson-McKenna Hall behind Foster Stadium will gain additional space in time for the 2019 football season. The new addition of 900 square feet will allow for instant replay capabilities, a new Southern Conference requirement, and also provide more space in the Ferebee Lounge for food preparation on game days, along with a camera platform on the roof. The addition of stucco and crenelations will bring the appearance of the stadium more into line with other buildings on post. The \$1.7 million cost is being paid entirely from donated funds.—VMI Photo by Kelly Nye.



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Header photo on page 1 by
H. Lockwood McLaughlin

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Triathlon Meet Sees Cadets on Every Podium

Kathleen Yates '20 sprints towards the finish line to win second place in the women's collegiate division of the sprint triathlon, behind teammate Rebecca Browning '20 at the Rumpus in Bumpass Triathlon April 20. VMI cadets swept the men's collegiate sprint division and took first place in three out of the four collegiate divisions.—Photos courtesy of Kinetic Multisports.



Secretary Esper Visits Post

Secretary of the Army Mark Esper visits VMI April 11 to speak with Army ROTC cadre and cadets. During a town hall discussion in Gillis Theater, cadets had the chance to ask questions about their prospective careers as Army officers, leadership within the organization, and the future of the U.S. Army. His visit also included a tour of post, lunch with cadet leaders, and a meeting with the superintendent.—VMI Photos by Kelly Nye.

Poster Session Showcases Math That Matters

By Mary Price

Near the end of April, approximately 230 cadets gathered in the Hall of Valor in Marshall Hall to present the research they'd undertaken for *Math That Matters*, the new introductory course sequence for cadets whose majors do not require calculus.

Originally proposed in 2016, and under construction for the following two years, *Math That Matters* was developed as part of VMI's quality enhancement plan for reaccreditation by the Southern Association of Colleges and Schools.

The goal of the new course sequence is to make required math courses relevant to cadets whose majors seem largely devoid of mathematics—and to increase cadets' engagement by inviting them to tackle self-chosen projects that can be solved using quantitative skills.

The late April poster session was a chance for cadets to share with the wider VMI community the projects they'd chosen and the results they'd found.

Rob Soluri '22 partnered with Porter

Flynn '22 to study whether the strictness of gun control laws affects violent crime rates in a particular state. Originally, the two had planned to collect data from all 50 states, but when they realized the massive amount of data that would be involved, they chose just two states instead—California, which has the nation's strictest gun control laws, and Louisiana, which has the least restrictive.

"We were curious to see if a state with high gun control and very restricted gun laws would have a higher crime rate than a state like Louisiana, where you can go into your local Wal-Mart and buy a gun," said Soluri.

"We got the violent crime rates from 1990 all the way up until 2017, and we compared

them to see if there was a significant difference between the two states, just to see if the gun laws had an effect," added Flynn.

In the end, the cadets found that there was no statistically significant difference in the crime rates between the two states. "That basically means that gun control laws have no major effect on a state's violent crime rate," said Flynn.

Two history majors, Harrison Peglar '22 and Haas Tehan '22, investigated the devas-

for the United States. "For the Americans, we got into the war late, which meant that it was going to be a little less devastating for us," Peglar said.

Tehan said that *Math That Matters* equipped him with the skills necessary to solve the problem he and Peglar had come up with.

"The things that we learned in *Math That Matters* were a great foundation and acted as a catalyst for us to be able to make that

equation," he commented. "We were able to take historical records and quantify them and make them relevant to us."

Peglar agreed, saying, "Before the course, I didn't know how to make charts like this, and I didn't know how to make this kind of equation."

Another pair of cadets, Bridget Hughes '22 and Matt Seeman '22, investigated whether females were more likely to suffer stress-induced physical injuries during the Rat Line.

For Hughes, the interest was personal, as she'd suffered a stress fracture in her left leg during Rat



Approximately 230 cadets gathered in the Hall of Valor April 29 to present their Math That Matters research to the wider VMI community.—VMI Photo by Kelly Nye.

tation of various wars that the United States has been involved in.

"We wanted to do something that related to our majors," said Peglar. To determine which war was the most devastating, Peglar and Tehan took the number of people killed and injured, weighting them by a factor of three and two, respectively, and then divided that number by the total population at the time of the conflict.

"When you look at our chart, you see that the Civil War was by far the most devastating, and that's because of how many people were killed during the Civil War on both sides," Peglar commented.

World War II, he noted, was more devastating for the world, but not as devastating

Line training.

She and Seeman also wondered if the company a cadet is assigned to made any difference in the likelihood of injury, as company assignments are based on height. Hughes is a member of Company H, which includes many taller females.

"In my company, the males and females are not the same height, but there's a shorter height difference," said Seeman, a member of Company F.

To obtain data, Hughes and Seeman surveyed cadets, asking their height, rat year company, and whether or not they'd ever had a stress-related injury.

Continued on next page

“We found for eight out of 10 companies, the females were statistically more likely to get stress injuries than the males, so overall for the Corps, we found that females are more likely to receive a stress injury during the Rat Line,” said Hughes.

Based on the data collected, Hughes and Seeman believe that companies with greater height differences produce more injuries among females, most likely because females have to widen their gait to keep up with

their taller male peers, and this puts a strain on their legs.

Faculty who teach *Math That Matters* have felt the strain of teaching a math class that’s definitely outside the box, or in this case, outside the textbook, as they adapt to a new way of teaching. Cadets, though, seem to enjoy the class.

“To their mind, they’re taking a math class that makes math applicable,” said Lt. Col. Jessica Libertini, associate professor

of applied mathematics and one of the main architects of the new curriculum.

“It’s much more of a hands-on experience, and they’re doing the work themselves rather than waiting for me to do it for them,” said Maj. Lucas “Luke” Castle, a post-doctoral fellow who was hired to help implement the QEP.

“It’s more geared toward the cadets discovering the material rather than me just telling them, ‘Hey, this is how it is.’” ❀

Fulbright Winner *continued from page 1*

of international programs. “Recipients are selected on the basis of academic and professional achievement, as well as their record of service and leadership potential in their respective fields.”

Before Tice, the last VMI cadet to receive a Fulbright award was Brett Carter ’01. Carter, who went on to earn a doctorate in government from Harvard University, traveled to Senegal courtesy of the Fulbright program.

“People associate Fulbright with elite colleges, but more and more small schools like us are starting to compete for these [awards] and actually win them,” Hall added. “It gets you national recognition, too.”

Hall believes that Tice’s genuine dedication to teaching shone through in her Fulbright application and interview, and that’s what impressed the Fulbright Foreign Selection Committee, a 12-member panel appointed by the president of the United States.

“Annika truly has a passion for working with kids and teaching young people,” said Hall. “I think that had a lot to do with it.”

Calling Tice a “consummate learner,” Maj. Stephanie Hodde, assistant professor of English, praised Tice’s intellectual curiosity and willingness to risk the unknown. The two first met when Tice enrolled in Hodde’s 4th Class public speaking class.

“I’d never had a student as enthusiastic about new ideas and new experiences as Annika,” said Hodde. “She was always ready to fully engage at what was coming at her in the classroom ... and make connections to her own personal journey as a learner.”

A native of Java, Virginia, in the rural Southside part of the state, Tice has long had a passion for education, which she developed in the wake of once being a struggling student herself. As a ninth grader, she worked hard to find her footing at Chatham Hall, a private, all-girls school, but ultimately

succeeded thanks to caring faculty members and inspiration from high-profile campus visitors such as Gloria Steinem and Venus Williams.

As a cadet, she became interested in helping girls about to make the middle to high school transition, and in the spring of 2018, she began volunteering at Maury River Middle School, which serves over 600 students from Rockbridge County. At the same time, she worked with Maj. Abbey Carrico, assistant professor of modern languages and cultures, to teach French to young children in the Lexington area.

Those steps led to an even bigger challenge, as she teamed

with Hodde to create the Girls Leadership Exchange, a camp for rising 7th through 9th grade girls held on the VMI post in June 2018. Tice has spent this academic year writing her Institute Honors thesis on the lessons she learned from the experience of planning and executing that camp.

Tice’s maturity and sense of justice have not been overlooked by her peers. Two years ago, she became the first female to be elected to VMI’s Honor Court. There, she’s led an effort to focus on prevention of Honor Code violations.

“This year, our Honor Court really worked as a team to push that forward,” said Tice.

As an Honor Court representative, Tice said she’s tried to be “very transparent” in her dealings with fellow cadets. “As a leader, you’re subject to the same rules as everyone else, and the best way to carry out your job is to relate to others,” she stated. “Some people are afraid of you, or think you’re above them. I’ve always tried not to make it that way.”

As her cadetship wraps up, and her July departure date to the Ivory Coast draws near, Tice is grateful for the opportunities VMI has provided her. She’s held rank in the Corps for the past three years, acted and helped out backstage with the VMI Theatre, worked on VMI’s literary magazine, *Cadence*, and held a plethora of on-post jobs. She’s also a member of Omicron Delta Kappa, the national leadership honor society.

Her advice for fellow cadets? Take wise risks, try new things, and don’t be afraid to step out of your comfort zone.

“Don’t feel like you have to stay in one place,” she counseled. ❀



Annika Tice '19

Anatomy Table Brings Virtual Dissection to Post

By Mary Price

A new tool housed in the Department of Physical Education will allow cadets to peer inside both human and animal bodies without ever wielding a scalpel.

The Anatomage table melds the interactivity and touchscreen capacity of a tablet computer with an ultra-high resolution 3-D visualization system to create a vivid picture of the body's circulatory, nervous, and lymphatic systems, plus internal organs.

Pre-loaded with four cadavers of varying genders and ethnicities, all based on individuals who donated their bodies to science, the Anatomage table allows users to view real people and real pathologies. For example, the Asian-American woman whose virtual cadaver is on the table died of gastroenterological cancer, so that disease is clearly revealed in looking at her cadaver.

The table also comes with CAT scans available for viewing. Animals and birds, too, are available for virtual dissection as users manipulate the images on the table using either their fingers or a stylus.

"When people ask me what it is, I say, 'It's basically a 7-foot iPad,'" said Col. Mike Krackow, professor of physical education and leader of the effort to bring the table to VMI. With a background in athletic training and psychology, Krackow serves in the summer as an adjunct professor at the Jefferson College of Health Sciences in

Roanoke, and that's where he first saw the Anatomage table.

Krackow explained that at least three departments—physical education, biology, and psychology—will be using the new device. The table will also support VMI's exercise science minor, which is now six years old and has become the second-largest minor on post, behind applied mathematics.

"In theory, every cadet could have exposure to the table," said Krackow. "Ideally, I'd put in a proposal to get another two or three of them so we'd have like a virtual dissection lab."

This fall, Krackow will be using the table to teach a new class, PE 274, human anatomy. So far, seven cadets have signed up, but Krackow is hopeful that number is just a start, especially given the fact that over a third of cadets

majoring in biology are interested in careers in the healthcare field.

The table's cost of just under \$80,000 was paid for by Virginia's Higher Education Equipment Trust Fund. ❧



Jaclyn Murphy trains physical education, biology, and mechanical engineering professors on how to use the recently purchased Anatomage Table May 7 in Cormack Hall.—VMI Photo by Kelly Nye.

Five Honored in Retirement Ceremony

Retiring faculty and staff were honored in a ceremony in Jackson Memorial Hall April 12 after rain forced the cancellation of the traditional retirement parade. Joining Gen. J.H. Binford Peay '62 III, superintendent, for the ceremony were Col. Jim Turner '65, professor of biology; Col. L.E. Hurlbut, deputy commandant for support; Col. Tom Hopkins, director of information technology; Col. Steven Biggs, commander, U.S. Air Force ROTC; and Lt. Col. Gil Rolon, executive officer, Army ROTC.—VMI Photo by H. Lockwood McLaughlin.



Ethics Team Competes at Annapolis

By Kelly Nye

Five cadets participated in the Military Ethics Case Competition at the U.S. Naval Academy's Stockdale Center for Ethical Leadership April 13. The cadets placed third of five teams, the others being the U.S. Military Academy, Coast Guard Academy, Air Force Academy, and Naval Academy.

The team has been active only since 2015 when Col. Dave Gray, director of the Center for Leadership and Ethics, put the group together. VMI has sent cadets to the Military Ethics Case Competition every year since, making it the only state school among the federal academies.

This year, the team consisted of cadet in charge Joel Thomas '19, Carter Johnson '19, Yavor Aleksiev '22, Zachary Shaffer '20, and Madeline Barrett '20. They were led by Col. Pat Looney, deputy director of the Center for Leadership and Ethics, and mentored by Dr. Duncan Richter, professor of English, rhetoric, and humanistic studies and holder of the Charles Luck III '55 Institute Professorship.

Winning third place was a big deal for the team.

"Until this year we had been bottom dwellers, despite very strong presentations by our cadets," said Looney. "So, the fact that we finally broke into the top three is quite an achievement by this team."

The topic for this year's competition was moral injury. In February the teams received a case stipulating that they create a strategic plan for minimizing moral injury within a platoon. The plan had to include all aspects of the deployment: pre-deployment, deployment, and post-deployment. The teams then had until April 9 to submit a 20-minute presentation.

Not only did the cadets need to know their presentation well, they had to anticipate questions. On the day of the competition, the judges were able to ask questions for 10 minutes about their conclusions. Question topics included minimizing moral injury, measuring success, and toxic leadership.

Preparing for this was a major time commitment. Each night a different faculty member, mostly from the international studies department, volunteered to listen to the presentation to bring fresh ideas to the cadets.

"This competition could not come at a worse time for VMI; to date it has fallen



The ethics team poses with Col. Pat Looney at the U.S. Naval Academy's Stockdale Center for Ethical Leadership April 13.—Photo courtesy of Col. Pat Looney.

on the weekend immediately after FTX, which means our cadets come back from FTX and jump into a nightly routine of practice and murder boards," said Looney.

But the hard work paid off. Yavor Aleksiev '22 attributed the team's accomplishment to the guidance of Looney and Richter, and the experience brought by seasoned cadets.

"Cadet Joel Thomas' devotion was crucial for our success," said Aleksiev of the team leader.

"The presentation included both ethics, like the just war theory

and real-life examples from the battlefield, which made our case stand out from the rest presented at the Naval Academy."

Some of those examples included Aleksiev's father's experience as an officer in the Bulgarian army. He served as a psychologist and a captain in Iraq in 2003.

"The topic ... is of huge importance nowadays, after the numerous war conflicts around the world and the large number of veterans that have to deal with their experience on the battlefield, as it is affecting their lives back home," said Aleksiev.

Overall the experience has left the team in a good position to do well again next year.

"I can clearly see the ethics team as part of my future cadetship," said Aleksiev. "The team atmosphere and the interesting topics that we cover are something that I look forward to." 🌸



Yavor Aleksiev '22 answers questions from judges during the ethics team competition in Annapolis April 13.—Photo courtesy of Col. Pat Looney.

POST BRIEFS

History Professor Publishes Book on Aviation History

Lt. Col. M. Houston Johnson V, associate professor of history, is the author of a recently published book, *Taking Flight: the Foundations of American Commercial Aviation, 1918-1938*. In the book, Johnson explores how and why the federal government established control over commercial aviation and what the government did to promote the growth of aviation

in the 1920s and 1930s, yet without nationalizing the airline industry as most European nations did. Johnson also notes that both Republican and Democratic administrations were supportive of the airline industry, as air travel was seen as an aid to both American economic development and national defense.

CIS Faculty Contribute to Book

Three members of the Department of Computer and Information Sciences faculty contributed to a recently published book, *Nature-Inspired Cyber Security and Resiliency: Fundamentals, Techniques, and Applications*. Contributing to the work were Col. Mohamed Eltoweissy, chair of the

department; Dr. Youna Jung, assistant professor; and Dr. Mohamed Azab, assistant professor. The book is the product of an international team: other authors were Errin Fulp of Wake Forest University, Elsayed Elaify of King Fahd University, and Wocjeich Mazurski of the University of Poland.

Legislation Establishes National George C. Marshall Museum and Library

Thanks to an act of Congress led by two Virginia legislators, the George C. Marshall Museum and Library is now the National George C. Marshall Museum and Library. A bipartisan resolution renaming the museum was included in the John D. Dingell Jr. Conservation, Management, and

Recreation Act, which passed Congress earlier this year and was signed by President Donald Trump March 12. Sponsors of the legislation were Sen. Tim Kaine and Rep. Ben Cline. The Marshall Foundation has been housed on post since 1964.

Modern Languages Professor Publishes Book

Col. Mary Ann Dellinger, professor of modern languages and cultures, is the co-author of a recently published book, *Indagaciones: Introducción a los estudios culturales hispanos*. This post-intermediate Spanish textbook, whose title in English is *Inquiries: Introduction to Hispanic Cultural Studies*, introduces students to a wide variety of visual, audio, and written texts

and teaches critical textual analysis in Spanish through a cultural studies approach and help intermediate-level language students progress past the intermediate level. In addition to Dellinger, co-authors of the book are Ellen Mayock, professor of Spanish at Washington & Lee University, and Beatriz Trigo, associate professor of Spanish at Gettysburg College. 🌟

North Post Challenge Tests Marksmanship, Athleticism

By H. Lockwood McLaughlin

Over a period of three days, April 30–May 2, six cadets from each company competed in the annual North Post Challenge. Throughout the competition, they participated in obstacle courses, a confidence climb, rock wall climbing, and firearm challenges that tested their competency with pistols, rifles, and shotguns.

There was a great deal of competitive spirit as each company had hopes for placing first in the challenge and receiving the streamer to display on their company guidon for the next year. The results were announced at the Commandants' Awards Ceremony May 16, with Companies E and



Holly Njabo '20 competes at the North Post indoor range May 2.—VMI Photo by H. Lockwood McLaughlin.

G tying for first place and each receiving a streamer on the company's guidon.

"The cadets are getting into it which is fantastic and times are fast," remarked

facility director, Capt. Isaac Slone right after the cadets participated in the rock climbing and indoor obstacle course in the CPTF. Slone also helped coordinate the outdoor O-course and confidence climb the previous day. "I'm excited to see times are getting faster," he added. "I think every year it's gotten better and better."

Having just climbed on the indoor rock wall, Jake Johnson '19 of Band Company offered a few remarks. "Our team has the fastest time on the rock wall right now. I think our team is melding really well.

This year, I think everyone's motivated to do it and it's a lot of fun out here."

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"Yesterday was a little shaky but today, there was definitely a change in our strategy and approach, which really helped us do pretty strong," chimed in fellow Band Company competitor Bobby Fricke '19.

There was a great deal of camaraderie and cheering for one another as the competition went on.

"It's a lot of fun," said Company H member Christina Skaggs '22. "I didn't volunteer for this experience but I'm glad I was volen-told. I've had a really great experience so far."

"It's all about the fine details in a lot of these obstacles, so it's just focusing and not trying to go too fast," said Stephen Kochy '19 of Company H. "I've done this every year, and this is my second year leading us. I

think we've got a lot of good competitive guys and girls on the team." With the second day of competition behind them, Kochy thought forward to the third and last day of North Post Challenge. "I think tomorrow will be our best day actually. A couple of us do competitive shooting."

The third day was completely firearms related. Each company was split into two groups. One group worked with rifle and pistol shooting in the North Post indoor firing range and the other traveled to the Quail Ridge Sporting Club south of town to shoot at clays.

"They're doing pretty well, especially for first time shooting Five-Stand," said Ret. Gunnery Sgt. Scott Guise, owner of the

Quail Ridge Sporting Club. "The greatest part is that they already have great fire-arm safety handling, and they were very attentive in the safety brief so they understood everything that we covered."

Right after the first round of shooting in which cadets rotated and shot from five separate shooting stands, Justin Polito '20 offered a few words.



Cadets scale the climbing wall in the Corps Physical Training Facility during North Post Challenge May 1.—VMI Photo by H. Lockwood McLaughlin.

"We're just putting our best foot forward" said a humble Polito. "It's fun. I think we're doing all right. Hopefully we'll win it. We'll see." When asked for additional comments, he further affirmed the assumption that cadets enjoyed a challenge as he mentioned that he'd "...like to see rucking and running" incorporated into the event. ❄



Scott Guise, owner of Quail Ridge Sporting Clays, gives a safety lesson to cadets before they use the course.—VMI Photo by H. Lockwood McLaughlin.

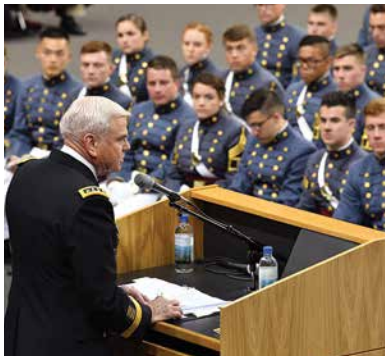
Beijing Opera Comes to VMI

Performers with the D.C. Beauty of Beijing Opera give a workshop and performance in Preston Library April 13 at the invitation of Dr. Laura Xie, assistant professor of modern languages and cultures. Xie, who has a longstanding interest in this ancient Chinese art form, took a Jackson Hope grant for faculty development leave last year to study dance movement with the D.C. Beauty of Beijing Opera. The group came to post to share with the VMI community this unique performing art, which was declared an intangible cultural heritage of humanity by UNESCO in 2010.—VMI Photos by Mary Price.



Graduation Week

The Institute sends off the Class of 2019 in the days leading up to graduation May 16. Cadets and faculty were recognized for excellence in academic and military life at the Institute awards ceremony. Members of the VMI community gathered with guests for fellowship and inspiration at bacchalaureate and the glee club concert. Cadet leaders ceremonially handed over leadership responsibilities to members of the Class of 2020 during the change of command parade, and, in the New Market Parade, the Corps honored all cadets and alumni killed in battle. —VMI Photos by Kelly Nye, Mary Price, and H. Lockwood McLaughlin.



'The Spirit of One-Nine'

By Mary Price

Approximately 300 cadets received diplomas during the commencement exercise held Thursday, May 16, each bringing to completion a journey filled with challenges, successes, setbacks, and more than anything else, memories.

This year's graduating class was smaller than last year's, which numbered over 370. Those graduating this year came from 31 states and three foreign countries. The most popular majors for 2019 graduates were international studies, civil and environmental engineering, and economics and business. By the end of the summer, 54 percent will have commissioned into the armed services.

Gen. J.H. Binford Peay III '62, superintendent, reminded those graduating that hard work and learned wisdom are still the keys to success in life.

"Hard work in America is still a competitive advantage, as it has been since our nation's earliest days," said Peay, who was this year's graduation speaker. "Hard work brings a steadiness to life and joy to accomplishments and success. And it also is a bedrock of wisdom."

Addressing the members of the Class of 2019 and other graduates was valedictorian Joel Thomas '19, a biology major with minors in philosophy and literary studies. In his remarks, Thomas discussed how the VMI that graduates thought they knew when they matriculated is not the same VMI they will carry with them afterward.

"The VMI we have known and experienced is not a place, though it is intimately tied up with this physical place, but a living, breathing entity," stated Thomas. "We have come through a system and it has changed us."

Both Thomas and fellow speaker Eli Facemire, class president, recalled how the September 2015 death of Sean Hoang '19 was a unifying factor for the class. Hoang was later found to have died due to a congenital heart defect.

"The loss of our BR Sean Hoang on 21 September 2015 did shake us deeply, but ultimately, it became the essence of the spirit of our class, the spirit of One-Nine," said Facemire. "Suddenly we realized that no one is guaranteed another day on this earth, no matter how young."

A cadet chaplain at VMI, Facemire plans to become a military chaplain, and he noted that his time at the Institute has taught him

how to connect with all kinds of people, in all kinds of situations. "It's such a diverse place."

Members of the class drew on that same brother rat spirit to support one another through individual trials and tragedies.

At the club sports banquet held a week before graduation, club lacrosse team member Tommy Smith '19 took the opportunity to thank his brother rats for their support in the wake of the sudden death of his father in March 2019. The elder Smith died of a heart attack just as Tommy Smith and several of his roommates were returning from a spring furlough trip to Las Vegas, Nevada.

"I got the week off just to be at home and try to figure things out," said Smith, who credited Chaplain Bob Phillips '87 and Lt. Col. Kevin Faust '96, assistant commandant, for helping him make arrangements to be away on short notice.

At the end of that week, Smith explained, there was a memorial service—and then it was time to go play lacrosse, as the team had a game scheduled against North Carolina's High Point University.

"I didn't want to leave my family that soon that weekend, but I could hear my Dad saying, 'You need to go play. Don't worry about me,'" said Smith.

That Sunday morning found Smith out on the playing field. "I had two goals in regulation, and then we went into overtime and then I scored the game-winning goal in overtime," Smith recalled. "It was my first game back, so it was really emotional." Smith credits his lacrosse teammates and his roommates with helping him come back to VMI and graduate on time after such a deep and shocking loss.

"The club team was so supportive of me," said Smith. "From the first practice, they treated me like I'd been there all four years on the team." After four years on the Keydet football team, Smith had joined the club lacrosse team for the first time this year because he'd enjoyed the sport so much in high school.

"My roommates were huge," Smith continued. "The next weekend [after Smith's father's death] they came to the services—I think six of my classmates came, which was awesome."

The sudden loss gave Smith a new perspective on adversities of all sorts. "No matter what life or VMI throws at you, there's always the next day," he stated.

And there are always your brother rats. ❀



Friends and family fill Cameron Hall to watch the Class of 2019 graduate May 16.—VMI Photo by Kelly Nye.

'Push Myself and Learn'

Over 160 Commission into the Armed Services

By Mary Price

At first glance, the 162 cadets commissioning into the armed services this spring and summer seem to have little in common. They come from different states, have different majors, and for some, commissioning wasn't their first choice of a career path when they arrived at the Institute. What unites them is a desire to give back, and a willingness to risk the challenging unknown in order to do so.

Ensign Alex Dedousis '19 commissioned into the U.S. Navy May 15, with an assignment to serve on a submarine once he completes a six-month nuclear power school in Charleston, South Carolina. That program, which is master's level coursework, is meant to be challenging, but Dedousis feels that the physics major he chose at VMI, along with a minor in applied mathematics and a concentration in nuclear engineering, will help him succeed.

"Physics in high school fascinated me," he said. "It was the one course that helped me explain why things occurred, and I really like knowing that."

Dedousis, a native of Nashua, New Hampshire, had been interested in serving in the Navy from high school.

"I've always been fascinated with submarines," he stated.

During his cadetship, Dedousis had the opportunity to spend time on two submarines, one traveling from Alaska to Hawaii and another making the trip from Scotland to Norway. Spending time underwater with enlisted personnel and officers cemented Dedousis's decision that the Navy was the place for him.

"They were in the middle of doing very important things for our country, and seeing how crucial they are to America's needs was very awesome," Dedousis commented.

"I'm just looking forward to the challenge of having to push myself and learn," he continued. "Everyone on that submarine is smart—I'm just excited to get into a field where everyone is technically very competent. They know exactly what needs to be done."

Unlike Dedousis, who found VMI in high school, Air Force 2nd Lt. John



Capt. Zach Cline '11 shakes hands with John Philbeck '19 after administering the Air Force oath in Jackson Memorial Hall May 15.—VMI Photo by Kelly Nye.

Philbeck '19 was aware of the Institute from elementary school. He visited for a parade as a second grader, and in fourth grade, when asked to write a letter to his future self, he'd written about going to VMI.

On Matriculation Day, though, he wasn't sure he wanted to commission, so he signed up for Army ROTC. Finding that branch of the service not to his liking, he switched to the Air Force.

"I've always been into innovation—being the best, the fastest," said Philbeck, an economics and business major who will serve as an intelligence officer, reporting for duty Sept. 30 in San Angelo, Texas.

In that position, he'll be eager to put the lessons VMI has taught him to good use.

"VMI has provided examples of who I want to strive to be as a leader, whether it's a member of the [commandant's] staff, another cadet, the ROTC, or a [professor] ... It's been a constant incubator of developing yourself for graduation, when you're actually leading people yourself."

Marine Corps 2nd Lt. Daniel Chisner '19 developed himself for leadership as well, although by a different route. Unlike some of his brother rats, Chisner had known for a long time that he wanted to commission. The Naval ROTC's Bulldog program, which prepares cadets for Officer Candidate School, drew him to VMI.

"I knew that I wanted to serve, and I knew that, ultimately, lives were going to be in my hands if I was going to be an officer in the Marine Corps," said Chisner. "I wanted to be the best-trained I could be going in."

While at VMI, Chisner served in many leadership positions, among them a platoon sergeant for Company C his 2nd Class year and

serving as the 1st Class representative to the Rat Disciplinary Committee this academic year. He was also the Marine Corps commanding officer in the fall of 2018 and the Bulldog adviser in the spring of 2019.

"For at least the Marine Corps commanding officer, I definitely learned to delegate," he said. "It builds that unit cohesion, and everybody feels like they have a part in that team."

A chemistry major, Chisner also spent many hours in the lab of Maj. Dan Harrison '05, who works in the area of renewable energy.

"You have to be persistent," said Chisner of his lab work. "One of the



Army ROTC cadets take their commissioning oath in Cameron Hall May 15.—VMI Photo by Kelly Nye.

things that Major Harrison tells me, when my research starts failing, is that you're going to fail 99 times, but it's that 100th try that can change the entire world."

At VMI, Chisner has felt the support of others propelling him forward through some of life's darkest moments. Just before Thanksgiving furlough his rat year, his mother died unexpectedly.

"Ultimately, I looked around, noticed my brother rats, noticed the Marine Corps, and said that I'm never going to be a part of a brotherhood outside of the military," he explained.

"There's just something about the Marine Corps that just builds everybody together," Chisner said. "That shared suffering that everybody goes through, especially in boot camp and Officer Candidate School, builds that brotherhood between people." ❀

Leader in Residence

Gen. Dennis L. Via gives an address during the Superintendent's Leadership Dinner in Marshall Hall April 17. Via, who last served as the 18th commanding general of the United States Army Materiel Command in Redstone Arsenal, Alabama, is VMI's 2019 Leader in Residence. —VMI Photos by H. Lockwood McLaughlin.



Dolitsky to Serve in Army Aviation

Growing up in Illinois, Army 2nd Lt. Sarah Dolitsky '19 learned to play water polo in high school—and four years later, she came to VMI on an NCAA scholarship to play that sport. Although not from a military family, she also felt drawn to military service.

Her rat year, though, made her question her desire to commission. "It was rough when I came in," she acknowledged. "I was very in shape for my sport, but you float with more body weight in water polo, so I came in at 195 pounds, and I was very, very out of shape."

Coming back for her 3rd Class year, Dolitsky was determined to make major changes.

"I got on a big workout kick, and a big nutrition thing, and I dropped 45 pounds," she explained. With less weight, Army ROTC training was much more doable, and even the steep hills of Lexington didn't seem so daunting.

By the time her 1st Class year rolled around, Dolitsky was ranked third on the VMI Army ROTC's internal order of merit list, which is based upon factors such as physical fitness scores, grade point average, and performance at Advance Camp, which all Army commissioning cadets must attend the summer before their 1st Class year.

She managed that despite having to travel out of state constantly for water polo meets. Because VMI is the only NCAA Division I school in Virginia with a women's water polo team, staying in state for meets isn't an option—and this year, the team has traveled as far afield as Minnesota and California to compete.

"It's never fun because you're always tired," the psychology major acknowledged. "I've stayed up until 3 a.m. the night before water polo



Sarah Dolitsky '19 receives her shoulder boards in Marshall Hall May 15 after commissioning into the Army. —VMI Photo by Mary Price.

tournaments doing homework. It hurts, but the grades come first."

Thanks to her dedication to her studies, Dolitsky was recognized this year as an academic all-American by the Metro Atlantic Coast Conference and was named to the Southern Conference Honor Roll.

Outside of the pool and the classroom, Dolitsky has been involved with the Cadet Equity Association (CEA), which educates the Corps about Title IX offenses and investigates instances in which Title IX may have been violated, as is the case with racial slurs, sexual

misconduct, and more. Extreme cases go to Col. Jeff Boobar '86, inspector general, while the CEA metes out punishments such as confinements and penalty tours for less serious cases.

Both with the CEA and the water polo team, where she's team captain, Dolitsky strives to lead without lording it over her fellow cadets.

"I want it to be on an even playing ground, so we see eye to eye," said Dolitsky. "That keeps a good environment, especially for a team that you want to stay close-knit."

On May 22, Dolitsky reported to Fort Rucker, Alabama, where she'll train with the Army's aviation branch. Having conquered VMI's physical, mental, and academic challenges, Dolitsky is eager to push herself further.

"I'm looking forward to the chance to lead other people and be put in those uncomfortable situations that you just have to figure out how to maneuver around," she stated. "I really like being challenged, so I'm super excited to go somewhere that it's very difficult."

— Mary Price

Cadets Instruct Local Children in French, Spanish

By Mary Price

This spring, two groups of cadets moved to the other side of the lectern and became teachers themselves as they taught foreign languages to local students.

Cadets enrolled in Maj. Jeff Kendrick's French 470 class traveled once a week to a meeting of the Boomerang Gang, a local home-school cooperative, to teach an eight-week set of French lessons.

Kendrick, who is assistant professor of modern languages and cultures, kicked off the semester with asking the cadets to reflect on their own experience of learning French. He also went over the history of the French language and theories of learning before inviting them to create their own lesson plans.

The four cadets in Kendrick's class—Peyton Bembry '19, Nolan Lipscomb '19, Michael Manning '20, and Josiah Womack '19—met on Tuesdays and Thursdays. Tuesdays were spent preparing and delivering practice lessons, with feedback from Kendrick and their fellow cadets. On Thursdays, it was time to go teach the two groups of students, one made up of fourth through sixth graders and the other of seventh through 10th graders.

"Research has shown that when learners are doing, they're actually learning better," explained Kendrick. "When learners ... are doing, they're taking an active part in that learning."



Lance Von Rinteln '21 assists in teaching Spanish to elementary age children at the Collaboratory and Makerspace in Lexington.—Photo courtesy of Sabrina Laroussi.

The material taught was centered around daily conversation, such as how to introduce yourself, family vocabulary, likes and dislikes, and clothing and colors. At the end of the semester, the cadets gave a crepes party for the children, explaining the significance of crepes in French culture and the holidays with which they're associated. As a culminating exercise, the students were asked to order their crepes, including toppings, *en francais*.

It didn't take long for the cadets to realize that teaching is a lot harder than just walking into a classroom with a textbook.

"One of the things that the cadets said ... was 'I never knew how long it took to get ready to teach,'" Kendrick related.

While feeling it unlikely that any of the cadets will go on to teach foreign languages as a career, Kendrick is hopeful that the experience of getting in front of a group will stand them in good stead.

"They're going to be standing in front of people ... They're going to have to get their attention, get them engaged in what they're talking about," he commented.

Also this spring, Maj. Sabrina Laroussi and Lance Von Rinteln '21 teamed up to teach an after-school enrichment Spanish class at the Lexington Collaboratory & Makerspace, with an emphasis on language and culture in Spain, Colombia, and Argentina. 🌿



Cadets in Maj. Jeff Kendrick's special topics in French course prepare crepes for local home-school children as the culmination of the course they taught in French language and culture.—VMI Photo by Kelly Nye.

ASCE Award

Bob Cagle III, society director for the American Society of Civil Engineers, presents cadet members of the VMI chapter of the ASCE with two awards, one for being named the best student chapter in Region Four of the ASCE and the other for being a finalist for the 2019 Robert Ridgway Award. The Ridgway Award is given annually to the best student chapter nationwide.—VMI Photo by Mary Price.



Cadet Engineers Put Their Knowledge to the Test

By Mary Price

Most times, civil engineers set out to build something, whether that something is a house, a commercial building, or a bridge. But in mid-April, a group of five cadets gathered in the civil and environmental engineering structures lab for a very different purpose: they wanted to break something.

The cadets, all participating in an independent study with Lt. Col. Matt Swenty, associate professor of civil and environmental engineering, were preparing to enter the Big Beam Competition sponsored by the Precast/Prestressed Concrete Institute (PCI). To fulfill the contest requirements, students must create and then load test a 20-foot concrete beam, with guidance from an industry member of the PCI.

A project such as this, involving a beam weighing approximately 2,300 pounds, is only possible because VMI now has sufficient lab space for testing large and heavy items, explained Swenty. Just this academic year, space that was once a mechanical engineering lab has been reallocated to the civil engineering department.

"[The beam project] has been very fulfilling," said Uzoma Kpaduwa '19, one of the cadets working on the beam. "It's everything we've been doing for the last few years in class—it all directly stems into this project."

Guiding the cadets through the process of casting the beam, and then coming to post to watch the testing, was Chris Gray '15, who now works as a structural engineer for VMI's beam sponsor, Winchester-based Shockley Precast. He and Swenty have kept in touch since Gray graduated, and it was Gray who invited Swenty and the cadets to come to Winchester and help cast their beam.

"It was awesome that Shockley let us come up and really participate," said Jake Paladino '19. "We went right onto the pouring board. ... They really let us be hands-on, which really felt like 'this is our beam.' We designed it and helped build it."



Lt. Col. Matt Swenty watches as cadets prepare to test their entry in the Big Beam competition April 18.—VMI Photo by Kelly Nye.

For his part, Gray said he was glad to see cadets have an opportunity to put their civil engineering skills to the test.

"It's something [Shockley] wanted to do with students—work with them and expose them to our industry," said Gray. "We didn't have the facilities to do this when I was here."

As cadets from Swenty's advanced design class watched, the five cadets involved in the beam test project used a hydraulic jack to apply force to the concrete beam. At first, nothing seemed to happen. The first crack appeared when 15,600 pounds of pressure were applied, but the beam didn't give way with a truly audible crack until the weight

reached just over 32,000 pounds.

For the cadets, the sound of the snap was euphoric—because they knew that to qualify for the PCI competition, a beam must break when the load placed on it is between 32,000 and 40,000 pounds.

The contest, Swenty noted, doesn't involve travel since moving heavy pieces of concrete is impractical. Rather, results are certified by an industry partner—in this case, Shockley

Precast—and sent in electronically. And the winner is not necessarily the school whose beam can bear the heaviest load.

"It's a lot more than how strong is the beam," said Swenty. He added that factors such as load, deflection, cost, and efficiency all come into play when determining a team's final score.

Swenty also noted that while he'd be happy to see the cadets win, a first-place award isn't the true goal. "The major goal isn't to win," he said. "The goal is to learn. There's always problems. It's how you learn from them."

As the cadets gathered up souvenir pieces of their beam after they'd successfully

broken it, they noted that being surrounded by shards of concrete is just the kind of professional preparation they need.

"I'll be working with this kind of stuff," said Paladino, who commissioned into the Army Corps of Engineers in May. "It's exciting. It's going to be awesome. I'm going to be getting into the explosives side and seeing how this stuff reacts with explosives."

In addition to Kpaduwa and Paladino, other cadets involved with the big beam project were Tyler Fedison '19, Anthony Sposato '19, and Brandon Morgan '19. ❁



The 20-foot concrete beam cracked all the way through when the weight reached over 32,000 pounds.—VMI Photo by Mary Price.

'The Paradigm Future of Business and Society'

Second Annual Business Summit Stresses Innovation, Entrepreneurship

By Mary Price

Now in its second year, VMI's Business Leadership Innovation Summit (BLIS) was held April 11-13 with the goal of spurring entrepreneurial thinking among cadets and connecting them with like-minded alumni already succeeding in the business world.

This year's summit attracted approximately 70 alumni, said Dr. Dekuwmini "Dee" Mornah, associate professor of business and economics. It also drew a good number of cadets, although fewer than last year because attendance by economics and business majors this year was optional, whereas last year it was mandatory.

But for those who came, the rewards were plentiful. "[Cadets] were getting internships and jobs everywhere," reported Mornah, who organized the summit along with an alumni steering committee headed by John Kemper '68.

Mornah also noted that of the 70 alumni who attended, approximately 90 percent attended BLIS last year.

"A 90 percent retention rate is great," he commented.

Keynote speaker Dr. Michael Morris kicked off the event Friday, April 12, with a speech designed to broaden attendees' thinking about entrepreneurship.

Morris, who was formerly the George and Lisa Etheridge professor of entrepreneurship at the University of Florida, shared the message that entrepreneurship is not just about starting a small business. Rather, entrepreneurship is a mindset that can be taught and cultivated, no matter what someone's age or employment status.

"The most creative people are the people who practice their creativity more," said Morris, who defined entrepreneurship as "the pursuit of opportunity regardless of resources controlled."

That evening, Sean Matson '05, a former Navy SEAL and founder of two small businesses, spoke about his experience as an entrepreneur as part of the John W. and Jane M. Roberts Institute Lecture in Free Enterprise series.

In his remarks, Matson stressed the intense focus it takes to get a business off the ground—a focus so great that it often demands giving up everything that's not essential to success.

"Streamline everything so you focus your efforts on your priorities," stated Matson, whose start-ups are Matbock, a military supply company, and Strike Force Beverage, a producer of energy drinks. "You have to quit everything that doesn't help you achieve those goals."

Matson also stressed that entrepreneurs don't necessarily have to have top-notch skills in all areas to be successful. "I'm not a smart person ... but I know how to build a team," he stated.

On Saturday, April 13, a panel of VMI faculty and cadets from the departments of economics and business, mechanical engineering, and computer and information science convened to discuss how innovation and entrepreneurship are relevant to their fields of study.

Col. Clifford West, chair of the Department of Economics and Business, began by noting that for the past three years, cadets



Dr. Dekuwmini Mornah chats with Rives Worsham '19 during the Business Leadership and Innovation Summit April 11.—VMI Photo by H. Lockwood McLaughlin.

majoring in his department have been required to create a business plan as their 1st Class capstone project as a way of tying together the seemingly disparate components of their very broad discipline.

"We didn't begin this with the intent of having our students become entrepreneurs and start their own businesses," said West. "We didn't discourage it. And

so far, in three years, we've had one new business get started ... and we're hoping that that will accelerate as we go."

Like West, Col. Mohamed Eltoweissy, chair of the computer and information science department, said that the capstone project in his department is meant to orient cadet learning toward the real world. The CIS capstone requires cadets to develop a working prototype of a computer system.

"We have developed a program such that innovation and experiential learning resonates throughout our program," said Eltoweissy.

Col. Joseph Blandino, professor of mechanical engineering, stressed his department's need to prepare cadets for a post-college world in which they'll be competing for jobs with newly minted engineers from much larger schools.

"You want kids that understand that although you want to do cool projects and those are fun, at the end of the day, you're doing it to make somebody money or to make the process better, whether it's military or civilian," he commented. "Innovative projects and collaborations with businesses are natural ways we can distinguish our graduates."

Agreeing with Blandino was Bennett Johnson '19, an economics and business major who recently teamed with three other cadets to take third place in a business pitch competition.



Sean Matson '05 addresses attendees at the Business Leadership and Innovation Summit April 12.—VMI Photo by H. Lockwood McLaughlin.

Continued on next page

"Innovation obviously is the paradigm future of business and society as a whole," said Johnson. "We think it's just so, so important going forward for both cadets and the departments to embrace the idea of innovation."

One of Johnson's teammates, Jon Chamberlain '19, a mechanical engineering major, also touted the benefits of cross-departmental collaborations and innovation.

"I learned so many things that a classroom setting couldn't give me, and it makes me a better person for it," he said of the cross-departmental capstone project that led to the business pitch competition.

VMI, Chamberlain concluded, "is the perfect environment to reach out, find your interests, do something you're passionate about, and pursue it." ❀

History Majors Present at 'Top Tier' Conference

By Mary Price

Just a few days before graduation, four cadets traveled to Columbus, Ohio, to present their original research at the annual meeting of the Society for Military History.

It sounds like a rather commonplace happening—but this is a conference that normally doesn't take undergraduates. What's more, the cadets were assigned a panel all to themselves.

"This is a top tier, international conference," said Lt. Col. Houston Johnson V, associate professor of history.

"This year, for the first time, the Society for Military History is sponsoring what they're calling a series of young scholars panels," added Johnson, who moderated the cadets' panel at the conference, in addition to presenting a paper of his own.

Acting as commentator for the panel was an alumnus, Bradford Wineman '99, who teaches war studies at the Marine Corps University at Quantico, Virginia.

"Largely due to the strength of their research, we've been able to get this VMI panel accepted," noted Johnson. "It certainly speaks to the quality and depth of the research our undergraduates are doing."

One of the cadets presenting, Madden Chapman '19, spent the past year and a half conducting research on the development of Marine Corps amphibious doctrine in the interwar years in preparation for writing a senior honors thesis.

"I'm commissioning in the Marine Corps, and I wanted to dive more into what the mission of the Marine Corps is," said Chapman.

He explained that the Marine Corps underwent dramatic growth not only in numbers but in scope of mission during the



Bradford Wineman '99 introduces the cadet panel at the Society for Military History annual meeting in Columbus, Ohio.—Photo courtesy of Lt. Col. Houston Johnson V.

first half of the 20th century. At the dawn of the century, he noted, approximately 2,000 Marines served largely as guards aboard ships and at Naval bases. Furthermore, the idea that an amphibious landing on a beach during wartime could work had been abandoned following the disastrous Gallipoli campaign of 1915 during World War I.

By World War II, though, the Marine Corps had swelled to over 475,000 strong, and Marines played a leading role in winning the war in the Pacific, where invasions of islands were key to victory.

Chapman explained that in 1921, the United States had signed a naval limitation treaty with Japan, stipulating that the United States could not build or fortify anything west of Hawaii. At the time, the Philippines and Guam were both still U.S. territories.

"Essentially, this left the Philippines and Guam on their own and very vulnerable," said Chapman. "And I believe this was the main catalyst to developing amphibious doctrine because it created the need for us to get in there and retake islands."

While Chapman's research focused on a specific branch of the military, the

independent study undertaken by Andrew Hunt '19 took a much wider look at a political philosophy: fascism.

Hunt, a double major in history and English, rhetoric, and humanistic studies, undertook his independent study, a holistic look at fascism, under the guidance of Col. Geoff Jensen, professor of history.

"I've always been into World War II, even as a kid," said Hunt, adding that many members of his family fought in the European theater in World War II. "I always understood the Nazis were fascist, and that was the extent of it."

Over the course of the past year, Hunt sought to deepen his understanding of fascism as a philosophy. "For history, it's a very broad topic," he stated.

Hunt explained that after World War I, both Germans and Italians rejected democracy and religion because they felt those ideologies had failed them—and fascism, with its emphasis on nationalism, stepped in to fill the gap.

"Fascism is a very emotional reaction—it's almost part of Romanticism," Hunt stated.

Hunt was well aware that his topic would stand out from that of his fellow cadets at the meeting in Ohio.

"They're more specific military-focused projects, which is great," Hunt commented. "This one is a different kind of paper—it's an historiographical essay, so it's going to be militarism, nationalism, and all of the other themes of fascism."

On May 15, Hunt commissioned into the Army, where he will train to be a field artillery officer at Ft. Sill, Oklahoma.

In addition to Chapman and Hunt, other cadets presenting their research at the Society for Military History meeting were Andrew Schifalacqua '19 and Cameron McNeil '20. ❀

VMI Team Finishes Third in Commonwealth Challenge

By Mary Price

It's a Cinderella story reminiscent of the Keydet basketball team's meteoric rise to the NCAA Final Four in 1977—but this time, it's on the academic side of the house.

On April 12, an interdisciplinary team of cadets placed third in the Commonwealth Challenge at the American Innovators Cup Competition, held in conjunction with the TomTom Summit and Festival in Charlottesville, Virginia.

The Commonwealth Challenge, which no one from VMI had entered before, is a competition designed to challenge college students from across Virginia to develop innovative solutions to problems facing the state and nation. To get to the competition, the VMI team was chosen as one of 42 semifinalists out of 600 applicants, and then, one of six finalists.

Of the teams in the top six, the other five were much larger state schools such as Virginia Tech, the University of Virginia, and the College of William & Mary. Many of those teams had funding in the six figures already. The VMI team's investment? Less than \$50. Their handmade prototype was made from a repurposed desk drawer and aluminum scrap metal.

"People literally had presentations that cost more than our project did," said Jonathan Chamberlain '19, one of four cadets working on the project.

While serious about their project, the cadets had entered the competition mostly on a lark. "We never showed up expecting to really compete, much less be a threat to the other teams," said Bennett Johnson '19.

The business idea in question, Keydet Cap Aero, is the brainchild of mechanical engineering major James Seal '19. Joining Seal on the engineering side of the project was Chamberlain, while lending a business and finance perspective were economics and business majors Johnson and Patrick Fowler '19.

The idea for an aerodynamic, retractable truck bed cover came to Seal last summer, after he'd signed up for a cross-disciplinary capstone project proposed by Dr. Dekuwmini Mornah, associate professor of economics and business. To fulfill the capstone requirements, cadets from the departments of mechanical engineering and



James Seal '19, Jonathan Chamberlain '19, Bennett Johnson '19, and Patrick Fowler '19 show off their third place award from the Commonwealth Challenge. —VMI Photo by Mary Price.

economics and business would be required to come up with a viable business idea together.

"Over the summer, I was just thinking of ideas to work on coming into the fall," he explained. "I was doing a lot of driving, and I guess I'm kind of a nerd and an engineer because I was thinking about drag a lot."

As he drove, Seal noticed that many tractor-trailers now sport trailer tails, which increase fuel efficiency. Why not follow that idea and create a way to make pickup trucks more fuel efficient, he thought? A retractable cover could help truck owners save money on gas, while leaving the bed available for hauling when needed.

"This is the first time we've done a joint capstone [at VMI]," said Fowler. "It's interesting for us because in business classes, we develop business plans, but we don't get to develop any tangible products."

Working with engineers, Fowler has learned that when putting together a business plan, it's vital to take things such as the cost of materials and manufacturing time into account.

"That's something you can only learn through hands-on experience," Fowler noted.

Beginning last fall, the four cadets met regularly to develop the idea. Seal and Chamberlain used the mechanical engineering department's wind tunnel for testing, while Fowler and Johnson did market research and came up with a business plan.

One thing the cadets didn't do was build a full-scale prototype, although that's likely to happen down the road.

"You don't build what you want," Chamberlain explained. "You build what the market wants. We didn't want to go design something completely ... because we have to adapt to what the market actually wants. You have to stay flexible."

Because he's commissioning as a Naval aviator, Seal will be unavailable for business purposes for some time, but the other three cadets are determined to keep

Undergraduate Research

Cadets Reese Laferriere '19 and Logan Adams '19 opened this year's Undergraduate Research Symposium with a presentation on their work toward creating a soft robotic glove for patients with reduced grip strength. Students from Southern Virginia University, Mary Baldwin University, and the University of Lynchburg joined VMI cadets for this year's event. —VMI Photo by Kelly Nye.



their idea alive long enough to test it in the real world.

“If it saves gas money, it’s worth pursuing,” said Chamberlain. “If it doesn’t save gas money, it’s not worth pursuing.”

Mornah, long a proponent of entrepreneurial thinking, explained that his department requires its majors to develop a business plan as their capstone project, but because most economics and business majors don’t have a lot of technical skills, their business ideas tend to revolve around what they already know.

“Therefore, working with engineering/STEM students would inspire better business plans from [economics and business],” said Mornah. And on an even deeper level, the cross-disciplinary capstone, he said, is meant to help cadets “develop an active entrepreneurial mindset, which is a market-oriented problem-solving approach to their capstone projects and jobs.”

Fowler, for one, sees cross-disciplinary capstones as a way of harnessing the energies of many cadets for the greater good.

“There’s a lot of smart engineering students, a lot of smart CIS students, who have ideas, and there’s plenty of business students who know how to take it to the next level, but there’s a disconnect there,” he commented. “We’re in different buildings ... if there were some sort of program to bring the two sides together, and funding for them, this could be a regular thing.” ❁



Employees Recognized for Years of Service

Gen. J.H. Binford Peay III '62, superintendent, recognized dozens of employees for their service to the Institute during the annual employee breakfast May 17. Groups of employees were honored in five year increments of service. The longest-serving employee recognized, for 45 years of service, was Donna Johnson, VMI Alumni Agencies mailroom manager. In addition to food and camaraderie, employees took part in a drawing for door prizes, with human resources giving away items ranging from garden decorations to power tools.—VMI Photos by Maj. John Robertson IV.



Officer Women Leadership Symposium

Command Sgt. Maj. Suzanne Rubenstein took three cadets, Abbi Schlemmer '19, Riley Neary '19, and Maddie Fay '20, to Arlington April 24-25 for the Officer Women Leadership Symposium. The conference is a chance for future military leaders to network with each other and to hear from their predecessors, like Brig. Gen. Jeannie Leavitt, the Air Force’s first female fighter pilot. Topics during the conference included leadership tips, mindfulness and meditation, women’s health, and career advice. The cadets also toured Arlington National Cemetery during their visit.—VMI Photos courtesy of Command Sgt. Maj. Suzanne Rubenstein.





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Sanborn Receives Fulbright Grant

By Mary Price

Col. Howard Sanborn, professor of international studies, will spend the fall semester in Hong Kong courtesy of a Fulbright grant from the U.S. State Department.

Sanborn is one of approximately 1,200 faculty members nationwide to receive Fulbright awards for the 2019-20 academic year. He's long had an interest in Hong Kong, the former British colony which reverted to Chinese control in 1997, and has made two trips there in the past seven years to study Hong Kong's legislature.

"This specific research project really comes into line with this overarching interest I have in the promotion of democracy through the establishment of robust legislative institutions," said Sanborn.

Hong Kong's legislature, explained Sanborn, is quite different from the U.S. Congress because not only is it a unicameral legislature, with only one chamber, but the way members are elected

is also unique. Half of the legislators are elected on a geographical basis, and the other half are elected to represent "functional constituencies" or special interest groups.

"It provides a whole set of really cool questions to ask about how legislatures develop," Sanborn noted.

While much of Sanborn's time will be spent observing and conducting research about the Legislative Council, he will also teach a course in western democracy at the Chinese University of Hong Kong, and explore ways to bring cadets to Hong Kong as well.

In mid-April, Sanborn traveled to San Diego, where he met with Glenn Shive, director of the Hong Kong America Center—who, coincidentally, is a former Fulbright recipient.

"He's very open to bringing cadets to Hong Kong as a nice gateway toward Asia, given its English-European heritage,"

Sanborn commented.

Sanborn was quick to thank all those on post who'd helped him obtain the Fulbright, who include not only the dean but also his colleagues in the Department of International Studies and Political Science, some of whom have rearranged their teaching loads to accommodate his absence.

"I am so fortunate to count myself a part of an ambitious, talented faculty, whose members have provided me nothing but encouragement and support throughout this process," he stated.

Previous Fulbright recipients among the VMI faculty include the late Col. Jim Hentz, formerly chair of the international studies department; Col. Mark Wilkinson, chair of the history department; and Col. Timothy Dowling, professor of history.

"[Sanborn's] Fulbright award is a well-deserved recognition of the important, cutting edge work that he is doing on democratization in Asia," said Col. Dennis Foster, chair of the international studies department. "His is the first Fulbright to be awarded to a member of the IS department in 16 years, so this is a rare and prestigious honor that enhances our national profile." 🌸



Col. Howard Sanborn, professor of international studies, teaches a course in Asian studies in Scott Shipp Hall.—VMI Photo by Kelly Nye.