

# West Point

SUMMER 2018

**DEVELOPING LEADERS FOR THE 21ST CENTURY ARMY**

Preparing Tomorrow's Cyber Warriors:  
How West Point is Leading the Way

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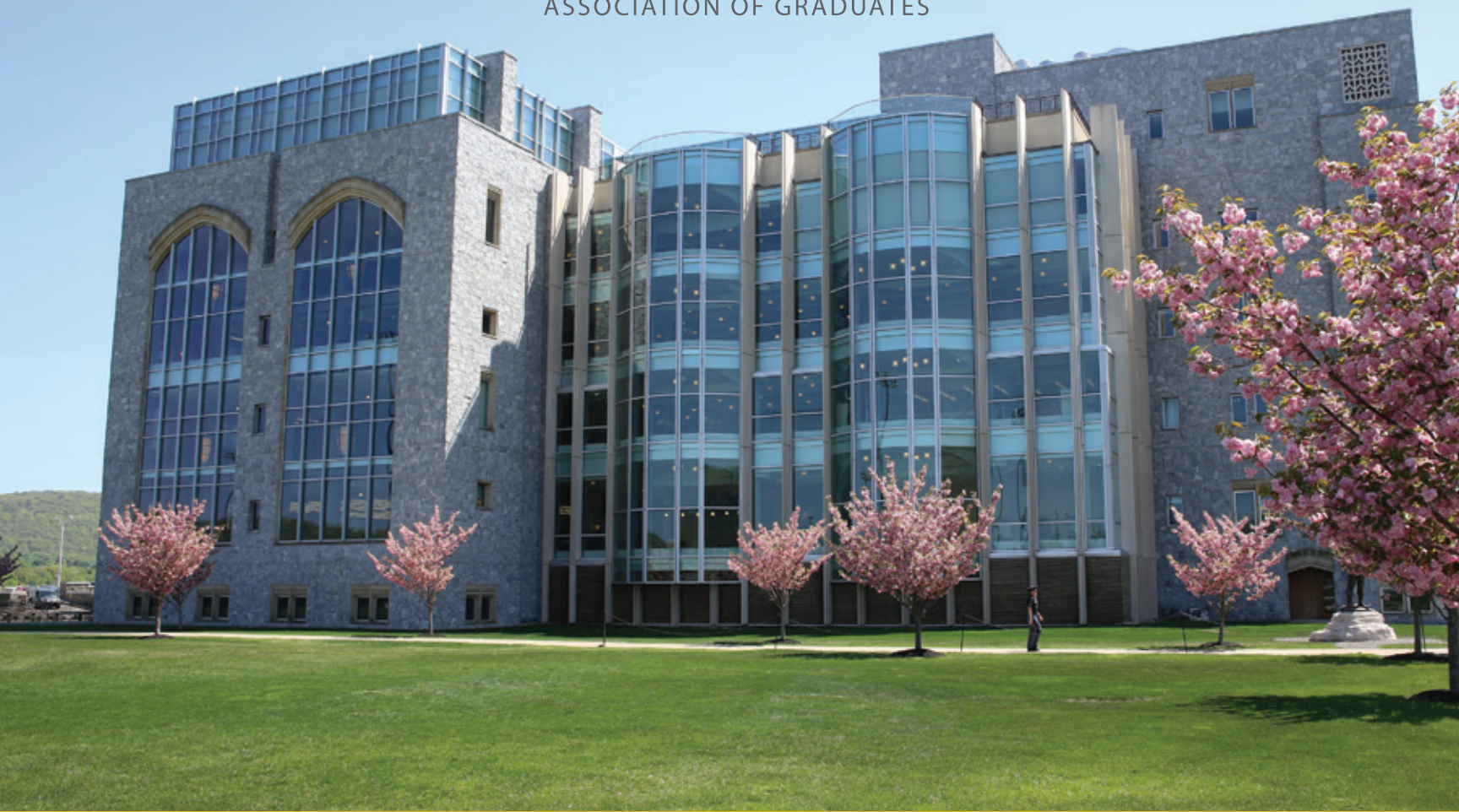
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# West Point

VOLUME 8, ISSUE 3 • SUMMER 2018

The mission of *West Point* magazine is to tell the West Point story and strengthen the grip of the Long Gray Line.

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**ON THE COVER:** The global cyber domain is characterized by hundreds of real time attacks and defense measures daily. Image: Shutterstock

## FROM THE PRESIDENT

### Dear Fellow Graduates:

With the tossing of 972 white hats into the air at Michie Stadium, summer at West Point kicked off as the members of the Class of 2018 received their diplomas, headed to bar-pinning ceremonies, and exited Thayer Gate as the United States Army's newest second lieutenants. This brings the living total of the Long Gray Line well past 53,000 members, led by Colonel Kermit R. Dyke (USAF, Retired), Class of 1940, who, at 103 years old, returned to West Point on May 22 to lead the annual alumni exercises and lay a wreath at the base of the Thayer Statue, starting Grad Week. Now, just as this publication is reaching your mailbox, approximately 1,200 members of the Class of 2022 are beginning their 47-month West Point experience with Cadet Basic Training, or "Beast Barracks." On behalf of all Old Grads, I'd like to welcome the parents of these new cadets to the West Point family.

Twenty of the junior officers who graduated with the Class of 2018 in May branched Cyber, and the cover story of this issue of *West Point* magazine details the work of West Point's cyber home, the Army Cyber Institute (ACI), as well as its cadet-focused sister agency, the Cyber Research Center, which is housed in USMA's Department of Electrical Engineering & Computer Science. Coordinating with Army Cyber Command, the Army Cyber Center of Excellence, and the Army Staff, ACI's mission is to build the intellectual capital necessary to defend the nation in cyberspace, the newest battlefield in our country's wars. From the voting machine to the search engine, from aviation to the power grid, that battlefield is now seemingly everywhere, and I'm sure you'll find reading about ACI's frontline efforts in cyberwarfare as fascinating as I did.

The remaining articles of this issue revolve around a "did you know?" theme. For example, did you know that the Academy now has courses in game theory, photogrammetry, and cryptology—all preparing cadets for the rapidly changing world in which today's modern Army officer operates. Courses have sure changed a lot since I was a cadet! And speaking of our rapidly changing world, did you know that come fall you'll be able to listen to WKDT online via your computer? Read about it in this issue. Did you know that West Point is getting a new statue? Or that tennis great Arthur Ashe was stationed at West Point when he won the inaugural U.S. Open? Or that we have an "Ultimate" team?

Turning attention to WPAOG, did you know that your Association of Graduates offers memorial services assistance for families planning a funeral service for a graduate at the West Point Cemetery? And did you hear about WPAOG's latest enhanced service, Grad Link? This initiative combines data from WPAOG (such as email address, cadet company and geographical location) with your LinkedIn profile, offering you the easiest and most powerful way to network with fellow grads. All these services are designed to move towards our aspirational vision: For the Long Gray Line to be the most highly connected alumni body in the world. As we anticipate the 150th anniversary of our founding in 1869, always know that WPAOG and the Long Gray Line is here for you!

Serving West Point and the Long Gray Line,

Todd

Todd A. Browne '85  
President and CEO  
West Point Association of Graduates







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# PREPARING TOMORROW'S CYBER WARRIORS

## How West Point is Leading the Way

By Tom Stoelker, Guest writer

In remarks at the 2016 AUSA Convention in Washington DC, General Mark A. Milley, Chief of Staff of the Army, outlined the challenging 21st Century strategic environment, where future wars will be fought “on a non-continuous, non-linear battlefield, with little higher command supervision and maximum decentralization.” Crises will unfold rapidly, decision cycles will compress, and response times will narrow. A vital part of the U.S. Army’s readiness in such an environment is its capabilities in cyber defense.

Organized defense of the Cyber domain, with the establishment of both U.S. Cyber Command and Army Cyber Command in 2010, is a relatively recent addition to the Army’s capabilities. Yet, despite the rapidly evolving pace of cybersecurity’s “history,” West Point graduates, instructors and cadets have been at the forefront of the field from the very beginning, providing innovative responses and expert analyses unrivalled by any other institution in the country.

### Role of the Military in Cyber Defense

If you can make \$500,000 as a senior hacker at the Bank of New York or \$50,000 in the Army as a cyber warrior which job do you take and why?

This not-too-hypothetical question was posed by General Keith Alexander ’74 (Retired), former Director of the National Security Agency (NSA) and former Commander, United States Cyber Command.

“The military loses out on that in almost every case—but with the military you can get an education, training, *and* you get to do stuff in government that you can’t do in commercial life: conduct offensive operations to support national security requirements legally in cyberspace,” he said.

Class of 2018 CDTs Preston Pritchard, Mason Adam and Connor Eckert design an exploit to launch against a Naval Academy team’s webserver during the National Security Agency Cyber Exercise (NCE) attack-defend style capture the flag challenge called “Live Fire” during the March 19-21 competition at the U.S. Naval Academy in Annapolis, MD.

With significantly higher pay offered by private sector for cyber expertise, what draws cadets at West Point to study cyber beyond the opportunity to legally hack? Probably the same reasons that have attracted cadets to West Point for more than two centuries.

"It fundamentally comes down to service, and 'Do you want to serve your country?'" said Cadet Lexie Johnson '18, a member of the West Point Cyber Policy Team, one of two USMA Dean's Teams that compete in the cyber realm. "I think that's where you're going to find distinctions: You're either doing this job for money or you're doing it for a greater purpose."

Major Sang Yim, a cyber instructor in West Point's Department of Electrical Engineering & Computer Science (EECS) and Officer in Charge of the Special Interest Group for Security, Audit and Control (SIGSAC), a cadet cyber club, said that he finds that camaraderie draws talent to West Point rather than the private sector.

"You're all on the same team working on the same goal to defend the country," he said. "In business, you have to beat out the guy next to you, and you're not going to have that team aspect."

### History Being Made Now

Few would have predicted even 10 years ago that cybersecurity for the nation would become as omnipresent in the public awareness as it is now. But Alexander said that as far back as the late 1990s "we saw people messing around" with a series of cyber attacks by Russians on the U.S. government.

"There was a series of three or four [U.S.] operations to identify the source of the attacks that gave us concern," he said. "Back then it was more of a niche operation by the NSA to identify the attacks than a broad scale response."

By 2005, the "niche" NSA operation had significantly grown, and NSA was developing their next generation collection platform, called Trailblazer. The contract on that platform was terminated three days before Alexander took over NSA. Then-Secretary of Defense Donald Rumsfeld charged Alexander to come up with a new platform that would shift defenses from analog to digital. Shortly thereafter came the large-scale 2007 cyber attacks on the Estonian government and banking system amidst tensions with Russia. And then came a 2008 cyber breach predominantly in United States Central Command, spread by thumb drives. This breach eventually led to the creation of U.S. Cyber Command, which became operational under Alexander in 2010.

The 2008 attack marked the beginning of a new kind of threat in warfare: it wasn't someone simply stealing information, it was someone exploiting and corrupting the U.S. military network with a virus. "We identified the attack on 24 October 2008 and by the next day we had a solution on the network," said Alexander. "It was then that Secretary [of Defense] Gates decided to bring together the offense and the defense that would become Cyber Command."

Alexander pulled together a team that included now-General Paul Nakasone, now Rear Admiral T.J. White, now-Colonel Suzanne Nielsen '90, presently Professor and Head of the Department of Social Sciences at West Point, and Jen Easterly '90, currently Managing Director at Morgan Stanley and Global Head of the Cybersecurity Fusion Center. Together, they developed the intelligence framework for U.S. Cyber Command and presented the concept to then-Secretary of Defense Robert Gates. "To say they were met with strong resistance would be an understatement. We knew we would need this in 2018, but that wasn't as apparent in 2008," observed Brigadier General Jennifer Buckner '90, who joined the team in 2010.



### TRAINING TOMORROW'S CYBER FORCE - CYBER LITERACY FOR ALL CADETS

*Required Plebe Computer  
Course: IT105*

MAJ Sang Yim instructs plebes in *IT105 Introduction to Computer and Information Technology*, a one-semester required core curriculum course for all cadets. This course enables digital literacy, teaching cadets to create a program that harnesses the computer's power. Structural aspects of the cyber world are explored so that cadets understand the tasks of information dissemination and disruption.





## SECOND LEVEL COURSES – CADETS GAIN DEEPER KNOWLEDGE OF THE CYBER DOMAIN

### *Cyber Engineering Core Engineering Sequence: CY350*

LTC W. Clay Moody teaches cadets in three-person teams in *CY350 Network Engineering and Management* as they work in the Reconfigurable Network Lab with both hardware and software. Here, cadets learn about arterial engineering of traffic in the digital world. **Top:** Each cadet uses a double-screen station in the Cyber Engineering Laboratory, one of the most expensive classrooms at West Point.

But U.S. Cyber Command was approved, as was Army Cyber Command, which evolved to include the establishment of the U.S. Army Cyber School at Fort Gordon's Cyber Center of Excellence. Buckner, the first Cyber School Commandant, helped design the curriculum, and drew upon her West Point education, emphasizing engineering and technology. "We're teaching them to solve hard problems not by telling them what to do, but by teaching them how to think," she said.

### Laying the Foundations for a Cyber Team

Alexander said he learned Fortran computer coding while he was a cadet at West Point. But while those hands-on programming skills have served him well, he stressed that the team-building skills he learned at the Academy is what helped him to grow as a leader in the cyber realm. "West Point teaches you to figure out what you don't know, and how to get the right people to work with you," he said.

Many of the people that Alexander surrounded himself with during the early days of cyber defense would go on to build and lead some of the Army's and West Point's key institutions in cybersecurity. Buckner was there when he set up U.S. Cyber Command, and she served as the U.S. Army War College Cyber Fellow at the NSA. She was recently promoted from Deputy Commander, Joint Task Force-Ares to Director of Cyber, G-3/5/7, U.S. Army. She said the field is experiencing tremendous growth. The Army Cyber School graduated its first class in 2016, and, where just three years ago there were only 18 students, today there are nearly 800.

"Education is so important. Our future leaders are the lieutenants and captains, our junior ranks, so developing that talent is important," Buckner said, adding that she continues to call on the talents at West Point to work on some of the Army's toughest cyber problems.

The U.S. Army Cyber Branch, established in 2014, first welcomed 15 graduating second lieutenants from the USMA Class of 2015, and saw 20 cadets from the Class of 2018 branch Cyber. At the Academy, cyber education continues to grow and become more interdisciplinary (see "Developing the Cyber Warrior," sidebar on page 11). All plebes are required to take *IT 105 Introduction to Information Technology*, a core course introducing cyber concepts, and then may choose to pursue an interest in the field with advanced level courses, clubs or participation in a competitive cyber team. Courses that were once limited to Computer Science, IT or Electrical Engineering majors now welcome economists and foreign language and English majors.

"For the English major in any other school it may not be as critical, but considering our graduates are going to be lieutenants and they're going to be in the Army using our information systems, we want them to understand cyberspace, because our weakest link right now is the user," said Lieutenant Colonel W. Clay Moody, Ph.D., Assistant Professor in EECS and a coach for the award-winning Cadet Cyber Competitive Team (C3T).

For cadets who aren't sure whether cyber is for them, there is a chance to get their feet wet at SIGSAC. The club's casual atmosphere delves into security issues in many spheres, not just cyber. (They've even held lock picking contests.) But the primary focus is on cyber and hacking. The group meets every Monday and is a mix of men and women, some of whom are technically proficient and some who are not.

"There will be people who will be interested in the tech side but don't get too involved because they're spending their time in policy," said Cadet Preston Pritchard '18, the Cadet in Charge of the group.



### SPECIAL INTEREST CLUBS TO LEARN MORE OUTSIDE THE CLASSROOM

#### SIGSAC—Special Interest Group for Security, Audit and Control

SIGSAC is a cadet academic club in the EECS Department where cadets can explore their interest in cyber in a relaxed atmosphere, and delve deeper into cybersecurity issues. CDT Preston Pritchard '18, the Cadet in Charge, will join the Cyber Branch upon graduation and wears its insignia as he analyzes a circuit board. EECS Instructor MAJ Sang Yim is the Officer in Charge of SIGSAC, volunteering time to coach the club.



Pritchard said that the club is also a good place for students from a variety of backgrounds to begin to meet on the common ground that is cybersecurity. But the two groups that continually overlap are the tech-savvy students and the policy-savvy students. "They're two very different groups, but they are both equally important," said Pritchard. "The tech side can't operate without knowing the law and the policy side can't operate if they don't know a bit about tech."

After competing amongst themselves, the students' talents begin to emerge. "From there we pick people who are good at what they do," said Pritchard. "Those people who are good at tech we encourage to try out for the C3T."

Next year, Moody said, the C3T team will operate as three sub-teams that reflect the real world of cybersecurity: one team will focus on cyber defense, another team will focus on offense, and the third will be a more "full-spectrum" Capture-the-Flag team. In Capture-the-Flag competitions, cadets are authorized to compete on a cyber range, where they can safely engage in hacking and defending. A hacker may be searching for a hidden message that requires them to exploit a vulnerability in the system in order to recover that message, which could be a string of characters representative of a social security number or war plans. Most of the competitions run about 48 hours and occur online. "It's about understanding the foundations and be willing to dive in and work on it," said Moody. "To be successful on the teams, you need to be inquisitive."

Although many competitions take place online, members of the C3T and Cyber Policy Dean's Competitive Teams were able to travel to the inaugural NSA Cyber Exercise (NCX) for the U.S. Service Academies at Annapolis this year. Cyber policy team members,

SIGSAC members, and cadets in cyber-related classes accompanied C3T to the event. After 17 years of the NSA Cyber Defense Exercise (CDX), a weeklong exercise which featured each academy's teams defending against NSA attacks from their home location, faculty from the military academies and United States Cyber Command joined the NSA in developing and executing a wholly redesigned competition. The NCX features in person head-to-head attack and defend scenarios, as well as policy and forensics scenarios. The benefit of competing in person is the chance to get to know cyber teams from the other academies.

"It's great because we know each other and we'll probably get to know each other in our careers," said Pritchard. "Cyber is a joint effort. If you go down to Fort Meade or Fort Gordon you have Air Force next to Marines next to Navy, and civilians too."

### Cyber Thought Leadership: The Intellectual Home of the Army

Lieutenant General Rhett A. Hernandez '76 (Retired), currently serves as the West Point Cyber Chair at the Army Cyber Institute at West Point (ACI), an outward-facing research organization that was established in 2012. He was the first Commanding General of U.S. Army Cyber Command upon its activation in 2010. Hernandez said that West Point addresses cyber education not just through electives in computer science and math, but also through policy, law, ethics, cognitive behavior, and even cyber history.

"We need to think about how to increase thought leadership by not necessarily focusing on today's problems, but by helping the Army and others think about what could be next," he said. "And to add to



### 400 LEVEL COURSES – DEPTH CYBER KNOWLEDGE DEVELOPED

Taught by CPT Michael Kranch '08, cadets in CS482 *Cyber Security Engineering* work in teams of five to seven people to conduct team assessments for AAR at the conclusion of the course. 400-Level courses provide advanced knowledge on specialized topics including Programming Languages, Operating Systems, Digital Forensics, and Artificial Intelligence.



## Developing the Cyber Warrior

According to Lieutenant Colonel Dave Harvie '96, Assistant Professor and Operations Officer for the Department of Electrical Engineering & Computer Science (EECS), every cadet is going to encounter cyber issues as an officer in the Army today. For this reason, every cadet is required to take two cyber courses as part of the Academy's core curriculum: *IT105 Introduction to Computer and Information Technology* and *CY305 Cyber Fundamentals* (those majoring in EECS take *CY355 Cyber Foundations-Computing* in place of *CY305*). After taking these courses, all cadets will have a solid basis of knowledge involving basic programming, network security, cybersecurity, privacy concerns, and more, and upon graduation and commissioning, should be capable of securely using computers and information technology in an Army that must fight and win in the cyber domain.

Should a non-engineering major cadet get assigned the Cyber Engineering core engineering sequence (CES), he or she will take three additional cyber courses: *CY300 Programming Fundamentals*, *CY350 Network Engineering and Management*, and *CY450 Cyber Security Engineering*. EECS used to have a similar CES, but its nomenclature was a mix of computer science and information technology courses (*CS301*, *IT350*, and *CS482*), which lacked the cogent message of today's Cyber Engineering CES. Furthermore, *CS482 Cyber Security Engineering* used to be for both those in the EECS CES and computer science majors who were participating in the Cyber Defense Exercise (known now as the NSA Cyber Exercise), and it was difficult to teach cadets with such divergent skill sets. Today's "CY" Cyber Security Engineering course, as opposed the "CS" Cyber Security Engineering

course, is taught with the realization that the cadets enrolled do not necessarily have the "hacking" background of cadets in the major.

All cadets also have the opportunity to pursue a Cyber Security minor through EECS. The Class of 2017 was the first one eligible for the minor, and a revised version of the minor was implemented for the Class of 2019 and beyond. A total of five courses are required for the minor; two of these on the "Technical Track"—*CY350* and *CY450*—may be double counted in the event that a non-engineering cadet was assigned the Cyber Engineering CES. Cadets enrolled in the minor must also take one of three "Non-Technical Track" courses: *IT460 Cyber Policy, Strategy and Operations*; *LW462 Cyber Law*; or *PY326 Cyber Ethics*. Finally, given that cyber matters cross numerous domains, courses four and five of the Cyber Security minor seek to answer how cyber lessons are practically applied to other fields. These final two elective courses can be filled by 35 options crossing 23 academic majors (the majority of which are in the reading and writing of foreign languages).

While new, Cyber Security is a growing field of interest among cadets. Five cadets from the Class of 2018 graduated in May with the minor, and more than double that number of cadets from the Class of 2019 (11) and nearly triple that number from the Class of 2020 (14) have enrolled in the minor. According to Harvie, half of the cadets studying for the Cyber Security minor are Electrical Engineering, Computer Science, or Information Technology majors, while the other half include a diverse range of majors such as Systems Engineering, Nuclear Engineering, Law & Legal Studies, Philosophy, and Foreign Languages.



### ADVANCED LEVEL DEAN'S TEAMS— INTERCOLLEGIATE CYBER COMPETITION

West Point fields two competitive intercollegiate cyber teams: the Cadet Competitive Cyber Team (C3T) and the Cyber Policy Team. Team members are selected competitively and may be majoring in a technical discipline (Computer Science, Electrical Engineering, IT) or a non-computer related field.

Here during a four-hour evening session, Jim O'Gorman, President of Offensive Security, a cybersecurity training firm, briefs all USMA competitive team members on a "Capture the Flag" exercise. O'Gorman provided a simulation "range" where the cadets worked in teams on penetration testing of labs and services. The simulation environment is designed to be attacked and penetrated as a means of learning and sharpening skills for both attackers and defenders.



the body of knowledge, we need to develop strong partners in the commercial sector, industry, academia, and government.”

Colonel Andrew Hall '91, Director of the ACI, said the organization encourages collaboration with academic researchers based at universities around the country, where the tenured faculty model complements West Point's rotating model for instructors who bring in knowledge directly from the field to the Academy. The university professors' theoretical rigor builds on the West Point faculty's on-the-ground experience.

“West Point is the intellectual home of the Army. Thought leadership is what the Institute started out on—no one else in the Army has the intellectual freedom to publish in peer-reviewed journals,” said Hall. “We're trying to expand the talent pool we work with, and to expand knowledge across the entire cyber community.”

Though the ACI works with many partners outside of the Academy, West Point reaps the benefit of having many of its researchers teaching cadets and coaching competitive cyber teams. “We have ACI faculty who teach in eight of the 13 academic departments, covering courses as diverse as Cyber Ethics, Law, History and Policy to Mathematics and Computer Science,” said Hall. “Diversity of thought is key to working in cyber.”

## Building on IT: The Power of Interdisciplinary Teams

For today's cadets majoring in non-IT disciplines, the attraction to cyber is simply part of being a digital native. Few draw hard lines between their discipline and cyber.

Cadet Nolan Hedglin '18, who as a firstie was majoring in math and physics, said that he and Johnson were part of the first cohort able to take courses that were once limited to computer science majors. He said voices from different disciplines enrich the cybersecurity field. “We bring another perspective to cyber and that perspective will have long term effects on how the culture will shift,” he said.

Both Hedglin and Johnson were part of the West Point Cyber Policy Team, a Dean's Team (like C3T) coached by Major Patrick J. Bell '05, a research scientist with the ACI and an Assistant Professor in the Department of Social Sciences. The team took home first place in the Atlantic Council Cyber 9/12 Student Challenge in Geneva in April, and won the Indo-Pacific Cyber 9/12 Student Challenge in Sydney, Australia in September 2017.

“Cyber is intellectual pluralism at its best,” said Johnson, who is majoring in international relations and Russian. “The cyber domain demands pluralism, because the repercussions can affect the economy,



### ADVANCED LEVEL DEAN'S TEAMS—INTERCOLLEGIATE CYBER COMPETITION

#### *West Point's Competitive Team Training for NSA Cyber Exercise (NCX)*

In order to prepare for the March 10-21 NCX Competition in Annapolis, MD, the hand-picked West Point Cyber team trained with staff from the Air Force Research Lab in a special workshop. In the NCX Competition, three-person teams are presented with real-time challenges of cyber warfare in a competitive exercise involving the service academies and two agencies. Reminiscent of R2D2, the double CUBESAT module seen on the table in the West Point EECS lab is a miniaturized satellite capable of running all of the software used to operate a space cyber operations platform. The cadets were briefed on satellite functionality by a senior government official from the cyber world. CUBESATs (each measuring 10 cm x 10 cm x 10 cm) are working satellites developed to support educational institutions so students can meet real-time satellite management challenges. Each year approximately 200 such multipurpose satellites are launched.

politics, and infrastructure,” she said. “We need cyber experts in a variety of realms to predict and understand their sectors.”

The Cyber 9/12 Challenge competition scenario involves briefing an important decision maker like the National Security Advisor on a rapidly unfolding situation such as a cyber attack. Competitors are not looking for a technical solution, though technology is certainly a component. The competitors must respond to immediate needs and make recommendations based on imperfect information.

“Cadet Cyber Policy Team members get to wrestle with a lot of the most pressing issues at play,” said Bell. “The speed with which the media will react to an event today is unprecedented; we’re expecting adversaries to prepare their communication responses before they even initiate actions.” Bell said traditional international relations theories are relevant in the cyber domain, though they may not apply as well as they do with warfare scenarios involving nuclear weapons. But the fact that the established theories are an imperfect fit intrigues Bell and his colleagues, and presents an opportunity to develop new ways of thinking. He added that decisions in the cyber domain must blend computer science skills with policy knowledge in order to best deliver effects.

## Digital Disruptions

From the very early days of cyber warfare, traditional command structures and the very language of warfare have been challenged to evolve, since the virtual world of cyberspace encompasses and extends beyond land, air, and sea.

“Culture aside, a lot of what delineates the Army from the Air Force and the Navy in cyber is what we consider to be tip of the spear for that mission, and for the Army it’s the soldier, the individual soldier interacting with humans on a daily basis in theater” said Hedglin.

Buckner agreed, adding that in cyber sometimes the junior ranks represent the tip of the spear, as cyber is a domain they grew up in. “One of the ironies is that, in most branches of the Army, you feel ‘established’ in a higher rank, but in this one, we recognize that our lower ranks are the future,” she said.

Hall noted that the typical Army unit operates under a commander, supporting the infantry commander, at the time and place of the commander’s choosing. He said that cyber warriors need to react more quickly and distinctly than their real-world counterparts. “In cyber, the most important thing we’re doing may be preventing attacks way before a kinetic attack,” he said.

Not only is the command structure evolving with cyber warfare, but so is the language required to direct action. Part of the reason West Point’s Cyber Policy Team took first place in Geneva was because they were best able to translate technical rhetoric into something that civilian policy makers could understand and act upon. “This is an emerging domain and an emerging threat that needs to be translated appropriately and effectively,” said Johnson.

Communicating about cyber events can prove further challenging when the effects of an event can seem elusive in the physical world. The damage is not something one can necessarily see. Even the term “warfare” irks some in the field.



## ADVANCED LEVEL DEAN'S TEAMS—INTERCOLLEGIATE CYBER COMPETITION

Members of the winning USMA Cyber Policy team at the Cyber 9/12 Challenge competition in Geneva, Switzerland. From left to right: Madison Maguire '18; Liam Furey '20; OIC MAJ Patrick Bell '05; Lexie Johnson '18; Sungpyo Choe '18 (four year exchange cadet from South Korea); Hannah Whisnant '18; Nolan Hedglin '18; Coach CPT Austin Minter '08; Amanda Roper '19; Robert Norwood '20. (Not pictured: team member Peter Kim '20).





**Bringing knowledge from the field back to West Point:** LTG (R) Rhett Hernandez '76, was the first Commanding General of U.S. Army Cyber Command upon its activation in 2010 and now serves as Cyber Chair at the Army Cyber Institute at West Point. Here, Hernandez talks with cadets working on cyber-related capstone projects at Projects Day 2018.

"Talking heads have too often used the phrase 'cyber warfare' to describe events like the OPM and Equifax hacks. But is it warfare? Not as I understand it," said Lieutenant Colonel Michael J. Lanham, Ph.D., Director of the West Point Cyber Research Center, which

focuses on cadet and faculty development in cyber and complements the ACI's outward focus.

Lanham said he sometimes uses "traditional military operations terms on non-traditional terrain" to help shape discussions about cyber warfare. However, equating cyber attacks to historic battles often proves a weak analogy, he said. He noted that most comparisons come from commentators looking for easy analogies, with several warning of an impending "cyber Pearl Harbor."

"That analogy breaks down," he said. "The Pearl Harbor attack was the seminal moment that provoked a full entry of the U.S. into World War II and led to the unconditional defeat of the Axis powers; what we're experiencing is not that. We are experiencing industrial and national espionage, experiments in sabotage, but not crossing the threshold into warfare yet."

The hyperbole of a "cyber Pearl Harbor" gives the perception we are waiting for a catastrophic event in the physical realm, like a large chunk of the power grid going down. But the U.S. has already experienced several large scale cyber events that have not galvanized the public in the manner of Pearl Harbor or even 9/11.

"I've heard a lot of people say it's the same warfare in a different domain, but in many ways, this is not the same warfare," said Bell. "In the Cold War, you could not go in and . . . get information on 87 million people in the country and then work to try to manipulate them at a granular level without anticipating any retribution."

## Hack Back

Almost everyone interviewed for this article said the military's ability to "hack back" attackers remains a strong incentive in recruiting potential cyber soldiers away from the more lucrative

## CYBER RESEARCH CENTER || est. 1985

DIRECTOR: LTC Michael Lanham, Ph.D.

*Mission: To educate and inspire cadets and faculty in the acquisition, use, management, and protection of information through innovative teaching, curriculum development, research, and outreach to the Army, Department of Defense, and federal agencies..*

One of West Point's oldest research centers, the Cyber Research Center (CRC) provides undergraduate research opportunities in cyberspace operations, computer science, information technology and electrical engineering. Founded in 1985 as the Artificial Intelligence Center, the center was changed in 1999 to the Information Technology and Operations Center to reflect the emergence of information systems and resulting securities vulnerabilities. In 2012, it became today's Cyber Research Center.

Housed in the Department of Electrical Engineering and Computer Sciences, the CRC has a staff of two primary researchers and eleven affiliates. In addition to assisting cadets, the researchers work with a variety of government, industry, and academic partners to solve real-world problems in network and document security, artificial intelligence, simulation, power industry security, and image processing and analysis.

Among the CRC's many initiatives is the NSA Cyber Exercise (NCX), an annual inter-service academy competition that challenges participants to build secure computer networks and defend them against attacks. With training from CRC, the cadets from West Point have won the competition eight out of 16 times since it began in 2001.

In 2018, after 17 years as the NSA "Cyber Defense Exercise," faculty from the military academies and U.S. Cyber Command joined the NSA in developing and executing a wholly redesigned competition, now called the NSA Cyber Exercise. In the old model of the CDX, each academy defended against the attacks of the NSA's Red team during a weeklong home-station exercise. Now, cadets and midshipmen attack each other while simultaneously fending off opponents. Additional changes included each school fielding multiple teams in this new Olympiad-style event and everyone traveling to one physical location to compete head-to-head. In the redesigned exercise, an overall winner is determined by taking the top finisher from each school in four equally-weighted modules.

*The former Cyber Defense Exercise (CDX), now in a new format and called the NSA Cyber Exercise (NCX) has been supported by Marshall N. Carter '62 and Marshall and Susan Larsen '70. The CRC also wishes to acknowledge other Margin of Excellence gifts and commitments from Mark Hoffman '69, Vinnie Viola '77, Neal Creighton '89, the West Point Society of North Texas, and the Classes of 1969, 1986, 1993, 2000, 2005 and 2006.*



MARGIN OF  
EXCELLENCE



private sector. Still, the Army follows very strict legal guidelines and authorities that they adhere to during cyber operations. Hacker training is only conducted on cyber ranges and in controlled environments.

“There’s no right to defend your cyber domain like you can defend your house,” notes Moody. “A lot of the hacking skills you may want to use in the private sector are going to come with handcuffs, but in the Army, the things you can do with those same skills are going to win you medals.”

The ability to hack and defend the nation may attract talent to the Academy and the Army, but all the hacker talent in the nation isn’t going to make an impact without cooperation from the private sector. Hernandez says it’s all about partnerships. “There are all kinds of numbers out there, but many say more than 90 percent of the critical infrastructure, from financial to energy to transport, is all owned by the private sector,” said Hernandez. “In order to better defend the nation, you have to have strong public-private partnerships at all levels—and that’s much easier to say, but harder to do.”

Alexander’s primary concern, as has been voiced by leadership in both the intelligence and defense communities, is forming strong public/private partnerships. “We created our government for the common defense and that includes the private sector,” said Alexander. “We don’t question well enough what the role of government is and what the role of the private sector is.”

Alexander said with the proper oversight the government can defend the private sector while addressing privacy concerns. He added that there’s a “perception problem” of what people think the government will do if it gains access to private data. “Think about how many phone calls, texts, emails, and social media posts you see every day, and multiply that by the number of people in this country,” he said. “No one is out there reading all that. We need to encourage people to get the facts: We’re doing this to protect you.”

### A Solid, Ethical Career

When Pritchard was growing up in the small farm town of Ixonia, Wisconsin, his family did not have internet service. “I got into computers by not having internet access, so I turned inwards to the computer,” he said. “Instead of spending time browsing the internet I spent time in the windows operating system, breaking it apart and putting it together again.”

When his family did get the internet, he was able to get many of his burning tech questions answered. He said that as an outdoors person he wanted to branch Infantry when he came to the Academy, and then move on to Ranger School, but his interest in cyber continued to pull him in another direction. “Before, it used to be you could do one or the other, but now you can do both,” he said. “I can still do cyber and I get to serve my country.”

Today, his future in cyber looks secure and wide open. He has recently chosen to branch Cyber, where he’ll be able to hack back. But it’s not what people think, he said. It takes hours of training and supervision before anyone gets approval to respond to a cyber attack. Pritchard said sometimes the standards, which are rooted in law, make cyber warriors feel as though “their hands are tied.” But at the same time, the standards reveal what he and his colleagues are fighting for and who we are as a nation.

“In Russia or China, they can recruit off the street and say, ‘Attack this target,’” he said. “They’re able to do that because they are not held to the ethical standards that we hold ourselves to.” His fellow cadets agreed. “This environment is the most conducive in learning how to ethically hack, and then translate that into future jobs you can do,” said Hedglin, adding, “And the mission itself is extremely rewarding.” ★

*Tom Stoelker has covered the International Conference on Cyber Security and has written extensively on cyber issues. He also writes about, art, architecture, and academia.*



## THE ARMY CYBER INSTITUTE AT WEST POINT || est. 2012

DIRECTOR: COL Andrew O. Hall '91

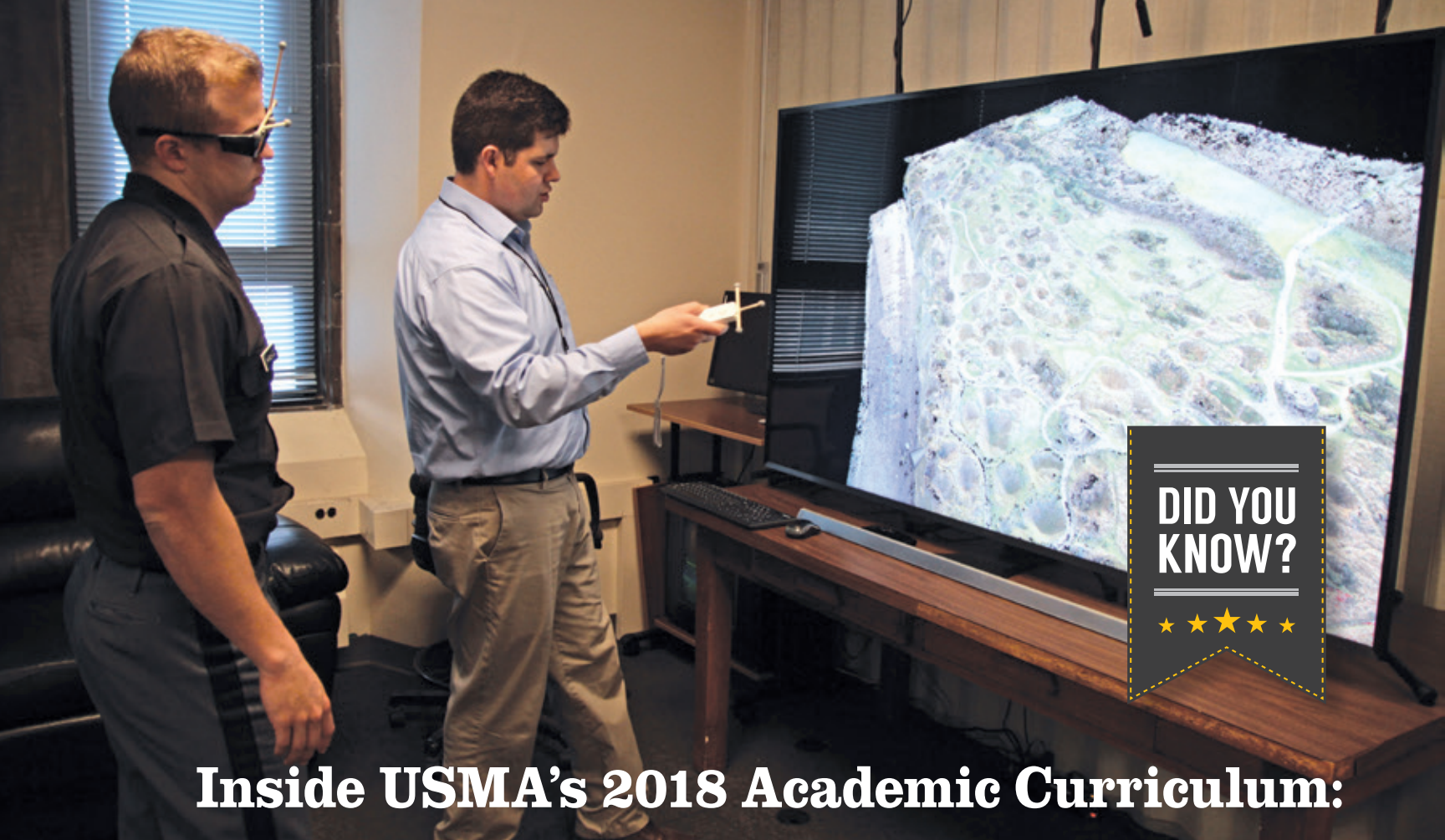
*Mission: The ACI is a national resource for interdisciplinary research, advice and education in the cyber domain, engaging DoD, Army, Government, academic and industrial cyber communities in impactful partnerships to build intellectual capital and expand the knowledge base for the purpose of enabling effective army cyber defense and cyber operations.*

The Army Cyber Institute was designed with the unique ability to bridge the public and private sectors, and to examine them through multiple academic disciplines. This “interdisciplinary” concept is one of ACI’s core tenets. In addition to the computer scientists, electrical engineers, and mathematicians, ACI employs civilian and military experts in public policy, law, ethics, history, behavioral sciences, and more. At the end of 2016, Army leaders, including USMA Superintendent Lieutenant General Robert Caslen ’75, signed a four-way agreement to coordinate and unify the cyber efforts of the Army Cyber Institute, the Army Cyber Command, the Army Cyber Center of Excellence, and the Army Staff. Informally known as the Army Cyberspace Tetrad, these four organizations are leading the Army into the growing and changing cyber domain. While the agreement formally charges the Army Cyber Institute with conducting cyber research, public-private partnerships, and outreach, this mutually supporting arrangement ensures a collaborative prioritization across the Army.

The institute’s staff, approximately 45 as of January 2017 and slated for 71 at full operational capacity, includes both military and civilians. Lieutenant General Rhett Hernandez ’76 (Retired) serves as the West Point Cyber Chair and provides strategic direction to the Institute. The military contingent draws tactically experienced officers primarily from the Army’s Cyber, Signal, and Military Intelligence branches but also includes acquisitions, modeling and simulations, psychological operations, and other specialties. Both the military and civilian academics assist West Point’s 13 academic departments by developing cyber-focused lessons within the core curriculum and creating discipline-specific electives that tackle cyber topics.

*WPAOG has facilitated support for ACI’s Margin of Excellence activities, including commitments from the Lynde and Harry Bradley Foundation, Palo Alto Networks, Lockheed Martin, the Class of 1970, the Class of 1991, Vinnie Viola ’77, Mark and Karen McLaughlin ’88, and Daniel P. Sullivan ’85 and Neal Creighton ’89.*





## Inside USMA's 2018 Academic Curriculum:

# THREE CUTTING-EDGE COURSES

By Keith J. Hamel, WPAOG staff

In his book *Carved from Granite: West Point Since 1902*, Brigadier General Lance Betros '77 (Retired) writes, "At the beginning of the twentieth century, the academic program at West Point looked much the same as it had for the previous 80 years." The hallmarks of this program were small sections, a prescribed mathematics-based curriculum, daily recitation, and strict classroom standards. "By the early twenty-first century, small sections were still the norm," Betros says, "in most other ways, however, the academic program differed markedly from its nineteenth-century forebear...but the material was more challenging and diverse."

Such is the case with *EV379: Photogrammetry*, *MA464: Applied Algebra and Cryptology*, and *SS364: Game Theory*—three courses that, by their names alone, might not seem to belong to the academic tradition for which West Point is known but, after some examination, clearly fit with preparing cadets for the rapidly changing world in which today's modern Army officer operates.

### EV379: Photogrammetry

No, this course is not about "writing" with pictures, despite what its name suggests. Instead, Photogrammetry teaches cadets the art and science of making accurate measurements and maps with

images. It is one of the either/or courses (along with *EV380: Principles of Surveying*) required by the Department of Geography & Environmental Engineering's Geospatial Information Science (GIS) major, a program that "uses a hands-on approach to teach the science behind the technologies that locate, measure, and quantify geographic phenomena" (according to its brochure). "In its infancy, roughly 20 or so years ago, the technology of this course was strictly celluloid photography," says Professor Matt O'Banion, *EV379*'s course director. Although that technology has now gone digital, the 17 cadets in O'Banion's class still learn the basic technique of extracting ground coordinates and measurements from metric film photographs using photogrammetric math equations.

“Photogrammetry is one of the hardest courses in the GIS major because the math does get rigorous,” says O’Banion. “No calculus, but we do a lot of heavy-duty geometry, trigonometry, and linear algebra.” While advanced software will do the work for them in a couple of clicks (measuring the height of a building from a photograph, for example), O’Banion wants his students to have a working knowledge of the equations behind the software. “It is important that cadets know why they are getting the numbers they are getting, whether that means understanding a camera calibration report, camera orientation parameters, or satellite sensor details,” he says. In a recent lesson introducing his students to SOCET GXP—an advanced geospatial intelligence software that utilizes imagery from satellite and aerial sources to identify, analyze, and extract ground features—O’Banion quizzed them on which coordinate system they should be using, a state plane projection or a geographic system involving latitude and longitude? After some back and forth, the cadets opted for the state plane coordinate system, understanding that a localized, “flatter” system is more accurate and would minimize distortion better than the ellipsoid-based global system.

While there is a lot of work in the course, there is also a modicum of fun; after all, *EV379* employs some pretty cutting-edge “toys.” For example, as a final project, O’Banion has the cadets working with the department’s UX-5 drone. They’ll need to prepare a flight plan, fly the drone, gather geographical data during the flight, and develop maps and 3-D point cloud models based on the data they gather. “It’s a pretty neat system, and it provides valuable hands-on experience with planning and flight execution of a drone that captures aerial photography, helping cadets retain all the technical processes they’ve been taught about survey-grade or mapping-grade photogrammetry,” says O’Banion. While the military implications of photogrammetry are immediately apparent (reconnaissance, battle-mapping, targeting, etc.), O’Banion stresses that there are plenty of commercial or humanitarian aspects as well: “From natural disaster response to automated navigation and urban planning, the lessons taught in *EV379* should serve the cadets well both in the military and in the civilian geospatial science and engineering sector,” which the Bureau of Labor Statistics has called one of the fastest-growing new fields.

### MA464: Applied Algebra with Cryptology

*MA464* is another course with both military and commercial applications. In fact, according to Colonel Joseph Lindquist, the Electives Program Director for the Department of Mathematical Sciences, the applied algebra portion of *MA464* was just an obscure mathematical topic (a “pure math for those who love doing math” topic, says Lindquist) until the applications came along. What sort of applications? “Ever wonder how your credit card gets encrypted when you use it online?” asks Professor Ivan Dungan, one of *MA464*’s two instructors. “That’s one of the business applications for the theorems of applied algebra.” When this course was first introduced in 2003, it involved more early cryptology, such as basic shift ciphers. “The old text used in the course was really a history book,” says Dungan. “Now, with a majority of cadets who are pursuing the Academy’s new Cyber

Security minor taking the course, it focuses much more on advanced math topics, from RSA encryption to Diffie-Hellman key exchange, very difficult math,” he says.

During the first of the course’s three lesson blocks, Dungan starts the cadets out “easy” by introducing them to some of the rudimentary topics associated with cryptography, including modular arithmetic and integer rings, stream ciphers, and data encryption standard or “DES” cryptography. Each block ends with a “Crypto Lab,” during which cadets need to solve a series of cryptography missions: for example, “Military Intelligence intercepted the message below with no other information.

Decipher the ciphertext and derive the original cryptosystem—NFRN RUWJ XXJI NYTS QDYT TPDZ ZMTB RFSD YNRJ X.” Easy, right? Of course not, but as Dungan is apt to repeat often in class, a major objective of *MA464* is to get cadets comfortable with the advanced math necessary for modern cryptosystems. “I want to get them comfortable with doing the computations and understanding why they work,” he says. By the end of the term, Dungan has his students working on discrete logarithm problems, ElGamal encryption, and elliptic-curve cryptography, some of the most widely used public-key cryptosystems to date.

“I think this is one of the reasons that cadets find this to be a cool course,” says Dungan. “It is cutting edge and crosses boundaries with some pretty intriguing topics, such as national security.” And while it is only a primer to the world of cryptography (the course only uses pre-made ciphers or practices current attacks against these ciphers), it is vitally relevant to the emerging directions for today’s Army. First Lieutenant Alex Molnar ’15, who took Dungan’s course and was in the first class of Cyber officers (the branch being stood up in September 2014), wrote an email to his former professor in October 2015 stating, “So far nearly all of the material we are learning was covered in your class, [so] thank you



**Previous page:** Prof. Matt O’Banion, D/GenE, demonstrates CDT Jacob Marchillo ’18’s (left) 3-D point cloud of *Pointe du Hoc* on the department’s 3-D TV system. The data was gathered from photographs taken by a UAV. **Right:** Cadets take boards in *MA464* to decrypt a cybertext using fast modular exponentiation (extended Euclidean algorithm).





**Left:** Prof. Ivan Dungan D/MATH introduces a lesson on RSA key generation. **Right:** A cadet in SS364 takes boards to solve a problem asking him to determine the minimum level of  $n$  that will achieve separation between two types of workers, qualified and unqualified, in an economy with two types of jobs, good and bad.

for helping me be prepared in this material, in particular with elliptic-curve cryptography.” Molnar’s testimony is music to Lindquist’s ears. “All math electives are developed because of an identified need; Lieutenant Molnar’s email just confirms the magnitude of the need for this department and for West Point.”

### SS364: Game Theory

Yes, cadets do play games in this course (10 percent of their final course grade depends on their in-class game performance), but the word “play” may be a bit misleading. Games are not played for enjoyment in SS364 but rather to study the logical considerations and decisions that need to be made whenever there is a strategic interaction between agents, particularly economic agents (as this is an economics course with the Department of Social Sciences [SOSH]), but the lessons of Game Theory apply whenever one needs to anticipate the strategic responses of others. In terms of course organization, SS364 is separated into three “blocks,” each designed to, as Major Oliver Moore ’06, the course director, says, “...hone the cadets’ analytical skills and provide a rigorous and methodical examination of strategic choice.” The first block examines simple games of strategy or games that involve sequential and simultaneous moves, such as on the reality TV show *Survivor*. In the second block, cadets “play” games of mixed strategy and uncertainty. “Here, we inspect the equilibrium outcomes under different assumptions about the underlying game structure, distribution of information, level of uncertainty, and the sequencing and timing of decisions,” Moore says. Finally, in block three, the cadets use the game theoretic tools developed in the first two blocks to analyze a number of important economic problems.

Moore says that the lessons of game theory apply to everything from the often-discussed, yet still theoretical presidential line-item veto to cadets weighing the payoffs of doing class work instead of corps duties. “From an instructor point of view, it is rewarding to watch the 23 cadets in this semester’s two game theory classes start to realize that they are acting in game theoretic fashion whenever they choose to prioritize  $x$  over  $y$ ,” he says. When SS364 changed versions in 2003, many cadets enrolled in the course thinking that it would be an easy “A,” but now the word is out that this is not the case. Being an economics course, there are lots of numbers bandied about in SS364, which means that cadets have to rely on lessons from their core math courses, particularly MA206: *Probability and Statistics*, which is a pre-requisite for Game Theory. “It is important to know the math, but more important to know why it conceptually makes sense,” says Captain John Rohn ’07, SS364 instructor. “It’s not just solving for  $p$  and double underlining the answer, but rather knowing what that answer means and knowing what the implications of that answer are in a real-world economic sense.” Essentially, SOSH uses SS364 to drill down on the individual actions within the larger markets taught throughout the Economics major, but its lessons are applicable to cadets’ future careers as Army officers as well. “Anytime platoon leaders need to encourage their soldiers to do something, game theory implications apply,” says Moore, “as well as with any interaction with the enemy—game theory applies to which bases to defend, where to provide coverage, where to take risks...you can see it everywhere!” ★



## **LEADERS ARE SHAPED BY THE VALUES THEY EMBODY**

As future academy graduates prepare for their military careers and beyond, support and advocacy is essential for their long-term success. Boeing is proud to partner with the U.S. Military Academy at West Point, the U.S. Naval Academy at Annapolis and the U.S. Air Force Academy at Colorado Springs with the shared goals of leadership development and engineering excellence. Together, we're helping shape leaders of character to better serve our nation and the world.





# THE WEST POINT BEER CLUB:

*Chemistry and  
Life Science Majors  
Brewing Up Lessons*

By Kim McDermott '87, WPAOG staff

**DID YOU  
KNOW?**



CPT White pours a glass of Sally Porter.



It's a basic formula: Sugar + water + yeast = beer. But the USMA Department of Chemistry and Life Science can tell you there is much more to it than that. Specifically, Captain Joshua White '06, instructor in the department, and Officer in Charge of the West Point Beer Club—a group in the American Institute of Chemical Engineers (AIChE) club. The AIChE club mission is “to support the professional development of cadets in their quest to become technically proficient and environmentally aware chemical engineers and Army officers.” Lieutenant Colonel Matthew Armstrong is the Officer in Charge of AIChE.

In one small laboratory in the basement of Bartlett Hall, the club simultaneously brews beer and learns fundamental lessons in chemical engineering, controls, heat transfer, and analytical chemistry. The process starts with milling and cooking malt for about an hour at a specific temperature, between 148-155 degrees Fahrenheit. (The lower end of this range produces short chain sugars which ferment to all alcohol for a dry beer, and at the higher end a sweeter beer results.) Then the mash is strained before going into a boil kettle where hops are added. After boiling, the resulting “wort” is cooled by passing through a heat exchanger. Finally, it meets the yeast in the fermenter. After it has reached the appropriate stage (based on density as measured with a hydrometer), it is kegged and pressurized.

The Beer Club's brews get clever names like “Branch Night Brown,” “Sally Porter,” and “Irish It Were Grad Week.” The club even created a special “Warrior Field IPA,” brewed for the 10th anniversary celebration of Anderson Rugby Complex. White and his Cadet Brewmaster, Jesse Hudgins '19, engage the club in activities that tie into learning more about their craft. An example is a recent trip section to Defiant Brewery in Rockland County, New York, where they learned about larger scale brewing operations.

Through the Directorate of Cadet Activities, the club has received Margin of Excellence funding to purchase the new equipment. And it uses the money it makes from selling the kegs to the Cadet Activities branch (an average of one keg every one to two months) to purchase more raw materials. Cadet Activities sells the beer at the First Class Club, and cadets learn when the club brews are available by word of mouth, email and social media.

Department Head Colonel John Burpo '92 says, “Brewing beer is the ultimate combination of our department's three majors—Chemistry, Chemical Engineering, and Life Science. Compared to solving an Old Corps board problem, it makes for a great Bartlett Hall experience.” ★



**Above:** Malt is barley that has been steeped, germinated, and dried before sprouting.  
**Below:** Cadet Brewmaster Jesse Hudgins '19 and Beer Club OIC CPT Joshua White '06



**Sugar**

+



**Water**

+



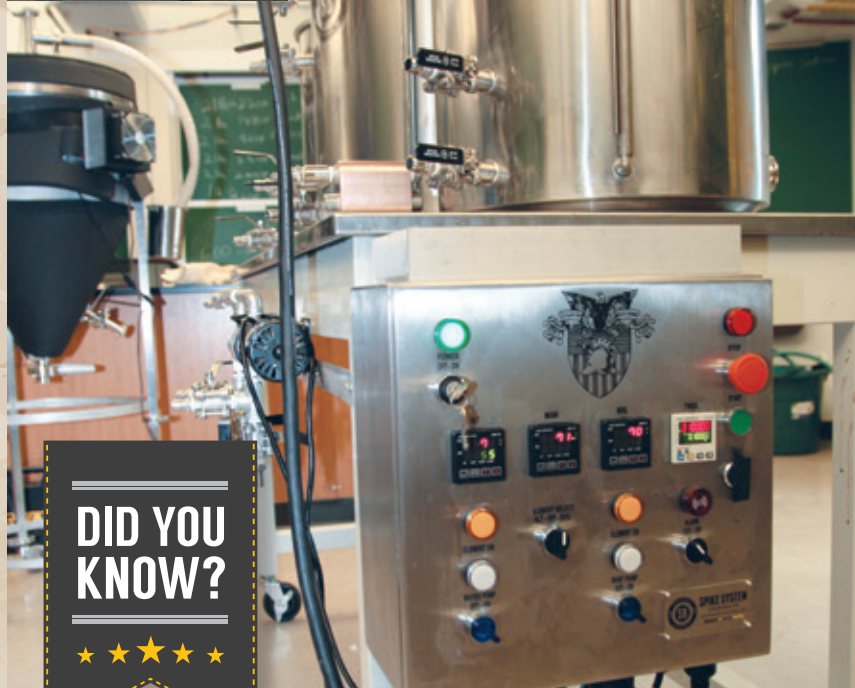
**Yeast**

=



**Beer**





**DID YOU  
KNOW?**



## THE WEST POINT BEER CLUB:

- Chemical Engineers control processes for profit to maximize production and minimize cost and loss.
- Water composition: everything affects the flavor of the beer, but  $\text{CaCO}_3$  (calcium carbonate) affects it the most.
- Anyone can brew decent beer, but it takes chemical engineers to create long-term consistency in taste and quality.
- The veteran who welded the fittings on the electric heat exchange recirculating mash system (E-HERMS) added a USMA logo.
- Brewed beer is flat, and must be pressurized with gas.
- Chemistry and Life Science Department Head Colonel John Burpo recommends the Sally Porter!

**Top, left:** A hydrometer is used to measure the density of the brew as it ferments, indicating when it is done. **Middle, left:** The conical shape of the fermenter reduces the surface area when draining off yeast/sediment. **Left:** Before having the E-HERMS, the lab equipment was a bit more primitive. **Above:** The electric (versus steam) Heat Exchange Recirculating Mash System, or E-HERMS, was custom-built by Spike Brewing in Milwaukee. It is a scaled down version of commercially used equipment and can cool boiling mash down to 70°F in one pass. Note the custom USMA logo (inset) on the E-HERMS equipment.





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# THE LONG TERM:



## Major Innovations in Military Training at West Point

By Kim McDermott '87, WPAOG staff

When the nation is in peril, it's up to West Point graduates to help defend it and win. To that end, West Point has an obligation to produce officers who don't just meet minimum standards of military proficiency; instead, they must exceed the standards.

Colonel Bill Ostlund, the Director of the Department of Military Instruction (DMI) puts it this way, "The Dean doesn't say, '2.0 [GPA] and go.' The Master of the Sword doesn't say, 'Get a 180 on your APFT [minimum passing score].' It shouldn't be any different for military training." USMA, as always, looks for every opportunity to innovate and truly inspire the nation's next generation of military leaders. This allows the Academy and the nation to stay one step in front of potential adversaries, and maintain an edge in the competition within current and future operating environments.

The tasks, conditions and operational environments of the future will be vastly different from what they are today. While accurate predictions about all of these are impossible, it is possible to begin making changes and preparations at an institutional level while searching for common themes. It is possible to evaluate current training capabilities, assess the need for change, and start to plan and make decisions from there. And all of these strategic activities seem to intersect in the innovative and ever-expanding West Point Simulation Center (WPSC).

**Below:** CPT Guillermo Guandique '07 discusses combat action in the Computer Assisted Virtual Environment (CAVE).



The WPSC is poised to provide unique opportunities for the Academy and the Army by forming cooperative relationships with other Army organizations. These relationships include evaluating the efficacy of emerging training techniques or capabilities, as well as providing user feedback to Army program offices. This feedback can include things as diverse as results obtained through the Army's new marksmanship strategies, or novel use-cases for niche capabilities and legacy systems. The WPSC maintains active contact with modeling and simulation communities across the Joint Force, in academia, and in industry.

In the future, the WPSC will enable strategic—even revolutionary—transformation of military training, and serve as the catalyst for a future West Point Military Complex (WPMC). The current vision for WPMC is to provide a scalable, adaptable, and sustainable complex of year-round training areas and facilities which integrate intellectual acumen and physical performance to prepare leaders to win in the contemporary operating environment.

These objectives will be accomplished by creating a complex that:

- Integrates existing camps, range complexes, training areas, simulations center, and Washington Hall to promote the preeminence and world-class standing of the Academy.
- Focuses on foundational military competencies and addresses emerging aspects of the future operating environment through live, virtual, and constructive means.
- Integrates and contributes to the Decisive Action Training Environment (DATE) and military staff and faculty professional development.
- Resembles aspects of Combat Training Centers to lay the foundation for mastery of military competencies.
- Supports Academy research and networking efforts while promoting USMA relationships with the Total Army Force and various Army-related agencies/communities.

The goal of the WPMC is to provide a world-class education and training facility that inspires professional excellence, supports evolving contemporary requirements, and remains adaptive to future changes in training competencies, equipment, and force structure. The WPMC demonstrates the Academy's commitment to remaining the preeminent source of leaders, for both the Army and the nation.

As it stands right now, USMA's existing military training facilities cannot support the WPMC vision. The ranges and camps are old (built in the 1940s), and seen by many as uninspiring and professionally unsatisfactory for the future leaders of the world's strongest Army. But the WPMC has a "build it and they will come" nuance. USMA knows that agencies like the Army Capabilities Integration Center, Training and Doctrine Command, Army Research Labs, and the Defense Advanced Research Projects Agency want to be associated with USMA. The WPMC will enable these and other relationships,



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## The West Point Simulation Center

Here are some highlights of the achievements and ongoing efforts of the WPSC.

- Second only to the Maneuver Center of Excellence (MCoE) at Fort Benning, Georgia in the amount of simulation-supported training provided. Tied with MCoE for the highest usage numbers of the small-unit simulation Virtual Battle Space 3 (VBS 3), a small-unit collective training system that cadets will use again in BOLC and as platoon leaders in the force.
- Increased integration with academic courses, with vital support to four different departments.
- A recent complete technology refresh of the Computer Assisted Virtual Environment (CAVE) ensures that the capability will endure for years to come.
- Deployment of a USMA-unique virtual reality (VR) troop leading procedure capability incorporating cadet and faculty research.
- Developments in the emerging fields of VR and the utilization of drone-collected terrain data. These efforts are supporting partnerships across the Academy and the Army.
- Coordination with Athletics and the Center for Enhanced Performance to enable strategies for athletic and academic enhancement through technology. In this effort, WPSC is providing technical expertise, capabilities (e.g. the CAVE, VR head mounted displays and 360-degree camera) and assistance with contracting of services to enable the athletic repetition in VR for select Army-West Point Division I sports teams, and in support of commissioning requirements.
- Sponsoring research on behalf of the Center for Enhanced Performance and the Center for Personal Development, assisting cadets to overcome phobias and increase resilience using commercial VR platforms.
- Increased utilization of the Engagement Skills Trainer (EST), a virtual marksmanship trainer, has proven effective in assisting cadets with unique challenges, (e.g., cross-eye dominance).
- The VBS 3 and EST training systems are supporting cadet capstone and faculty research in novel ways.

MARGIN OF  
EXCELLENCE



**“As part of our commitment to being the world’s preeminent leader development institution, we continually emphasize the idea of building and fostering a culture of excellence and winning in everything we do. We don’t settle for mediocrity or ‘good enough,’ but continually strive to be the best and then strive to make the best even better.”**

—LTG Robert L. Caslen Jr. '75

further establishing USMA’s position as the premier leader development institution.

As appropriated funding for military training upgrades is not expected until 2023, USMA must creatively and critically campaign for the WPMC to Army and other stakeholders. Significant effort has already gone into creating a concept plan for its enduring service and future expansion. The WPSC, as the catalyst for the WPMC, will initially exist as a Margin of Excellence capability until it is recognized as mission critical and receives appropriated funding. In the meantime, with funding secured by the West Point Association of Graduates, the WPSC will continue to pursue innovations in the application of simulation for training and education, driving technology-enabled strategic transformation of the way the Army trains junior leaders to “Fight and Win” in tomorrow’s complex operational environment.

A time-phased development plan for WPMC will maintain historical ties yet provide valuable new education and training facilities that inspire professional excellence, support evolving contemporary requirements and remain adaptive to changes in threats, training needs, equipment and force structures. Within the next 15 years, the WPMC will demonstrate to multiple audiences that USMA is a vanguard for change and is committed to remaining the preeminent source of leaders for the Army and the nation.

Ostlund likes to tell the story of First Lieutenant Samuel S. Coursen '49 who entered West Point in 1945. World War II was almost over, and the Cold War had not yet begun. At no time in his cadet experience did Coursen have reason to expect combat service on his immediate horizon. He graduated fifth from the bottom of his class. Yet, finding himself plunged into the Korean Conflict, Coursen distinguished himself by “conspicuous gallantry and intrepidity above and beyond the call of duty in action.” Coursen was awarded the Medal of Honor posthumously after dying while engaged in hand-to-hand combat. Our current graduates do have reason to expect combat service is on their immediate horizon and our nation will require them to be highly skilled combined arms and joint fighters as second lieutenants. The leaders of our future Army will not know the place and time where they may be called, but it has always been, and will continue to be, USMA’s obligation to ensure that they are as prepared as possible for any future conflict at any given time. ★

**Left:** On Projects Day in May 2017, then-CDT Jett DiPalma '17 orients Dean of the Academic Board BG Cindy Jebb '82 to his project, drone-based map-data capturing to create a 3D terrain mesh, turning her to demonstrate how the virtual reality headset senses/accounts for motion.



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# No Rain on This Parade! The 2018 Distinguished Graduate Awards

By **Keith J. Hamel**, WPAOG staff

The calendar may have said May 22, the start of Grad Week at West Point, but the raw weather for the annual alumni exercises and cadet review for the 2018 Distinguished Graduate Award (DGA) recipients felt more like an extension of Gloom Period. But rain showers and temperatures in the low 60s could not dampen the spirits of the more than 1,100 graduates and guests who returned to their Rockbound Highland Home for the festivities, especially those of Colonel Kermit Dyke '40 (USAF, Retired), USMA's oldest living graduate, who at 103 years old took part in the alumni exercises and laid a wreath at the base of Thayer Statue, nor those of the six graduates who joined the legacy of 127 other

graduates, just two-tenths of one percent of the Long Gray Line, who have been recognized as West Point "Distinguished Graduates": Colonel Dana Mead '57 (Retired), Mr. Thomas Barron '65, Lieutenant General Larry Jordan '68 (Retired), General William Wallace '69 (Retired), the Honorable Sloan Gibson IV '75, and the Honorable Douglas Lute '75.

The DGA is given to graduates of the United States Military Academy whose character, distinguished service, and stature draw wholesome comparison to the qualities for which West Point strives, in keeping with its motto: "Duty, Honor, Country." Asked about

The USCC Brigade Staff poses with the 2018 class of Distinguished Graduates (Lto R) LTG(R) Larry Jordan '68, Mr. Thomas Barron '65, HON Sloan Gibson IV '75, COL (R) Dana Mead '57, GEN (R) William Wallace '69, and HON Douglas Lute '75.



Photo: Anthony DiNoto, WPAOG



these values and the impact they have had on his life and career, Wallace said, “When you enter West Point as a plebe, ‘Duty, Honor, Country’ may be just a motto, but when you graduate, ‘Duty, Honor, Country’ is who you are, it’s part of your DNA.”

For Mead, who was President and CEO at two of America’s largest companies, “Duty, Honor, Country” translated into ethics and integrity, lessons he learned at West Point and consistently preached to his business managers. “I always reminded them that no business purpose justifies an illegal, unethical, or immoral act,” Mead said.

“‘Duty, Honor, Country’ are guideposts to live by, pinning graduates to West Point’s eternal values,” said Lute. “During times of adversity and uncertainty, they serve graduates well and will never steer them wrong.”

For Barron, who was present as a cadet in the Mess Hall during General Douglas MacArthur’s famous “Duty, Honor, Country” speech, it is the final passage of that speech that resonates for him as a Distinguished Graduate: “The Corps, and The Corps, and The Corps.” “Like ‘Duty, Honor, Country,’ MacArthur’s

repetition of these three terms reminds me of the importance of this institution, and of my integral part in it.”

Similarly, as Todd Browne ’85, President and CEO of the West Point Association of Graduates noted in his remarks at the DGA luncheon, the annual graduate procession and Distinguished Graduate Parade should remind all graduates of their common experience. “They symbolize the common ideals connecting all generations of graduates,” he said.

Finally, the DGA ceremony is one of West Point’s last opportunities to teach a lesson to the graduating class about what it means to be a leader of character and a member of the Long Gray Line. “This year’s group is quite impressive,” said Lieutenant General Robert L. Caslen Jr. ’75, the 59th Superintendent of West Point. “Their leadership and diverse experiences have influenced national security, government, industry, and so much more; but what ties all of their accomplishments together and truly makes them Distinguished Graduates is their ideal of selfless service—to West Point, to our Army, and to our nation.” Or, as Jordan puts it, “The only legacy we leave is in terms of the people and places that we have touched.” The legacy of the 2018 Distinguished Graduates is impressive indeed. ★





# 2018 Distinguished Graduate Award Recipients

## Dana G. Mead '57

Soldier, educator, businessman, and national policymaker, COL (R) Dana Mead has accomplished much in his nearly seven decades of service. Commissioned Armor upon graduation, Mead served in the 82nd Airborne and Third Armored Division in Germany and won the Draper Trophy for top Armor unit in the Army during his company command at Fort Knox, KY. After receiving a doctorate from MIT, he taught in West Point's Department of Social Sciences, designing the National Security Seminar. While at West Point he served on Pentagon teams preparing the *Report on the War in Vietnam* and writing the last volumes of the *Pentagon Papers*. He was then assigned to be Deputy Chief of Staff, Plans, for the III Marine Amphibious Force, writing the plans and coordinating withdrawal of the Marines from Vietnam. Returning stateside, Mead was chosen a White House Fellow and served there three more years as the Deputy Director of the Domestic Council. After a second tour with USMA's Social Sciences Department (as Deputy Head), Mead retired from the Army and began a career first at International Paper and then as President, Chair, and CEO of Tenneco, a financially troubled conglomerate. He and his team quickly restored it to profitability; *Industry Week* named Tenneco one of the "100 Best Managed Companies" in the world three years running. Three notable chairmanships followed: the Business Roundtable, the National Associations of Manufacturers, and the MIT Corporation. GEN (R) Barry McCaffrey '64 sums up Mead's career by saying, "Dana is one of the most accomplished and brilliant leaders that West Point has produced in the post-WWII era."



## Thomas C. Barron '65

Mr. Thomas Barron is known as a quiet force behind the scenes, adept at getting things done without great fanfare. He was one of the first of his class to lead Infantry troops in combat and completed two tours in Vietnam. After graduating from Harvard Business School in 1972, Barron spent 34 years in leadership roles with top American companies, including Dun & Bradstreet, culminating his career as COO of the Episcopal Church Pension Group. While working in industry, Barron also made major contributions to West Point, Outward Bound Schools, and Business Executives for National Security. He is a Life Member of the West Point Society of New York and, as its President, led the society's period of greatest membership growth. As a member of the WPAOG Board from 1987 to 2005, Barron served on 10 different committees, including the Development, Finance & Business Operations, and Executive Committees. His 11-year leadership role in USMA's Bicentennial Campaign was recognized by the Secretary of the Army with the Army's Public Service Award. Passionate about its mission, Barron assisted the History Department in revitalizing the Center for Oral History (COH) program, and today remains a trusted personal advisor to COH leaders. He is also a generous contributor to the Combating Terrorism Center and the Rugby Team. LTG (R) Dan Christman '65, the 55th Superintendent of West Point, says of Barron, "Nobody, but nobody, has combined these important contributions with dozens of other major outreach efforts that have positioned our alma mater and its alumni association for excellence in the 21st century."



## Larry R. Jordan '68

According to GEN (R) Fred Franks '59, "LTG (R) Larry Jordan has been a distinguished graduate his entire life since his commissioning and graduation in 1968." Airborne trained and Ranger qualified, he quickly distinguished himself as an Armor officer while serving in the 2-2nd Infantry Regiment with the famed 1st Infantry Division ("Big Red One") in Vietnam. After further education, and an assignment with the USMA History Department, Jordan began a rapid rise through command and staff positions at the battalion, brigade, and installation levels, including chief of staff of the 1st Armored Division and command of the 2nd Brigade, 3rd Infantry Division. Upon promotion to general officer rank, Jordan became Commanding General of the Armor & Cavalry Center at Fort Knox, KY and excelled in three different Army three-star posts, notably Inspector General. When he retired after 35 years, Jordan had received numerous awards for his service, including the Armor Association's Gold Order of St. George and the Field Artillery Association's Order of St. Barbara. In 2012, the HistoryMakers designated him a Military History Maker, archiving his career story in the Library of Congress. Post-Army, Jordan served as Senior Vice President of Burdeshaw Associates and on several councils and boards, including as Chairman of the West Point Association of Graduates from 2014-17. As his biographical sketch in the 1968 *Howitzer* prophesized, "General Jordan, as indeed someday it shall please one to address him, has combined an outstanding military manner with amiability."



## William S. Wallace '69

When others discuss the five-decade Army career of GEN (R) William "Scott" Wallace, the word that comes up over and over is "visionary." Whether he was, as GEN (R) Gordon Sullivan notes, "...practicing his skills as an Army warrior or teaching others the skills of war at the tactical and operational level," Wallace was a key figure in the Army's renaissance after Vietnam. Early in his career, he was instrumental in developing a system to deliver tanks to the drop zone with minimal impact. Wallace later designed a new math and computer-based decision system, one of the Army's earliest digital combat simulations. He also served as commanding general of the Experimental Force of Force XXI, the transformed 4th Infantry Division, applying advanced technologies to command and control when the Army sought to modernize after the Cold War. His innovative nature was clearly on display when, as commanding general, Wallace led the 140,000 soldiers of V Corps to swift victory, using unparalleled capabilities against unconventional adversaries, during Operation Iraqi Freedom. Wallace's capstone assignment was as commanding general of U.S. Army Training and Doctrine Command (TRADOC). GEN (R) Peter Schoomaker, the 35th Chief of Staff of the U.S. Army, says, "General Wallace's contributions at TRADOC were instrumental to the Army's great success through some of the most challenging periods in our history, while concurrently setting a vision into the future that is unfolding even today." Part "muddy boots" soldier and part "premier trainer," few West Point graduates have had as influential an Army career as Wallace.



## Sloan D. Gibson '75

The Honorable Sloan Gibson is, as VADM (R) Richard Carmona, the 17th U.S. Surgeon General, puts it, one who "understands that leaders are ultimately responsible for the destiny of others." After time as a rifle platoon leader, he served as aide-de-camp to BG Fred Mahaffey, then Assistant Commandant of the Infantry School, and as speechwriter for LTG William Richardson '51, then Commander of the Combined Arms Center. Gibson then began a distinguished 22-year banking career, culminating as Vice Chairman and CFO of AmSouth, having helped it grow fourfold to \$50 billion in assets and join the S&P 500. Looking for new ways to serve, he obtained a Master of Public Administration from Harvard's Kennedy School and three years later was selected as the 22nd President and CEO of the USO, the only West Point graduate to serve in this role. Under Gibson's leadership, the USO dramatically expanded its support for forward deployed troops, wounded troops and their families, and families of the fallen. He was selected by then Secretary Eric Shinseki '69 to become Deputy Secretary of Veterans Affairs, taking over as Acting Secretary in 2014. He worked alongside classmate then Secretary Bob McDonald in the transformation of VA through the successful MyVA program. Quoting GEN (R) Martin Dempsey '74, 18th Chairman of the Joint Chiefs of Staff, "It is not an exaggeration to say that tens of thousands of military members and their families owe their lives to Sloan Gibson." Through it all, Gibson has supported West Point as a featured speaker at Founders Day dinners and as a generous donor.



## Douglas E. Lute '75

"In every generation," writes GEN (R) Peter Chiarelli, "West Point produces one or two soldier-statesmen who make a difference at the national level—the Honorable Doug Lute is one." As a soldier, Lute served as an Airborne Ranger in the 2nd Armored Cavalry Regiment before returning to West Point to teach in the Department of Social Science, earning the Lincoln Award as best instructor. He served again with ZACR during Operation Desert Storm, receiving the Bronze Star. Lute was promoted to general officer rank in 2001 and was the first in his year group to receive his third star in 2006. He commanded U.S. forces in Kosovo, served as the Director of Operations for U.S. Central Command and later for the Joint Staff, and was selected by President Bush to serve in the White House as Assistant to the President and Deputy National Security Advisor for Iraq and Afghanistan. He was the senior White House official retained by President Obama, serving the two presidents for a total of six years. As a diplomat, Lute in 2013 was appointed the U.S. Permanent Representative to NATO, "the most important post in the diplomatic corps" according to former Secretary of State Madeleine Albright. During his tenure, Ambassador Lute used military expertise and skillful diplomacy to lead NATO's response to the most severe security challenges since the end of the Cold War. As both a soldier and a statesman, Lute is, as former Vice President Joe Biden says, "a proven true American patriot." Lute currently serves as the Robert F. McDermott Distinguished Chair of Social Sciences at USMA.



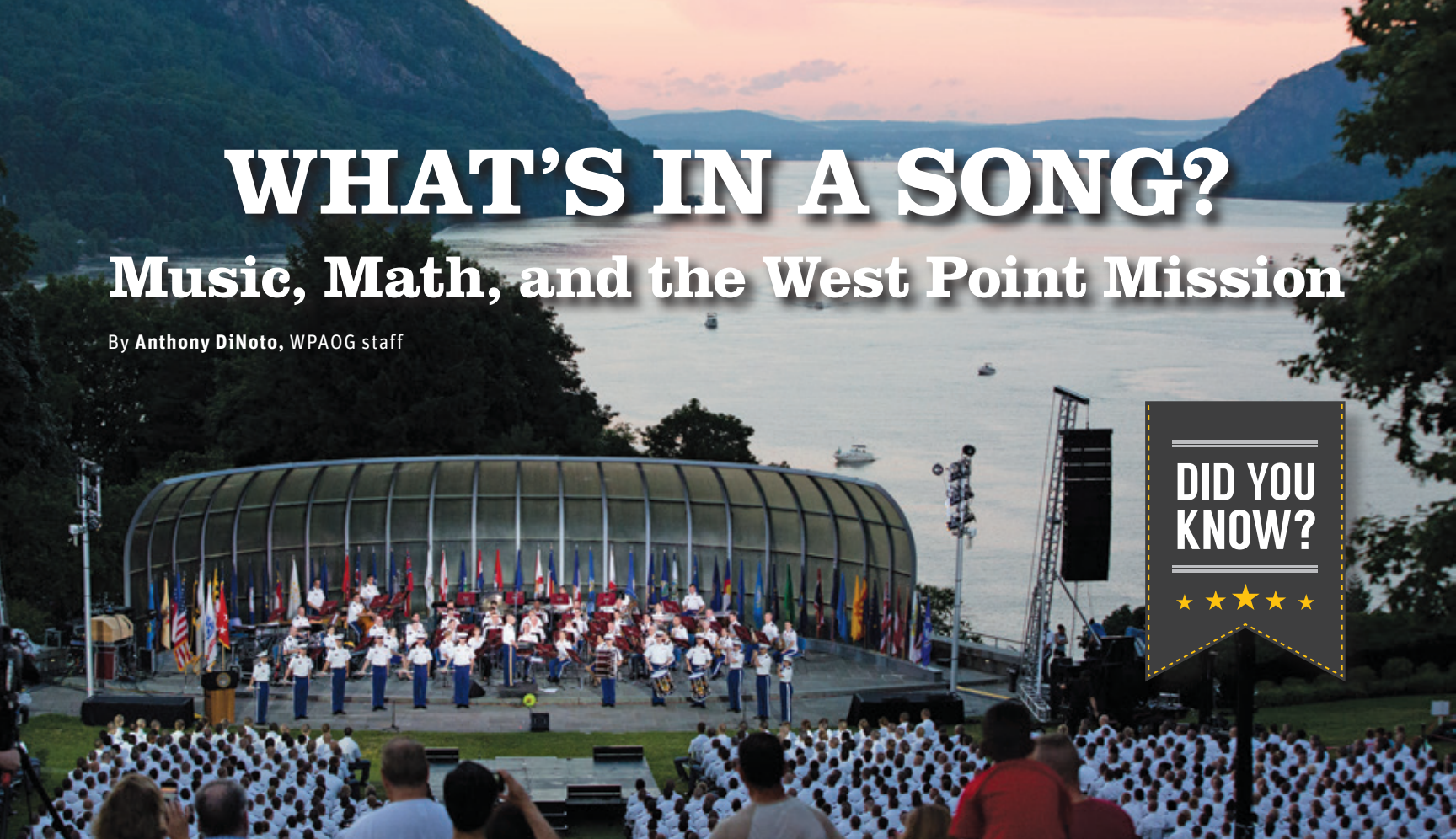


# WHAT'S IN A SONG?

## Music, Math, and the West Point Mission

By Anthony DiNoto, WPAOG staff

DID YOU  
KNOW?



As the summer sun sets behind structures of stone and marble, cadets, faculty, friends and families take their seats on the sloped grass at Trophy Point. The rays of twilight bathe Battle Monument's 46-foot tall granite column, casting a fading shadow on the amphitheater stage at the bottom of the hill. Soon, darkness falls and fireworks light up the night sky as a subtle evening breeze off the Hudson River ripples through Old Glory. New Cadets, reprieved from the grueling grind of Beast Barracks, wave *Bugle Notes* in lieu of lighters to kick off the West Point Band's 2017 Independence Day Concert.

But this show will highlight more than America's birthday. Tonight, Colonel Doug McInvale '93, Academy Professor of Mathematics, will take the stage alongside the West Point Band's Benny Havens Band to perform a military tribute version of "My Old Man," the popular country song by the Zac Brown Band that graced the airwaves in early 2017. The vocal trio of McInvale, Staff Sergeant Emily McAleesejergins and Staff Sergeant Jeremy Gaynor is a familiar sound to many in the crowd. The team recently recorded and released a music video for the tribute track which received critical acclaim and went viral on social media. Released for a limited time around Father's Day, the video garnered more than three million views and 12,000 shares on the West Point Band's Facebook page alone. This grassroots popularity was catapulted when it was shared on social media by the Zac Brown Band and the U.S. Army. What

may not be so familiar, however, is the story behind the song, a story that intertwines mathematical Game Theory and advanced marketing analytics. It's all very scientific, but this data-driven endeavor had a heartwarming effect that went beyond quantification to touch fathers, families, and West Point graduates around the world.

### Analysis: What's in A Song?

The "My Old Man" project traces its roots back to 2014, when then-Lieutenant Colonel Jim Keene envisioned a country music capability for the West Point Band. This vision became a reality through the support and ongoing relationship with USMA math professors Colonel Steve Horton and McInvale. This musical and analytical partnership extended, on and off stage, through the subsequent Band leadership of Colonel Andy Esch and current commander Lieutenant



Colonel Tod Addison, by providing quantitative expertise to articulate Army music's value to military leadership. They linked up with West Point Band member, then Master Sergeant Denver Dill to launch the Army Music Analytics Project—a collaborative effort between USMA's Department of Mathematical Sciences and Army Music Analytics. Together with a group of cadets, they travelled to New York City in the spring of 2017 to meet with executives at Nielsen, the global measurement and data analytics company. By working with Nielsen, the team aimed to maximize effectiveness, create a positive brand image and provide support for Army Music by understanding the marketing industry and utilizing strategic research and insights. "Our purpose at Nielsen was to help the U.S. Army and West Point cadets engage experts outside of academia and provide exposure to leaders in media and research," says McInvale. Following the initial meeting at Nielsen, a group of 15 cadets each presented their own ideas on how to better market Army music, and all cadet presentations seemed to have one recurring theme: social media analytics. So, the team got to work applying the principles learned through their work with Nielsen to develop a proof of concept that would highlight the effectiveness of Army music. Soon the concept formed what would become the "My Old Man" project. The initial idea was to cover an inspirational song that the Band could perform at the Army Birthday concert on Father's Day weekend.

## Integrity in the Process

Knowing they might be onto something bigger, now Sergeant Major Dill—Army Music Analytics Team Leader—took the initial idea one step further and suggested a complete rearrangement of the song, courtesy of the West Point Band. McInvale, whom the Band affectionately dubs the "Country Colonel," would deliver lead vocals. Furthermore, Dill proposed partnering with the USMA Band audio-visual team to produce a heartfelt music video to be marketed and released on social media ahead of Father's Day 2017. "We wanted to execute all of the elements the Army Music Analytics Project in one timeless, authentic, quality product to impact people beyond just the West Point community" Dill remembers. In the spirit of the Cadet Honor Code, "A Cadet will not lie, cheat or steal, or tolerate those who do", they knew they would need to seek approval from the Zac Brown team to execute such a bold idea. Demonstrating the values of the institution, the Band did its due diligence and began the process of contacting every legal entity associated with the song, from the publishing company who owned the copyright to Zac Brown Band management, to secure the licensing. "We had to make sure we did it right and display integrity in the process, because if we did, it could be our biggest success," says Dill.

While Master Sergeant Mike Reifenberg worked the legal end, the rest of the Band were hard at work recording and producing the song. Once recorded, they shot the video on location at West Point. After weeks of correspondence, they finally received approval from the song's owners. The video was published in the days leading up to Father's Day and received views by the millions, comments and shares by the tens of thousands, and hundreds of emails describing how the song inspired so many people. Seven million Zac Brown fans received the video via Facebook and in their monthly

newsletter. What's more astonishing is the nearly universal positive reaction to the video. By assessing the data and applying the principles of target marketing, the team knew that they had created a product that was sure to resonate with West Point cadets, military families, soldiers and dads everywhere. "We thought that if moved forward without pretense or expectation, the project would be what it's supposed to be," Dill says. The wildly successful video not only proved the effect of Army music but set an example for others to follow by honoring America through song, which was the central purpose of the Army Music Analytics Project. "The project inculcated many of the values we try to espouse in our cadets by inspiring, training and educating through experiences that build character," McInvale says.

## Character Reverberations From Combat

Humbled and flattered by the overwhelming response, the team spent much of July fielding emails from military officers, artists and musicians who wanted to thank the Country Colonel and the West Point Band for their inspirational song. One such correspondence from a soldier down range stood out:

*"Sir, I just saw your [My Old Man tribute] video and thought it was very cool and touching. It means so much more being deployed and knowing my Dad is back home supporting me and my family through this time. RLTW!"* —Paul Lushenko

At first, McInvale wasn't sure how he knew the name Lushenko, but was honored nonetheless. There was something about that note that seemed to really resonate with him, just as his tribute song resonated



**Previous page, top:** The West point Band opens the 2017 Independence Day concert on July 8. **Previous page, inset:** COL Doug McInvale '93 and SSG Jeremy Gaynor sing the "My Old Man" tribute version at the 2017 Independence Day concert. **Above, right:** Screenshot of the "My Old Man" video, released on Fathers Day 2017, shows McAleesejergins, McInvale and Gaynor.



with so many others. Then one day in August, McInvale saw a soldier in uniform waiting for him outside his Thayer Hall office. That's when it clicked; Major Paul Lushenko '05 was once Cadet Lushenko, a Distinguished Cadet and McInvale's former student from *MA206: Probability and Statistics*.

At West Point for Branch Week, Lushenko made it a point to find McInvale and let him know in person just how inspired he was by the song "My Old Man." He explained that when he heard the Colonel's voice in the video, it propelled him back to the fun times and lessons learned in McInvale's West Point classroom. Like the time they camouflaged their faces, or the time Lushenko messed up and got in some hot water academically. "Paul recalled that a leadership lesson—the ramifications of his actions and why it was so important to follow instructions—carried with him to this very day," says McInvale. Lushenko explained how that past interaction with his West Point professor impacted him in such a way that when his character was tested and danger was imminent, he possessed the integrity to make the right decisions on the battlefield. Truly honored, McInvale brought Lushenko over to his computer and played the video from the recent Independence concert. During the live performance of "My Old Man," McInvale bridged the coda by reading aloud to audience Lushenko's email. Lushenko watched the playback as McInvale told the story of a Ranger currently serving in Afghanistan who was inspired by that very song to build a closer relationship with his father. As the video ended, a tear rolled down

Lushenko's cheek and the two soldiers stood emotional in one powerful moment, knowing that "My Old Man" held so much more than just words and music. Lushenko offered to help the project in any way possible, so he met with West Point's Center for Oral History (COH) later that week to further document how a simple song and the legacy of leadership transcended time and distance. [Major Lushenko's full interview is available on the COH website].

The "My Old Man" project was a collaboration between various USMA departments that produced a military tribute to Dads everywhere, and provided a simple but poignant message: To All the Fathers—thank you! McInvale and Dill attribute the success of the "My Old Man" Project to the synergy in the West Point community, among departments, Public Affairs and the West Point Association of Graduates, noting that success happens when preparation meets opportunity. "At a time in our nation's history when coming together is so important, this message needs to be told," McInvale says. He credits his wife Amy, daughter of the late Colonel Richard L. Tripp '56, as an inspiration who views every interaction as an opportunity for kindness, and his parents for instilling in him a work ethic and a sense of purpose. "It was an honor to be part of the 'My Old Man' Project that generated so many touching stories about connecting people and restoring relationships in our ranks. I am grateful that the entire process encompassed all the principles of Duty, Honor, Country." ★

View the West Point Band's "My Old Man" Tribute video for a limited time only (June 17-July 29) at

[www.youtube.com/watch?v=nbpj-IbYUa8](http://www.youtube.com/watch?v=nbpj-IbYUa8)

View West Point Center for Oral History's interview with MAJ Paul Lushenko '03 at

[WestPointCOH.org/interviews/the-resonance-of-music-connecting-military-families-around-the-globe](http://WestPointCOH.org/interviews/the-resonance-of-music-connecting-military-families-around-the-globe)



**Above, left:** McInvale '93 (center) and then-CDT Lushenko '05 (right) during Probability & Statistics class in 2003. **Left:** The McInvale kids send their deployed father a special "We Love You" message. **Above:** COL Doug McInvale '93 (left) and Paul Lushenko '03 reunited in August 2017 at West Point after Lushenko viewed the "My Old Man" tribute video while he was stationed overseas.





Known as the “Country Colonel,” McInvale often sings with the West Point Benny Havens Band.

## Consistency - noun

Conformity in the application of something, typically that which is necessary for the sake of logic, accuracy, or fairness:

*Synonyms:* steadiness, reliability

*Antonym:* Fickleness (found often in weather and financial markets)



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Photo Credit Gregory D. Gadson

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**“I swing big, with everything I’ve got. I hit big or I miss big. I like to live as big as I can.”** —Babe Ruth







# *"With Strength We Lead"* Graduation Week

May 22-26, 2018



**Top:** The iconic hat toss after the Class of 2018 received the command, "Class Dismissed!" **Left:** Members of the Class of 2018 marching into Michie Stadium for the Graduation ceremony. **Right:** First Captain Simone Askew '18 and the Brigade Staff at the front of the Graduation Parade.



Members of the United States Military Academy Class of 2018 graduated and were commissioned as second lieutenants in the U.S. Army on May 26, 2018. Those graduating were 78 percent of the cadets who entered West Point almost four years ago.



#### GRADUATION SPEAKER:

General Joseph F. Dunford Jr. (USMC)  
19th Chairman of the Joint Chiefs of Staff

**NUMBER OF GRADUATES:** 972

#### INTERNATIONAL CADETS:

11 (representing Saudi Arabia, Taiwan, South Korea, Mongolia, Nigeria, Georgia, Bulgaria and Pakistan)

#### FIRST CAPTAIN:

Simone Askew, Fairfax, Virginia

#### CLASS PRESIDENT:

Marcos Arroyo, Orlando, Florida

#### VALEDICTORIAN:

Joy E. Schaeffer, Strongsville, Ohio

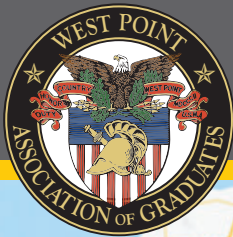
**Top Left:** LTG(R) Larry R. Jordan '68 presents a set of 2LT bars on behalf of the 50-Year Affiliation Class. **Top Center:** Gen Joseph F. Dunford addresses the Class of 2018.

**Top Right:** Class President Marcos Arroyo presents a cadet saber to Gen Dunford.

**Right:** The Class of 2018 "Goat" Daniel M. Davis Jr. receives his diploma. **Bottom:** USMA's Oldest Living Graduate, Col(USAF, R) Kermit R. Dyke '40 (far right), lays the wreath at Thayer Statue during the Alumni Exercises on May 22.

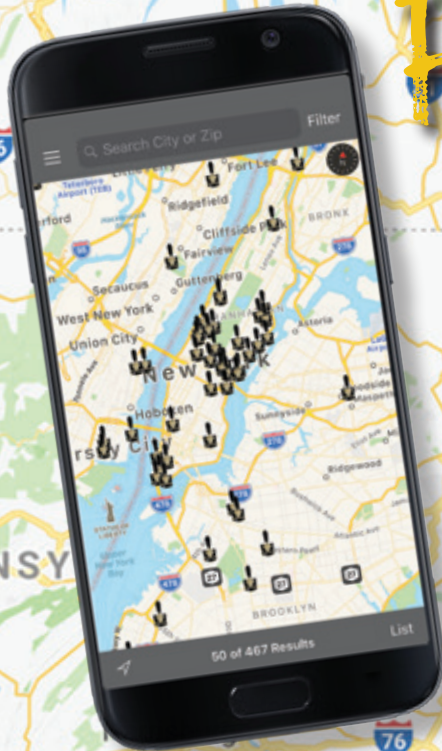






# For Grads Only

# Grad Link



## Grad Link Features

**Direct Grad-to-Grad connection:** By integrating select WPAOG data into your profile, Grad Link makes it easier to contact fellow grads directly.

**Convenient and flexible:** Grad Link offers mobile and desktop interfaces, so no matter where you are, you can find a fellow member of the Long Gray Line.

**Free:** Grad Link will be available for free to grads in the Apple App Store or Google Play Store.

**Easy, quick and customizable:** With a variety of search filters to choose from, Grad Link allows you to quickly find grads with shared interests. No more sifting through huge lists of search results.

**Location filters:** You can easily see who is in your geographic area, a feature helpful for planning happy hours, reunions or meet-ups, even when traveling.

**Search by industry, job and location:** Using LinkedIn data, Grad Link will recommend relevant grads in your chosen professional field and geographical location with whom to network.



## Expanding the Ways West Point Grads Connect to Each Other

For nearly 150 years, the West Point Association of Graduates (WPAOG) has offered a variety of resources for members of the Long Gray Line to connect with fellow graduates and connect with their classmates or company-mates.

In the past, grads serving and living around the world relied on printed publications such as *ASSEMBLY*, Class Notes, *West Point* magazine and the *Register of Graduates* to find information and stay connected across the miles. Reunions, Society events and annual Founders Day celebrations provided additional opportunities to connect face-to-face and allowed dedicated volunteers to share news and updates, making sure grads stayed informed and in touch.

With the advent of the digital age, services such as “Find a Grad” and “Grad News” on the WPAOG website made it easier to access contact information online. Even more recently, the launch of social media channels like Facebook, Twitter and LinkedIn has made it possible to immediately communicate news, updates and milestones with fellow graduates.

As the technological landscape continues to evolve, WPAOG is leveraging new technology to offer more ways for grads to interact. We are pleased to announce the launch of our newest service for grads to connect with each other: Grad Link.

### What is Grad Link?

Grad Link is a new, enhanced service that makes it easy to connect with any West Point grad, anywhere in the world, via the web or through a free app available through the Apple App Store or Google Play Store. With the introduction of Grad Link, WPAOG hopes to create the opportunity for a greater intersection of online and in-person connections.

### How does it work?

Grad Link leverages much of the data that is already available to your fellow graduates, including cadet company, geographic location and email address, and takes it to a new level by combining it with information from your LinkedIn profile, such as your company, industry and LinkedIn location. The result is an easy-to-use platform to find and connect with fellow alumni.

The information available for each person and detailed search features will allow grads to find those with whom they share common interests and instantaneously reach out to them. Once grads are connected, Grad Link also includes a geolocation feature to view the location of those searched and find a convenient place to meet in person.

*“Our vision is for the Long Gray line to be the most connected alumni body in the world, using innovative new technology that will make it easier for graduates to leverage the powerful network of more than 52,000 West Point graduates worldwide.”*

—Todd A. Browne '85, WPAOG President & CEO

### Privacy and Security

As with all WPAOG services, we take the utmost care to ensure your personal information is safe and secure. That is why Grad Link is only available to West Point graduates, and each person's identity and graduate status must be validated before they receive access to the platform. **To take maximum advantage of this service, we encourage everyone to make sure WPAOG has your most up-to-date contact information, specifically the email you use for LinkedIn.**

We understand that some graduates may elect to conceal portions of their personal information such as their location or email address. If that is the case, please contact [GradLink@wpaog.org](mailto:GradLink@wpaog.org). Alternatively, if you prefer to conceal your entire profile, you may do so after logging in to the platform.

We hope that all graduates will take advantage of this exclusive new service and help make the Long Gray Line the most connected alumni body in the world. ★

For more information on Grad Link, please visit:

**[WestPointAOG.org/GradLink](https://WestPointAOG.org/GradLink)**

Questions may be directed to: **[GradLink@wpaog.org](mailto:GradLink@wpaog.org)** or **845-446-1624**.

*Funding to support Grad Link comes from generous donations made to the Long Gray Line Fund.*

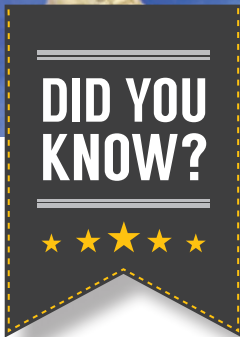
## Download WPAOG Grad Link today!

**Google Play Store:** Search for “WPAOG Grad Link”

**Apple App Store:** Search for “EverTrue Alumni Community” and choose “WPAOG Grad Link”

**Web Browser:** <https://community.evertrue.com/wpaog>





# DCA EXTRACURRICULAR CLUBS: “All for the Corps”

By Carol Miller, Guest Writer



A half a century ago, cadets had slightly more than 50 extracurricular clubs in which they could participate. Over the years, some of these clubs vanished (e.g., Audio Club, Information Detail, and Cardinal Newman Forum), but for every club that disbanded, it seems that a new club was founded.

Today, the Directorate of Cadet Activities (DCA) Extracurricular Club Program offers 139 diverse teams and clubs for cadets to join, including new offerings unfamiliar to most graduates (such as the Grill Club and the Motorcycle Club). But while clubs have come and gone over the years, the mission of the Cadet Extracurricular Club Program has not changed: to build cadets who are committed to the West Point ideals of Duty, Honor, Country, and who, upon commissioning, will live honorably and build trust; demonstrate intellectual, military and physical competence; develop, lead and inspire; think critically and creatively; communicate and interact effectively, demonstrate a strong, winning spirit; and pursue balance, excellence, and continual growth. Leader development is the primary and underlying objective of DCA's Extracurricular Club Program, which is supported by Margin of Excellence donations through the West Point Association of Graduates. Cadets enter the program as young plebes and depart upon graduation having emerged as true leaders after their 47-month USMA career. The following clubs, though new and unfamiliar to most graduates, continue the tradition of leader development upon which DCA is founded, and its motto is as true today as it has ever been: "All for the Corps!"

### Investment Club

Personal finance is one of the most overlooked facets of primary and secondary education. The West Point Investment Club seeks to educate its members on a variety of topics related to finance in order to best prepare them to make informed decisions regarding their future assets. The club's mantra is to let no question go unanswered. While its leadership is highly competent and capable at this, the club's industry-specific guests from across the country provide an unparalleled experience by bringing a wealth of knowledge on a variety of topics, including buying mutual funds and exchange-traded funds; investing in stocks and bonds; selecting banks, credit and debit cards, and loans (particularly for the career starter, or "cow," loan), instituting retirement and education programs; understanding Army pay, VA benefits, the Post 9/11 GI Bill, and Yellow Ribbon funds; and buying versus leasing, whether a car, house, or apartment. Meeting twice a month, the Investment Club focuses on having quality meetings and carefully selecting guests that will contribute the most to the intellectual development of club. Each semester, the club takes 12 to 50 cadets on trips to organizations in New York City and Boston. Most notably, cadets have had the opportunity to visit the Harvard Business School, JP Morgan, and CNBC's "Mad Money" show.

**Previous page:** Members of ELEX (in blue shirts, L-R)—CDT Sam Norman '19, Instructor CPT Josh Groen, CDT Jared Fritz '19, and CDT Shane Murphy '21—assisted high school teams at the 2018 Long Island FIRST Robotics Regional Championship at Hofstra University in April.

MARGIN OF  
EXCELLENCE



### Electronics Experimenters Group

The Electronic Experimenters Club (ELEX) exposes its members to the world of electronic design by working on electronic circuits and building electronic kits. As members of ELEX, cadets get experience working with motion sensors, small robots, radios, solar powered cars, audio amplifiers, lighting effects, and various other small scale electronic designs. Three members of ELEX recently used this experience to judge robots built by more than 40 high school teams for the Long Island FIRST Robotics Regional Championships at Hofstra University in Hempstead, New York. Given their knowledge of robotic drive systems, PID control and operation, and power delivery systems from their time in ELEX, Cadets Samuel Norman '19, Jared Fritz '19, and Shane Murphy '21 (along with instructor Captain Joshua Groen) were able to provide informed assessments and suggest improvements for the students' robots in order to solve a specific challenge. In addition, the cadets, in partnership with the NYC Recruiting Battalion (USAREC), spoke with students about their plans for the future and made many aware of opportunities at West Point and in the Army. The organizers of the competition were very impressed with the cadets' performance, professionalism, and bearing, and they asked the members of ELEX to return in support of this STEM event and others like it in the future.

### Society of Hispanic Professional Engineers

One of West Point's three diversity-based engineering clubs (along with the Society of Women Engineers and the National Society of Black Engineers), the Society of Hispanic Professional Engineers (SHPE) changes lives by empowering members of the Hispanic community to realize their fullest potential and to impact the world through STEM awareness, access, support and development. Approximately a dozen cadets regularly participate in SHPE activities at West Point, which include outreach events to local middle schools and high schools and volunteering at STEM events held at West Point. For example, this spring three SHPE cadets attended a regional leadership conference in New York City, which proved to be a great opportunity to meet successful Hispanics in STEM fields and to network with other local SHPE chapters (SHPE's network includes close to 300 chapters throughout the U.S.). Cadets join SHPE for a number of reasons, but mainly to give back to the local community and inspire the next generation of leaders in STEM. Major Gabriel Lucero, SHPE's Officer-in-Charge, says, "I have been inspired by the level of commitment to service displayed by members of this club; their passion to give back to their community will serve them well as future officers."







The 2018 Army West Point Ultimate Team posing before the 4th Annual West Point Classic.

## Army Ultimate (Frisbee) Team

Army West Point Ultimate is a young and growing team at the United States Military Academy (Note: “Frisbee” is a brand name, which is not currently the disc used in play, so the sport is just called “Ultimate”). In a few short years, what started as a group of friends playing during their weekend free time has grown into a nationally competitive team. In 2015, Army West Point Ultimate went to the conference championship tournament with nine players, and in 2017 the team rode a 14-0 winning streak to their first conference championship, first regional championship, and an appearance at the national championships, where they broke seed to finish in 10th place. Individual accolades for the team include four All-Region honors, with then-Cadet Ian Betzel '17 being recognized as All-American. Today the team, coached by USMA associate professor and five-time national Ultimate champion Dr. Stephen Finn, has a roster of nearly 30 cadets competing for 21 travel spots to the three-to-four tournaments in the Northeast area in which Army West Point Ultimate participates. The team practices three times per week and hosts two tournaments at West Point per year. The 2018 team finished the regular season with a 7-2 record and was recorded as high as 15th in the national power rankings. ★

*Mrs. Carol Miller is the Extracurricular Program Manager in the Directorate of Cadet Activities. Carol has proudly managed 139 clubs and forums under this diverse and exciting program. She has enjoyed working directly with and for our cadets, who will become the future leaders of our country. Carol will be retiring this summer after 24 years of government service and has humbly served the United States Military Academy in each of the positions she has worked.*





# SACC Service Academy Career Conference



**Your Successful Career Transition Starts at SACC.**

**San Diego, CA** : Aug 23 – 24, 2018  
**San Antonio, TX** : Nov 1 – 2, 2018  
**Jacksonville, FL** : Mar 28 – 29, 2019  
**Washington, DC** : Jun 13-14, 2019

To register for any SACC as an attendee or exhibitor, go to [sacc-jobfair.com](http://sacc-jobfair.com).

If you would like more information about WPAOG Career Services visit [WestPointAOG.org/Careers](http://WestPointAOG.org/Careers)



## WPAOG Career Services

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## START<sup>the</sup>DAYS!

AUGUST	SEPTEMBER	OCTOBER
<b>10</b> August Graduation	<b>8</b> First Home Football Game BEAT LIBERTY!	<b>4</b> Thayer Award
<b>12-13</b> Class of 2022 Grad March back	<b>14</b> Army Sports Hall of Fame Induction	<b>19-21</b> Family Weekend
<b>15-17</b> West Point Alumni Leaders Conference	<b>27</b> Nininger Award	
<b>18</b> Acceptance Day—Class of 2022		<b>Fall 2018 Class Reunions</b>
<b>20</b> First Day of Classes		<b>1973</b> Sep 6-9
<b>24-25</b> Ring Weekend		<b>1983, 1988</b> Sep 13-16
		<b>1998, 2003</b> Oct 18-21 (Homecoming Weekend)
		<b>2008, 2013</b>
		<b>1993</b> Nov 1-4

**Upcoming events suggested by West Point staff & faculty.**

Events for Nov 2018—Jan 2019 should be sent to [editor@wpaog.org](mailto:editor@wpaog.org) by Aug 15, 2018.

For the entire calendar, go to  
**[WestPointAOG.org/calendar](http://WestPointAOG.org/calendar)**









# SANDHURST 2018

**S**ixty-four teams representing four U.S. service academies, 13 international military academies, and eight ROTC programs competed in the 50th annual Sandhurst Military Skills Competition at West Point from April 13-14, 2018. This year, for the first time ever, the U.S. Air Force Academy team won the competition, earning the coveted Reginald E. Johnson Memorial Saber. Teams comprised of eight men and one woman competed in 11 different events ranging from marksmanship to grenade throwing. The competition tested individual and team military skills as well as leadership abilities and athletic proficiency. The competition was fierce and the scores were close. Runners up in order were: Royal Military College of Canada, Royal Military Academy Sandhurst—Red, University of North Georgia, and West Point (USCC) Gold.

Recently, the Class of 1999 endowed an annual Sandhurst Conference as part of their 20th reunion gift. This all-day conference brought together several hundred future officers from USMA, ROTC and international teams to provide an intellectual counterpart to the Sandhurst Military Skills Competition, testing mental agility as well as military skills.



# LIVE TO SERVE

## ARMY WEST POINT TENNIS

By Keith J. Hamel, WPAOG staff



Photos: Anthony DiNoto/WPAOG; courtesy ODJA





According to the 1921 *Howitzer*, the Academy's yearbook, when tennis was first introduced at West Point at the turn of the 20th century, it was ridiculed by some cadets and officers as an "effeminate" game. In other words, it was not viewed as the type of martial sport needed to prepare future Army officers in the same vein as football and boxing were. But, as more and more cadets started playing the sport and started to experience both the physical and mental endurance needed for tennis, attitudes changed.

In fact, when Brigadier General Douglas MacArthur, Class of 1903, the 31st Superintendent, introduced "Intra-Mural Athletics" to the Academy in the fall of 1920, tennis was one of the five original sports that cadets were required to play, and it was one of only three sports (along with soccer and lacrosse) that had company teams both in the fall and the spring.

Nearly 100 years later, Jim Poling and Paul Peck, the head coaches of the Army West Point Men's and Women's Tennis teams, respectively, still assert the connection between tennis and Army officership. Both one-time Army officers themselves—in fact, perhaps the only two college tennis coaches in America to have earned Bronze Star medals (Poling for his service in Vietnam and Peck for his service during Operation Desert Storm)—Poling and Peck are constantly reminding their players and educating their recruits on the lessons tennis can teach future Army officers.



League Champion and NCAA Tournament appearance banners adorn the rafters of the Lichtenberg Tennis Center, indoor home of Army West Point Men's and Women's Tennis.





“Tennis is a disciplined sport that demands that players to learn how to handle their emotions and self,” Poling says, “and we talk all year about being tennis warriors on the court.” Poling has even posted a sign to this effect on the wall that players first see as they enter the locker room. Modeled after the Army’s “Soldier Creed,” the Army West Point Men’s Tennis “Warrior Ethos” states: “I am an Army Tennis Warrior. I am mentally and physically tough. I throw away fear. I keep fighting and never quit. I will support and trust my teammates,” continuing for nine more lines and ending with, “I will stand, fight, win. I am an Army Tennis Warrior.” Peck also hands his players a sheet at the beginning of the year that contains battle maxims, such as “Be organized” and “Fulfill commitments,” which were given to him by his old battalion commander. “We bring cadets here to be tennis players in an immediate sense, but we are really trying to develop them long term to be future leaders,” says Peck, who tells all his recruits that tennis can’t be their sole reason for wanting to come to West Point. “I tell them that they are coming here to learn how to be a leader; tennis just enriches that experience.”

Some might think it would be difficult to bring top flight tennis talent to such a demanding institution as West Point, but Poling and Peck believe that the benefits for tennis players at the Academy

**“Even though tennis is typically seen as an individual game—one player versus another—we preach the team concept here. Individually, if you don’t put out your best effort every day, you’re hurting your teammates.”**

—Paul Peck, Head Coach, Army West Point Women’s Tennis

speak for themselves. “First of all, we have great facilities,” says Poling. Thanks to the generosity of Alan (’51) and Herb (’55) Lichtenberg and the Class of 1955, Army West Point has a facility that Peck calls “as good if not better than any facility in the country,” the Lichtenberg Tennis Center (LTC). Featuring seven sophisticated synthetic hardcourts, state-of-the-art lighting, live-streaming technology, a large digital scoreboard, an elevated spectator area, locker facilities, and team rooms, LTC received the United States Tennis Association’s “Outstanding Tennis Facility” award when it opened in 1999. Since that time the men’s team has won eight league championships and the women’s team has won 14, including a 71-match league overall winning streak (regular season and tournament) between 2005-14. This has led to a number of championship banners being hung from LTC’s ceiling and several trophies adorning LTC’s lobby. “When other teams come in and see these statements to our success, they know they are in for tough matches against our players,” says Peck. The teams also have the luxury of playing on the nine recently resurfaced hardcourts of the outdoor Malek Tennis Center, named after the project’s lead donor, Frederic V. Malek ’59.

Poling also cites the Army West Point Tennis schedule as a selling factor for the program. “Kids who come here get the opportunity to play great opponents and that, in turn, makes them better players,” he says. The men’s team played three top-75 teams in 2017, including the #3 ranked team in the nation, Stanford. “Our number-two player, Gregory Shannon ’18 played Stanford’s Alex Geller, the #1 ranked ITF (International Tennis Federation) junior player last year, and lost by the respectable score of 6-3, 6-4,” says Poling. “And Michael Sienko ’18, our number-six player, took a set from one of Stanford’s blue-chip players.” While he’s leery of ascribing the term “moral victory” to any match, Poling is certain that scheduling these matches against high-ranking opponents has helped prepare his players for the demands of Patriot League play. “Just look at Mikey Nguyen’s ’18 development while here,” he says. Nguyen played out of the number-six spot as a plebe, played the tough matches over the course of his time on the men’s team, and became the Patriot League Player of the Year for 2017, earning the opportunity to play in the Oracle ITA Masters Tournament in Malibu, California. “Our guys always get better,” Poling says.

What may be surprising is how good Army West Point Tennis recruits are already, which is a testimony to the legacy Poling and Peck have created during their time here. The men’s team consistently ranks within the top 20 in recruiting. According to tennisrecruiting.net (no kidding; “dot net”), the premier site for junior tennis rankings, the men’s team, with three four-star recruits committed, has one of top mid-major classes coming in next year. In 2010, when Poling recruited Asika Isoh ’14 and Alex Van Velzer ’15, both five-star recruits (the second highest classification), tennisrecruiting.net named Army’s incoming class as the best mid-major class in the country.

The women’s team is pretty much the same. In 2017, tennisrecruiting.net ranked Peck’s incoming group of players, which included five-star Anastasiya Joyner ’21, as the 17th best mid-major recruiting class in the country, and it could have been even higher. In 2016, Peck landed Katerina Stewart, the 158th player in the world at the time, according to the WTA (Women’s Tennis Association), and winner of six singles and two doubles titles on the ITF tour. Because her time on the pro tour kept her out of the traditional classroom, Stewart was admitted to the USMA Prep School, where she finished the year ranked first among women cadet candidates in academics and fifth in leadership (the only woman in her class to be named a platoon leader), and was primed to make an impact with the 2017 recruiting class. Unfortunately, issues involving NCAA eligibility rules and pro status ultimately disqualified Stewart from playing for the Army West Point Women’s Tennis team, and she’s returned to the ITF tour, recently winning the 2018 SGI Tournament in Tampa, Florida. “I just wish I could’ve seen the looks on the faces of the players on Navy when she walked onto the court,” jokes Peck.

Interestingly, Stewart would not have been the first player associated with tennis at West Point to be both an Army officer and a tennis professional. Between 1966 and 1968, Arthur Ashe, then a lieutenant in the Army, served at the Academy as an instructor of computer programming and as assistant tennis coach. He was serving at West Point when he captured the inaugural U.S. Open men’s championship in 1968. According to a 1988 *New York*



*Times* article, when Ashe returned to West Point after winning the U.S. Open, “the entire Corps of Cadets gave him a standing cheer in the mess hall during dinner.” Ashe reportedly said later that “It was one of the nicest ovations I ever got.” Lieutenant General Robert Van Antwerp ’72 (Retired), who was playing on the tennis team during Ashe’s time at the Academy, once reminisced about Ashe, saying, “We knew he was a great player; what we learned was that he was a great leader and a wonderful servant, serving those he led.” Van Antwerp says that Ashe spent hours with him working on his serve, but perhaps taught him more about leadership during that time: “Arthur emphasized the importance of improving your serve so that you can start points right and not simply react to your opponent. In my various roles as a leader, I see this as a great parallel for the importance of a strong first impression.”

Today, Poling and Peck continue to incorporate leadership lessons into those they teach on the court. A lesson both coaches stress is the importance of being a team member. “Even though tennis is typically seen as an individual game—one player versus another—we preach the team concept here,” Peck says. Part of this has to do with the emphasis Army West Point Tennis places on doubles matches in league play (history demonstrates that the team that wins the doubles point wins 70-to-80 percent of the overall competition), but it also has to do with an overall philosophy emphasized daily at West Point, which Peck sums up as,

“Individually, if you don’t put out your best effort every day, you’re hurting your teammates.” So even though players arrive at West Point preconditioned to focus on their individual rankings, given the significance that these rankings have on recruiting and tournament play, the culture of Army West Point Tennis teaches players to focus on only one rank, “second lieutenant,” the rank each Army West Point tennis player will have upon graduation.

Now, nearly 100 years after the 1920 *Howitzer* reported the once regressive opinion about tennis being too “soft” a sport for future Army officers, the matter should be clear. When it comes to the Army West Point Men’s and Women’s Tennis teams, whose players practice six days a week for their year-long schedules, and whose coaches regularly make line-up decisions based on preventing burnout and injury, given all the strength training, speed work, and agility drills the players go through, the path to serving as great Army officers is “game, set, match.” Need further proof? Go to LTC some afternoon when either the men or women are practicing and take a seat at one of the many high-top tables that overlook the courts. If you close your eyes and listen to the players smack the hollow, felt-covered balls back and forth, you just might think that you are at Range 8 during summer training with the cadets firing 40mm rounds to qualify on the M203 grenade launcher. ★

The 2018 Army West Point Women’s Tennis team captured its 14th Patriot League Conference title with a victory over top-seeded Navy in April.



Photo: Mady Salva / Army Athletic Communications



DID YOU  
KNOW?



# WKDT

## Still Rocking the Corps (And Now More!)

By Joe Cyr, Guest Writer

"Forget the past. Repeat it." Boiling down this famous quote to its essence, I find it on my mind a lot these days, although I do remember a lot from my 30-plus past years at West Point. As minder and mentor for WKDT, West Point's cadet radio station, I find myself right back where I started in 1984, building a new radio station.

Facing the future, WKDT is presently launching into the world of streaming radio. In some respects, this is like going back to the roots of the original cadet radio station, KDET, which was started in 1954. Back then, to listen to KDET, cadets had to plug their radios into the wall of any West Point building—the signal traveled through the building's electric current. Soon, cadets will be able to plug their laptop into their barracks' room data jack, or use Wi-Fi, and listen to WKDT. And (more progress) so will anyone else. This

is the biggest development for the cadet radio station since 1972, when a transmitter was purchased and a tower erected on top of Michie Stadium, hailing the change from KDET to WKDT. Think of it, sometime in the fall of 2018, the dream of generations of Old Grad WKD(E)Ters will come true: You will be able to hear the groovin' and rockin' tunes of WKDT, and the voices of its cadet talent broadcasting Army West Point sporting events, beyond the bounds of Thayer Gate!

**Clockwise from top left:** CDT Mike Searcy '99 in the old WKDT studio. Photos and music memorabilia cover the WKDT lounge wall. WKDT logo and slogan. LTG Dan Christman '65, West Point's 55th Superintendent, goes on the air during a WKDT broadcast circa 1999.



I hope you will like what this new generation of disc jockeys will be playing and saying. Like so many things that have changed at the Academy, the complaint process will no longer be calling me on the phone or stopping me on the street. I'm sure it will be interesting.

So, what do the managers of present day WKDT think of the Brave New World we are entering? Cadet Nick Levay '19, WKDT's Station Cadet in Charge, says, "I think there will be a level of involvement in the station like never before, with the prospect of being heard anywhere, even downrange somewhere." Cadet Erick Loe '20, WKDT's Program Director, says, "It's a little unnerving, but also exciting, to know that our audience will change from just cadets and faculty to old grads, parents, and anyone else who is interested in West Point." Both Levay and Loe see the launch of streaming WKDT as a great opportunity to learn how to reach different people. "With our ultimate goal being to become officers in the Army, this will help teach us vital communication skills to reach people," says Loe.

Hearing the cadets' enthusiasm and positivity is what keeps me at this job. For all the changes at USMA over the decades (and they have been myriad), and all the changes between generations of cadets, a basic need to inform, entertain, or just be heard is always there; in fact, more so now than ever.

Recruiting for WKDT was pretty easy in the 80s and 90s. We had a phone that cadets could use to call out without hanging at the CQ desk. We had a place where they could listen to music (rare) and watch TV (rarer!). And we had air conditioning! Now cadets watch Netflix in the temperature controlled confines of the barracks and download music to their own personal cell phones and laptops. The changes are not limited to changes in technology and USMA restrictions. My anxiety level increases every time I remind cadets that what is acceptable at home or in their rooms today may not be acceptable on air and, soon, online. WKDT has routinely banned songs for being "too suggestive" that are now part of every wedding's playlist. I am learning a new language every day. Too

many of my WKDT stories to the staff begin: "Before you were born, WKDT and or/West Point was this way..."

So, what is WKDT like these days? "WKDTers know how to have fun," says Levay. "We can cut loose by playing music and being the voice of Corps' parties at West Point." Through the decades WKDT's role in the life of West Point has increased, even as cadets



**Right:** A member of WKDT's DJ crew provides tunes for the Trace Adkins after party at Ike Hall in March 2018. **Below:** Members of WKDT pose with the club's van, which COL Craig Flowers secured for WKDT more than a decade ago when he was Director of the Directorate of Cadet Activities.





no longer brought radios or boom boxes to school (the SANYO in my office, complete with CD and cassette player [!], is looked at in wonder by cadets as an antique). Our activities branch is running full blast both semesters. If there is sound or music around USMA at night, it is probably WKDT. Our reach has extended to lower Manhattan for the Tunnel to Towers Run, to handling sound for the College Boxing Championships, to being present at cadet drill every day—not to march but to provide audio for the drill instructor (I confess to all the WKDT alumni who worked so hard to avoid drill over the last century and into this one, it does feel a little strange). The station even has its own van, albeit it is branded with decals 10 years past their prime. Once a year for the West Point Halloween Parade, WKDT runs a small system off the van's DC current to power music, but the van is mostly used for hauling equipment.

I am going to trade on some of the cachet that 35 years at West Point brings by borrowing from one of the greatest ever, General Douglas MacArthur, Class of 1903: "The shadows are lengthening for me. The twilight is here." Being the only person that ages around the radio station, I have gone from Paul and Linwood's slightly older mentor, to Skippy and Lulu's fatherly advisor, to the slightly dotty grandfather figure of the present day. I remember trying to convince Colonel Johnson and Major Tooke to "five me"

the budget reins of the station, and that by spending more money now we would save later. It took four years to get the station up and running when I arrived in 1984. I look around Ike Hall now and see the systems I designed to bring cadets out of their rooms as museum pieces, as well as the hundreds of old photos I saved when Bldg. 720 (now Davis Barracks) came down, the writing on the back fading as my memory does the same. Many WKDT veterans do keep in touch, and I am glad for all of them. I want to get the new WKDT firmly established, hoping that it doesn't take another four years, before I answer the ever-more-repeated question: "Joe, when are you retiring?" But now I am dealing with new technologies to learn, new costs to justify, and new ideas to adapt (which I need to have explained to me by 19-year-olds who are much more tech savvy than I am).

There is no streaming equivalent for "stay tuned" (so old school) that I know of, but hey: stay tuned, the new WKDT is coming. ★

*Joe Cyr, colloquially known as West Point's "CODE RED voice," handles Audio-Visual Production and Emergency Operations for the USMA Public Affairs Office. He grew up in Highland Falls, New York, and started working at Grant Hall in 1969 when he was only 15. He is now heading into his 35th year in his current position at West Point.*

## MAILBOX West Point



**We regret that because of limited space, we cannot publish all letters received. Letters may be edited and shortened for space. Submit comments or questions to [Editor@wpaog.org](mailto:Editor@wpaog.org), or chat with us on one of our WPAOG social media channels**

### FROM: R. Joe Rodgers '51

Spring 2018 was a great issue. I especially appreciated the article about Sprint Football. I love the traditional uniforms shown in the pictures—gold helmets, black jerseys with gold and gray arm stripes, and gold trousers with black stripes—these are almost the same uniforms worn by the A Squad teams when I was a cadet.

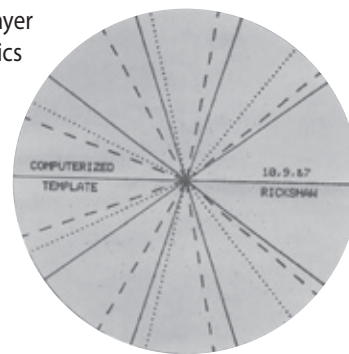
### RESPONSE:

*Thank you for your feedback regarding the 2018 spring issue, and we are thrilled that you enjoyed the article "Army West Point Sprint Football: In a League of its Own." Army West Point Sprint Football has a long tradition of success—35 league titles and 18 perfect seasons—wearing what you call "traditional uniforms." The fact that you associate their uniforms to those worn by A Squad players when you were a cadet (when the Army Football Team went 30-3-3, including a perfect season in 1949) speaks volumes about your respect for Sprint Football and those uniforms.*

### FROM: Rick Shaw '77

Thoroughly enjoyed the 2018 spring issue's Past in Review article, especially when I saw the two pie-cutting templates. I was a plebe in Company A-1 in 1973-74 and, like my classmates, dreaded having to cut the desserts. It seemed that whenever the upperclassmen initially agreed on 10 or 8 slices, one would suddenly change his mind so we would have to deal with 9 or 7. We all carried handmade templates in our caps, but some were better than others. One day I was in the

computer lab in the basement of Thayer Hall and discovered that the Tektronics printer could handle graphics quite well. I created a template for 10, 9 and 7 slices, ran off multiple copies, and passed them out to the other plebes in A-1. Years later, at one of our class reunions, a classmate gave me a copy of one he still had, which I have included (pictured). It brought back many memories!



### RESPONSE:

*Who knew that pie-cutting would strike such a nerve? When we ran this story on WPAOG's Facebook page (on Pi [π] Day, March 14 [3.14], naturally), and it also generated an overwhelmingly positive response—reaching nearly 50k users—proving once again the age-old maxim "misery loves company." At least no plebe was ever ordered to cut a mess hall pie into 11 slices! Yes, that was an oversight in the original Atlas Obscura blog that we cited word-for-word out of respect for the original source. We should have, however, included an "editor's note" explaining this error. Thank you for reminding us of this fact, and thank you for submitting the Tektronics (one-sided!) pie-cutting template. We bet it will bring back even more memories for our readers. ★*



The Pardee RAND Graduate School and  
the entire RAND community proudly congratulate

## COL (R) Dana Mead

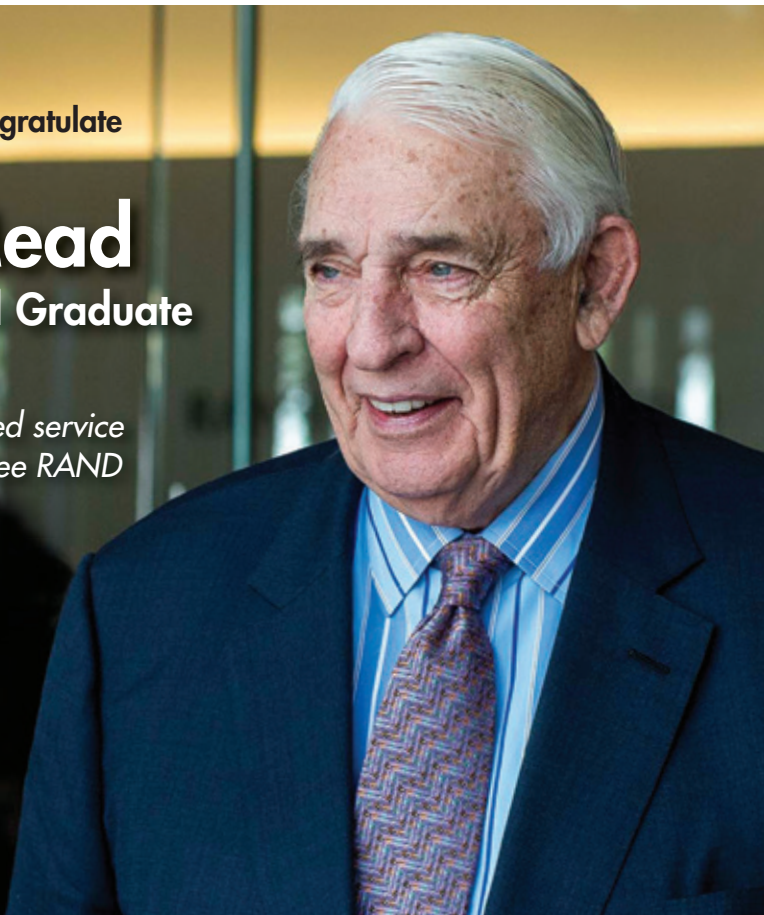
### 2018 West Point Distinguished Graduate

*Dana Mead truly embodies the ideals of  
"Duty, Honor, Country" in his distinguished service  
to the nation and leadership on the Pardee RAND  
Graduate School Board of Governors.*

**Pardee RAND prepares the  
next generation of policy leaders.**  
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PARDEE RAND GRADUATE SCHOOL



West Point | ASSOCIATION  
OF GRADUATES

*Congratulates the 2018  
Distinguished Graduate Award Recipients:*

COL (R) Dana G. Mead '57  
Mr. Thomas C. Barron '65  
LTG (R) Larry R. Jordan '68

GEN (R) William S. Wallace '69  
HON Sloan D. Gibson '75  
HON Douglas E. Lute '75



# Grant to Join Fellow Presidents Washington and Eisenhower on The Plain

By **Samantha Soper**, WPAOG staff



©Paula Slater Sculpture 2017



*U. S. Grant*  
Commander of the Union Army and President of the United States  
1822 - 1885



The National Defense Authorization Act for Fiscal Year 2017 from the Committee on Armed Services, House of Representatives reads, “The committee notes that The Plain at the United States Military Academy contains statues of several famous West Point graduates, including Douglas MacArthur (class of 1903), George Patton (class of 1909), and Dwight Eisenhower (class of 1915), but does not include a statue of another consequential graduate, Ulysses S. Grant (class of 1843). The committee therefore encourages the Secretary of the Army to consider placing a statue of Ulysses S. Grant at West Point in time for the sesquicentennial of his inauguration as the 18th President of the United States.”

To respond to the call, West Point convened the Museum and Historical Memorialization Committee to steward the project from selecting location to reviewing designs to approving historical details. With an approved design in hand, plans are now underway to dedicate the statue commemorating Grant and his service to the nation in early 2019.

At the same time, the West Point Association of Graduates sought Margin of Excellence funding for the statue. Upon hearing about the project, Robert A. McDonald ’75, and his wife Diane, stepped up to fully fund the project. Having spent most of his 33-year Procter & Gamble career just 45 minutes outside of Grant’s hometown of Georgetown, Ohio, McDonald became fascinated with Grant. In reading biographies and Grant’s own memoirs, McDonald agrees that Grant is an underappreciated figure in American history. “I welcomed the opportunity to help bring to life his legacy of leadership to West Point,” says McDonald.

“In addition, I wanted to use this opportunity to honor my classmate Bob Caslen for his tenure as the Superintendent. He has done an outstanding job—a soldier and leader deserving acclamation. Several years ago, my wife Diane and I endowed the West Point McDonald Conference for Leaders of Character, focused on the idea that character is an important part of leadership and that the needs of an organization are above your own needs. This complements the Academy’s focus on choosing the harder right rather than easier wrong.” For McDonald, Bob and Shelly Caslen are the epitome of this moral and ethical credo.

Just what does it take to bring the vision for such a statue to life? The chosen sculptor, Paula Slater, says, “I do a tremendous amount of research. I have read extensively about General Grant, his courage, his humanity. One of the perks of specializing in bronze portraits is the opportunity to learn about the lives of many amazing people.” Slater has been creating public monuments and dozens of bronze portraits for 30 years, including the *Military Working Dog*



Ulysses S. Grant graduated from West Point in 1843.

*Teams National Monument* at Lackland Air Force Base in San Antonio, Texas, and *In Sacred Union*, a 10-foot bronze statue of Abraham Lincoln for the Washington County Courthouse in Springfield, Kentucky.

Slater is working hand-in-hand with Sherman Fleek, the Academy’s Command Historian, as well as the West Point Museum to ensure the historical accuracy of Grant’s features, stature, and uniform. The final bronze statue will be approximately 7½-feet high and will be installed upon a solid granite base. “Bronze is called the ‘King of Metals’ and will last for centuries. I look forward to creating an exceptional bronze monument of General Ulysses S. Grant of which we can all be extremely proud,” says Slater. ★

MARGIN OF  
EXCELLENCE



**“I have read extensively about General Grant, his courage, his humanity... I look forward to creating an exceptional bronze monument of General Ulysses S. Grant of which we can all be extremely proud.”** —Sculptor Paula Slater



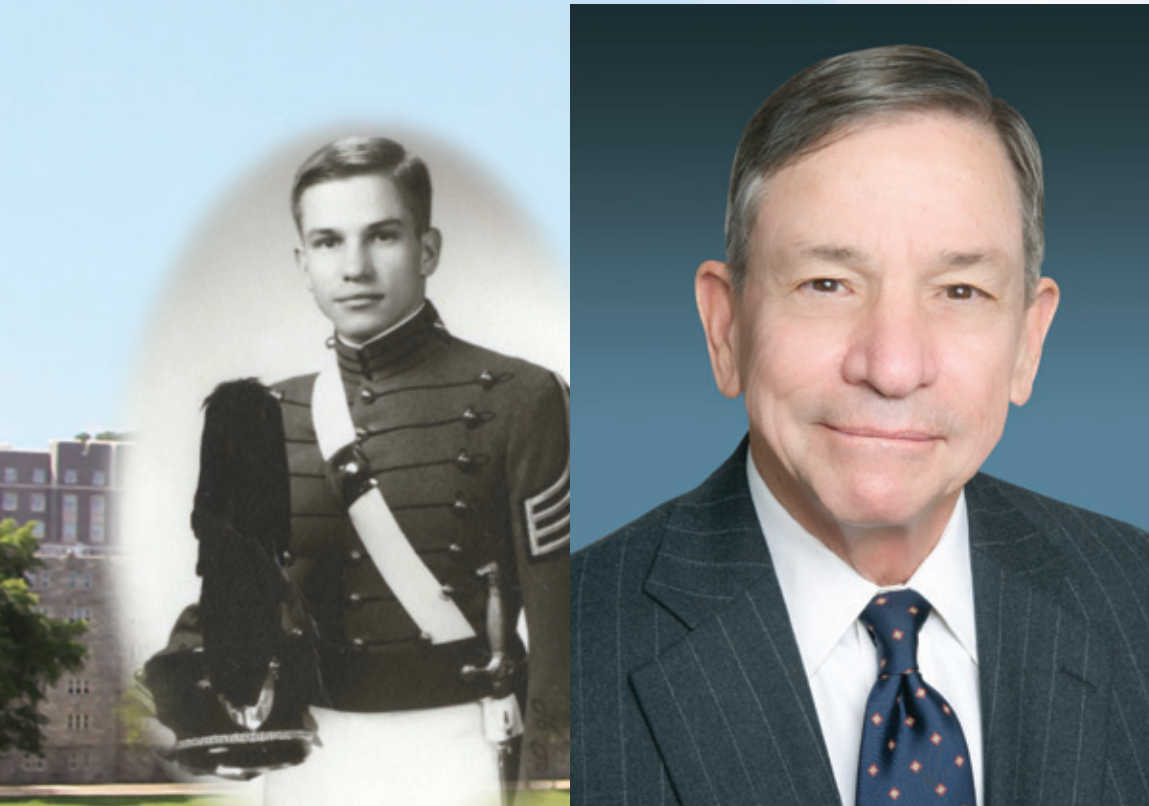
# Thomas C. (Tom) Barron

## 2018 DISTINGUISHED GRADUATE AWARD RECIPIENT

Congratulations from the Distinguished Class of 1965

To a Distinguished Classmate

*"Strength and Drive"*



*"Like Tom, others may have donated significantly to USMA...and like Tom, others may have stepped forward to help with class reunions and guide class giving. But nobody—nobody—has combined those important contributions with dozens of other major outreach efforts that have positioned our Alma Mater and its alumni association for excellence in the 21st century."*

—LTG (R) Dan Christman,  
55th Superintendent, USMA



**SPECIAL ADVERTISING SECTION**



# *Congratulations from your Classmates*



**LTG (R) Larry R. Jordan '68**  
2018 DISTINGUISHED GRADUATE  
AWARD RECIPIENT



**“No Task Too Great”**





## 2018 Distinguished Graduate Award Recipients

HON Douglas E. Lute '75

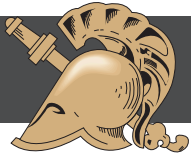


HON Sloan D. Gibson '75



Congratulations from your Classmates  
*"Courage and Drive"*





# West Point

# Parents Corner

## Welcome Parents of the West Point Class of 2022!

West Point Association of Graduates offers a range of services for cadet parents. *West Point*, the Academy's quarterly official alumni magazine, is mailed to all cadet parents free of charge. We also send out the *Parent Review* monthly newsletter, with a message from the Superintendent and cadet and Academy news. On social media, you can follow West Point, West Point AOG and West Point Parents on Facebook and Twitter. You can also receive our daily RSS newsfeeds of USMA and Cadet news by subscribing on the WPAOG website at [WestPointAOG.org/usmacadetnews](http://WestPointAOG.org/usmacadetnews). Additional information on regional Parents Clubs and other resources may be found at [WestPointAOG.org/ParentResources](http://WestPointAOG.org/ParentResources).

## Parents Clubs Provide TEE Pizza for Hungry Cadets

On May 15, more than 500 cadets enjoyed a Pizza Party in Grant Hall during Term End Exams (TEEs). Thank you to the Parent Clubs who donated to the TEE fund to make these snacks possible!

## WPAOG publishes Parent Handbook for 2018-19

The WPAOG *Parent Handbook* provides everything you need to know about being a member of the West Point community and participating in your cadet's 47-month experience. A tool to help families meet the unique challenges of having a son or daughter attend West Point, the guide includes an academic year calendar, as well as valuable information about visiting West Point, resources available to families, WPAOG support and services, connecting with other families through the WPAOG website's Parent Portal, how to become involved with Parents Clubs, and special events. Thanks to generous donations to funds like the West Point Parents Fund, the *Parent Handbook* is complimentary to all families. Please contact Shelisa Baskerville, WPAOG's Parent Relations Manager, at [Shelisa.Baskerville@wpaog.org](mailto:Shelisa.Baskerville@wpaog.org) to learn more.



## Advertise with US!

**The United States Military Academy at West Point is the world's premier leader development institution, consistently ranked among top colleges in the country.**

Now you can leverage **West Point** magazine to reach a high-achieving audience of more than 55,000 graduates, cadet parents, and friends of West Point to promote your business.

Opportunities are also available in **First Call**, our monthly e-newsletter, or choose an event sponsorship package to reach our premier audience.

**Contact Jess Scheuler at [ads@wpaog.org](mailto:ads@wpaog.org) or call 845.446.1577** to learn more about Advertising and Sponsorship Opportunities with the West Point Association of Graduates.



**West Point**  
ASSOCIATION OF GRADUATES





MARGIN OF  
EXCELLENCE







2018

# PROJECTS DAY

## CELEBRATING ACADEMIC EXCELLENCE

The United States Military Academy at West Point held its annual Projects Day on May 3, 2018. More than 400 posters, presentations, performances and briefings across West Point showcased projects from 13 Academic Departments, the Department of Military Instruction, the Department of Physical Education, and a dozen visiting universities. Cadets presented capstone work developed in Academic Individual Advanced Development (AIAD) opportunities, research projects, and other academic pursuits, many made possible by private funding. “Projects Day is not just a day to reflect on cadet achievement but also on the teaching and mentorship that helped bring these projects to fruition,” said Brigadier General Cindy Jebb ’82, USMA’s 14th Dean of the Academic Board.

WPAOG’s annual Donor Tribute Day, held in conjunction with Projects Day, demonstrated how the generosity of donors to the Margin of Excellence makes a significant difference for the Corps of Cadets. WPAOG was pleased to express our appreciation to donors and give them an opportunity to see firsthand the impact they have on projects representing the best of cadet intellect, creativity, and commitment. ★

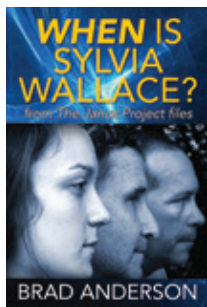






# West Point Authors Bookshelf

A West Point magazine supplement featuring books by West Point graduates and faculty.

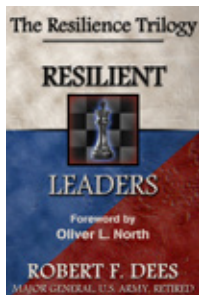


## **When Is Sylvia Wallace?**

Brad Anderson '85

A freak accident sends Deputy U.S. Marshal Sylvia Wallace to a future when prison escapees are in charge and the Janus Project does not exist. A note from the past gives her hope. Deputy U.S. Marshal Robert Mackie and Colonel John Callan are coming to bring her back to her time. All she has to do is stay alive until they find her, which becomes the most dangerous time of all.

Available at Amazon.com and BarnesandNoble.com



## **Resilient Leaders**

MG(R) Robert F. Dees '72

Leadership is a contact sport! How do we as leaders rebound and help others do the same? Leaders get tired. Leaders get body slammed. Leaders also must bounce back, ideally even higher than before. Leaders must be resilient. Resilient Leaders explains how to lead selflessly and successfully over time from a platform of character and competence—the kind of leadership every organization, family and loyal subordinate desperately needs and deserves..

Available at  
www.ResilienceTrilogy.com  
eBook versions available  
on Nook and Kindle



## **Mustang the Story**

From Zero to \$1 Billion

William (Bill) Higgs '74

True story about building a culture-driven company. You will feel the passion as a team of unbeatable "Mustangers" is created to change a tough industry during a tumultuous time. As a certified Vistage™ speaker, the author shows how to build a world-class culture. Labeled by the industry as the "King of Culture" he wants to inspire you to improve your organization using Mustang's methods.

Available at mustangthestory.com  
and Amazon.com

\*Mustang the Story e-book revised  
edition available in Summer 2018.



## **First In, Last Out:**

**An American Paratrooper in Vietnam with the 101st and Vietnamese Airborne**

John D. Howard '64

John Howard arrived in Vietnam in June 1965, a platoon leader in 1st Brigade, 101st Airborne Division. The U.S forces buildup was just beginning. He later served as an airborne battalion advisor in the 1972 Easter Offensive when the only Americans in ground combat were advisors. His book addresses the fighting and the complexities of the early and final stages of our involvement in the Vietnam War.

Available at Amazon.com



## **That's a Great Haircut!:**

Joe Oppold '96

I reported for Beast Barracks—knowing they would shave my head. Graduation came and I was on top of the world. Shortly, I had the worst migraine you could imagine. The medical staff shaved my head, the second great haircut and the greatest challenge of my life. Now, I have a beautiful wife and a family of four. I drew on the determination I'd learned at West Point, the strength of my family and friends, and on God!

Available at Amazon.com  
and Barnes & Noble

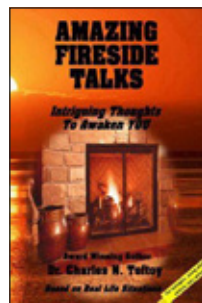


## **The Boss's Challenge: Manage Well, Lead Well, and Listen**

COL (R) Mark Scureman '66

Problem: Most people don't quit their job, they quit their supervisor. Cause: Most supervisors are woefully unaware of the myriad responsibilities they've accepted upon being hired. Solution: This guide, which clarifies what it takes to be an effective supervisor. It outlines fifteen differences between a manager and a leader, explains why both disciplines are crucial for success, and why sometimes they conflict. Great tool for all supervisors.

Available at Amazon.com



## **Amazing Fireside Talks Dr. Charles Toftoy '58**

Dr. Toftoy provides practical thoughts to INSPIRE us. Important issues of life are discussed.

This book is written to provide hope and inspiration for everyone. It will benefit young adults, seniors, men and women. Some proceeds will be donated to the Wounded Warrior Mentor Program. Dr. Toftoy, Professor, Emeritus at the George Washington University, is a highly decorated disabled veteran, including two purple hearts. He is an active mentor of USMA cadets and Wounded Warriors.

Available at Amazon.com,  
Kindle, Nook,  
Online Bookstores



## **Warrior: A Hero's Story**

By Kelly Blair Scott

Wife of James A. Scott '61

A pictorial saga of James A. Scott's military service, from enlisted soldier to West Point graduate, Class of 1961, and decorated Vietnam Aviator, recipient of the Distinguished Service Cross, the Silver Star, and the Distinguished Flying Cross. This includes Scott's awards with photos of citations and presentations, plus rare photos of shoulder patches, devices and medals. Scott now battles another lethal enemy: Inclusion Body Myositis. Proceeds will go to research a cure for that disease.

Available from  
Blurb.com/b/2951586-warrior





**The My Lai Cover-Up  
Deceit and Incompetence**

MG (R) Ira A. Hunt Jr. '45

The single most publicized incident of the Vietnam War was the massacre at the My Lai 4 hamlet. On March 16, 1968 a company unit of the Americal Division massacred over 400 innocent civilians, raped women, and burned down houses. Amazingly, the slaughter remained unknown for over a year because of a successful cover-up. The reporting and investigations of the incident are discussed in detail as well as an explanation of **how** the bold cover-up was successfully orchestrated.

Available at Amazon.com



**Waiting for a Sign**

Kevin Keating '82

If you were a baseball fan in the '60s or '70s—or if you now love baseball and its history—*Waiting for a Sign* will be a page-turner you can't put down. Kevin Keating spent a lifetime collecting baseball autographs. Along the way, he befriended many of the sport's biggest stars. Keating collected not just autographs, but behind-the-scenes stories that are must-reads for any baseball fan!

Available at Amazon.com (\$21.95), Kindle (\$9.99), Barnes & Noble, or at kevinkeatingbooks.com



**Sunday in Hell**

*Pearl Harbor Minute by Minute*

Bill McWilliams '55

A new, meticulously-researched history, takes us through America's first and most disastrous battle of World War II. Set in the historical context of the preceding ten years of the Great Depression, we see our nation's steadfast hold on isolationism, and the rise of the 20th Century's new totalitarians, leading to the shattering Japanese attack on Pearl Harbor. Told by the people who lived its events, the attack abruptly thrusts us into the midst of war and its powerful cross-currents of emotion.

Available at Amazon.com (E-book, P.O.D.)  
Open Road Integrated Media



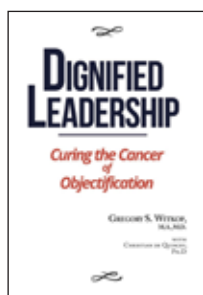
**We're All In:**

*The Journey to a World-Class Culture*

MG Robert W. Mixon Jr. '74

Equipped with extensive leadership experience in both the military and business worlds, Major General Robert Mixon speaks with authority and years of practical experience about transforming organizations into world-class, Level-Five cultures. Mixon fills the anecdote-driven pages of *We're All In* with leadership insights and techniques accumulated from years of hands-on immersion in the field. Robert offers practical strategies for transforming any culture from the ground up to achieve and sustain a truly "All In" organization.

Available at Amazon.com



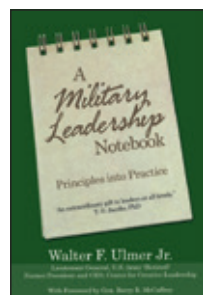
**Dignified Leadership:  
Curing the Cancer of  
Objectification**

Gregory Witkop, M.D

A former United States Army surgeon proves treating followers as dignified humans increases mission effectiveness while fostering superior ethics, debunking the myths of the punishment-reward system.

Leadership style isn't merely a personal choice. It's the most critical element of leadership itself.

Available wherever books are sold, including Amazon.com



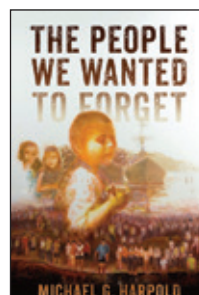
**A Military Leadership  
Notebook**

Walt Ulmer '52

"This book is a marvelous blend of a lifetime of real-world experience and decades of tutoring. It is so distinct as to all but defy definition among the daunting list of related volumes. A lasting legacy, it should be in the knapsack of each new lieutenant, on the desks of all generals, and in the hands of everyone in between."

—LTG (R) Dave Palmer, '56

Available at Amazon.com, Barnes & Noble, eBooks, and 800-288-4677



**The People We Wanted  
to Forget**

Michael G. Harpold, Ex-'61

Starving, their crops and catches collectivized by the new Communist government, following the war over 1.5 million Vietnamese fled the Socialist Republic of Vietnam with their families in small fishing boats. The author, who had served with MACV/CORDS during the war, was tapped to investigate the exodus. His first person narrative offers a compelling retrospective on the war, the Vietnamese people, and the Pacification Program.

Available at Amazon.com or from the author at thepeoplewewantedtoforget.com



**The West Point  
Register of Graduates &  
Former Cadets**

West Point Association of Graduates

A treasury of Academy history at your fingertips! The 75th Edition of the *Register of Graduates & Former Cadets*, the first and most historic publication of the West Point Association of Graduates, has been comprehensively updated in this 2015 limited edition. This ultimate West Point reference book is a wealth of information on all 72,413 West Point Graduates from 1802-2015, including 218 graduating class mottos and crests, West Point ancestry, USMA leadership, Medal of Honor Graduates and more! Deluxe clothbound edition with endpaper maps.

Available at WPAOGGiftShop.com



# Gripping Hands

*“Grip hands—though it be from the shadows—while we swear as you did of yore, or living or dying, to honor the Corps, and the Corps, and the Corps.” —Bishop Shipman, 1902*

1978

## Bulls '78 Named to Most Influential Blacks in Corporate America List

JLL Vice Chairman, Americas, Herman Bulls has been recognized by *Savoy* magazine for his executive and business leadership in national and global corporations as one of the Most Influential Blacks in Corporate America. Bulls is a Director of the West Point Association of Graduates.



1986

## Pompeo Confirmed as Secretary of State

On April 26, 2018 the U.S. Senate confirmed Michael R. Pompeo '86 as the Nation's 70th Secretary of State, installing the former CIA Director as the nation's top diplomat. In a statement, President Trump welcomed the Senate's vote. "Having a patriot of Mike's immense talent, energy, and intellect leading the Department of State will be an incredible asset for our country at this critical time in history," said Trump. "He will always put the interests of America first."



2013

## Nasir Awarded Soros Fellowship

CPT Hamid Nasir '13 has been awarded a fellowship from The Paul & Daisy Soros Fellowships for New Americans. The program awards merit-based fellowships exclusively for immigrants and children of immigrants who are pursuing graduate studies in the United States and draws nearly 1,800 applications annually for just 30 fellowships. Nasir's award will support work toward a JD degree at Georgetown Law School. Nasir also was a Truman Scholar and a McDonald Leadership Fellow.



## ★★ Change of Command ★★

The Chief of Staff of the Army has announced the following general officer assignments:

**MG Patrick E. Matlock '88**  
to Commanding General, 1st Armored Division and Fort Bliss, Fort Bliss, TX

**MG Terrence J. McKenrick '85**  
to Commanding General, First Army Division East, Fort Knox, KY

**BG Jonathan P. Braga '91**  
to Commander, Special Operations Command Pacific, U.S. Special Operations Command, Camp Smith, HI

**BG Antonio M. Fletcher '89**  
to Commander, Special Operations Command South, U.S. Special Operations Command, Homestead Air Reserve Base, FL

## ★★ Promotions ★★

The U.S. Senate has confirmed the following General Officer nominations for promotion:

To the rank of Lieutenant General:  
**MG Joseph M. Martin '86**

To the rank of Major General:  
**BG Antonio A. Aguto, Jr. '88**  
**BG Douglas C. Crissman '88**  
**BG Antonio M. Fletcher '89**  
**BG Steven W. Gilland '90**  
**BG Mark W. Gillette '83**  
**BG David C. Hill '90**  
**BG Kenneth L. Kamper '89**  
**BG Joseph P. McGee '90**  
**BG Richard Mark Toy '87**

To the rank of Brigadier General:  
**COL(USAR) Jamelle C. Shawley '92**



# WPAOG News



## Founders Day Celebrated by Old Grads Around the World

From Afghanistan, Kuwait and Botswana to Connecticut, Denver, Tennessee, and Michigan and everywhere in between, West Point graduates around the world gathered during March and April to celebrate Founders Day. In keeping with tradition, at each gathering the oldest and youngest grads present spoke, cakes were cut, and the Alma Mater was sung. WPAOG staff attended 60 of the 107 Founders Day events held by West Point Societies, USMAPS, West Point and active duty stations. West Point speakers were at 62 of these events, with 23 attended by a member of the USMA Leader Team: the Superintendent, Commandant or the Dean. *West Point, for thee!*



## Gripping Hands *continued*

1973 1984

1985 1996

### Four USMA Grads Named as CASAs

Graduates recently named as Civilian Aides to the Secretary of the Army (CASAs) are: Michael D. Hockley '73 (KS-East), Timothy A. Jones '84 (AK-North), Susan K. Shugert Green '85 (OH-Central), and Kevin D. Offel '96 (OK-North). Each state, the District of Columbia and the five U.S. territories have one or more CASAs who provide vital Army links to the people whom they serve. CASAs are usually business or civic leaders who possess a keen interest in the welfare of the Army and their communities.



### 2008 Three 2019 Olmsted Scholars

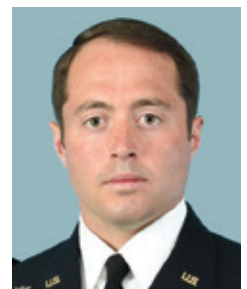
CPT Scott Clark, CPT Charles Harris, and CPT Adam Jannetti have been selected as 2019 Olmsted Scholars. The Olmsted Scholar Program, named after MG George H. Olmsted, West Point Class of 1922, awards scholarships to highly qualified, active duty junior officers in the United States military to pursue language studies and overseas graduate-level education.



Clark



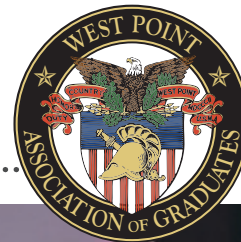
Harris



Jannetti



# WPAOG News *continued*



## Class of '58 Reunion Check

In April, 160 graduates from the Class of 1958 returned to West Point to celebrate their 60th reunion. During the Academy Leader Team briefing in Eisenhower Hall, the class presented a check for \$405,000 to LTG Robert Caslen Jr. '75, 59th USMA Superintendent. This generous gift supported the recent First Class Club renovations. Thank you to the Class of 1958 for your tremendous support!



## Class of '78 Reunion Donation

The weekend of May 4, 311 graduates from the Class of 1978 returned to West Point to celebrate their 40th reunion. During the Academy Leader Team briefing, members from the class presented a check for \$3,000,000 to LTG Robert Caslen Jr. '75, 59th USMA Superintendent and Todd Browne '85, President and CEO of the West Point Association of Graduates. This generous gift supported the Malek West Point Visitors Center, the Center for the Study of Civil Military Operations and three Marksmanship Teams. Thank you to the Class of 1978 for your outstanding support!

## Class of '68 50th Reunion Gift

The Class of 1968 returned to West Point during Grad Week to celebrate their 50th reunion. During the Alumni Luncheon, COL(R) D. David Hostler USAR '68 and Mr. Paul A. DeCoursey '68 presented a check for \$2,000,000 to USMA Superintendent Robert Caslen Jr. '75, and LTG (R) Joe DeFrancisco '65, Chairman of WPAOG's Board of Directors. This generous gift is in support of The Fallen Graduates Memorial Scholarship, Academy Scholars, and DCA. Thank you to the Class of 1968 for your generosity!



## 75th Reunion Gift from Class of '43 January

During Grad Week, the Class of 1943 January presented a check for \$60,000 in support of the Department of Law. COL (R) Bill Stewart '43 and Mr. Bob Wood '43 came to West Point to celebrate their 75th Reunion and present the check to the Academy. Thank you to the Class of 1943 January for your tremendous support!



# Be Thou at Peace WPAOG Memorial Support for the Long Gray Line

By Laura McKenna '01, WPAOG staff



## *That we of the Corps are treading, Where they of the Corps have trod...*

Those words evoke strong sentiment from every “heart in gray.” When a graduate passes into the “ghostly assemblage,” “our hearts stand at attention,” and the Long Gray Line salutes those whose “course on earth is run.”

In the spirit of gripping hands, the West Point Association of Graduates’ (WPAOG) Memorial Support team is honored to serve our graduates and their families as they return to inter and inurn their loved ones in the West Point Cemetery. To foster the connection of the Long Gray Line, WPAOG provides a compassionate point of contact and acts as a liaison between the family and on-post agencies, as well as communicating information on a myriad of logistical needs, including lodging, post access, and event coordination.

“The support WPAOG provided during our challenging time was so important and greatly appreciated,” says Debra Kimball, the wife of the late Captain David Kimball ’73. “Classmates and family members were all impressed with the attention—it certainly made the time special and memorable for everyone.”

In 2008, thanks to a donation by Mrs. Betty Dettre in honor of her late husband, Major General Rexford H. Dettre ’43JAN, WPAOG started the Dettre Memorial Services Assistance Program. Since its inception, this program has grown from supporting 31 percent of the funerals at the West Point Cemetery to now supporting more than 97 percent of them.

When a graduate’s “work is done” and “their course on earth is run,” the West Point Association of Graduates is honored to support and say, “Well Done; Be Thou at Peace.” The assistance WPAOG provides even extends to spouses and families and helps families focus on remembering their loved ones.

After laying to rest Colonel Charles McCarty ’46 in 1998, the family recently returned to bid a final farewell to Mrs. Jessie McCarty. “I cannot thank WPAOG enough for the help and support provided during my mother’s service at West Point,” shares their daughter, Lisa Gheesling. “Everything was a lovely tribute to our mother, and WPAOG’s kindness and attention to detail allowed us to focus on our parents’ memory.”

The Memorial Support Program is just one of many ways that WPAOG connects the Long Gray Line and honors those who have passed. WPAOG also provides daily death notifications to the alumni network and the classes of the deceased, offers Associate Membership to surviving spouses to facilitate their continued connection (including continuation of *West Point* magazine), annually assists families and graduates with writing and publishing hundreds of memorial articles in *TAPS* magazine, and creates an online tribute to each deceased graduate at the “Be Thou at Peace” web page, where friends and family can share testimonials and condolences or make a memorial donation.

Those needing Memorial Support assistance, as well as those interested in contributing to WPAOG’s Memorial Support Assistance Program, are welcome to contact WPAOG at [Memorial.Support@wpaog.org](mailto:Memorial.Support@wpaog.org) and 845-446-1620, or visit [WestPointAOG.org/DettreMemorialProgram](http://WestPointAOG.org/DettreMemorialProgram). Since WPAOG provides assistance at no cost to the families, we are grateful for contributions from individual alumni, families, societies, classes, and especially for the generous donation made by Mrs. Dettre. ★



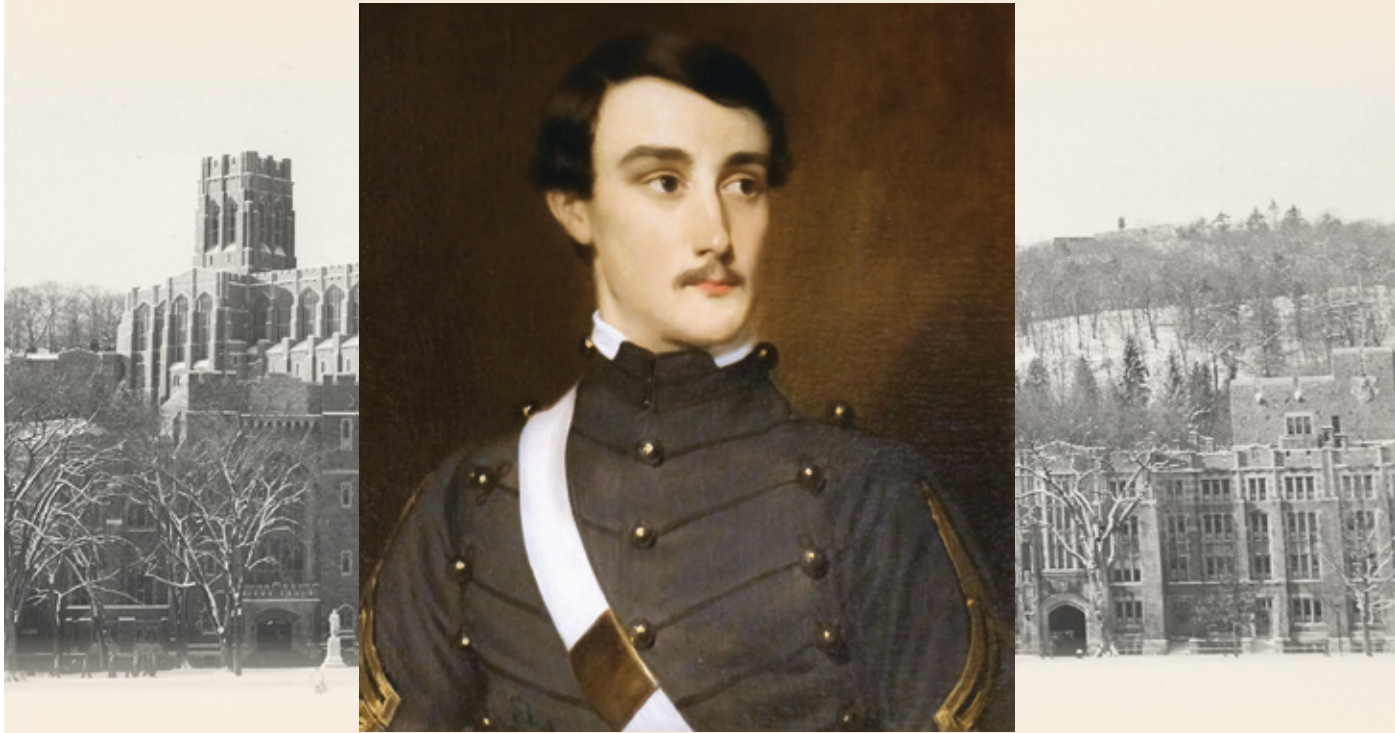
# Be Thou at Peace

Deaths reported from March 13–June 6, 2018

Col Robert C. Sears USAF, Retired	1939	COL Montgomery T. Speir USA, Retired	1953	COL Donald E. Appler USA, Retired	1965
COL Ralph M. Rogers USA, Retired	1940	COL Arthur D. Wells USA, Retired	1953	MG Richard E. Coleman USA, Retired	1965
MG George A. Rebh USA, Retired	1943 JAN	Mr. Ronald E. Morris	1954	Mr. William T. McCreary	1965
COL John B. Bond USA, Retired	1943 JUN	Mr. Cary R. Peyton	1954	Mr. Manuel E. Velazquez Jr.	1966
Col William J. Brake USAF, Retired	1943 JUN	COL William W. Brown USA, Retired	1955	Mr. David C. Jones	1967
COL Harry A. Buzzett USA, Retired	1944	LTC Thomas T. Craven USA, Retired	1955	LTC Robert T. Schoville USA, Retired	1969
COL Harold G. De Arment USA, Retired	1944	Col Donald H. Peterson USAF, Retired	1955	Mr. Harold H. Dunwoody Jr.	1970
LTC John T. Elliott USA, Retired	1944	BG Zeb B. Bradford Jr. USA, Retired	1956	Mr. Thomas P. Berry	1971
COL Karl R. Liewer USA, Retired	1945	COL Gerald Z. Demers USA, Retired	1956	Chaplain Michael L. Raymo	1971
Dr. Herman S. Napier	1945	LTC John F. Wagner USA, Retired	1956	Mr. Stephen J. Gillon	1972
Lt Col Robert C. Buckley USAF, Retired	1946	COL Stanley D. Cass USA, Retired	1957	Mr. Guy H. Richardson	1972
COL George S. Webb Jr. USA, Retired	1946	Lt Col Craig H. Smyser USAF, Retired	1957	Mr. Michael J. DeBow	1973
Mr. Raymond P. Whitfield Jr.	1946	COL John E. Sobraske USA, Retired	1957	Mr. Thomas M. Depkovich	1973
COL William W. Whitson USA, Retired	1948	Mr. James P. Woolnough	1957	LTC Richard J. Hoffman USA	1973
COL Malcolm K. Lewis USA, Retired	1949	CPT William Cibosky USA, Retired	1958	Mr. Robert M. Montgomery	1973
Mr. George D. Summers	1949	BG Donald J. Palladino USA, Retired	1958	MAJ Earl A. Johnson Jr. USA, Retired	1975
Mr. Joseph F. Green	1950	GEN Crosbie E. Saint USA, Retired	1958	LTC Nicholas F. Altomare USA, Retired	1977
Maj Gen John E. Kulpa Jr. USAF, Retired	1950	COL Erven S. Tyler USA, Retired	1959	LTC Kirk A. Boothe USA, Retired	1978
Mr. Peter Mallett	1950	Mr. Spencer D. Marcy	1960	Mr. Thomas A. Bush	1978
COL George S. Oliver USA, Retired	1950	Mr. William E. Yeager	1960	Mr. Scott L. Loomis	1978
COL Joseph G. Clemons Jr. USA, Retired	1951	COL William I. Parks Jr. USA, Retired	1961	Mr. Robert L. Shields	1981
COL Richard P. McLean USA, Retired	1951	COL Roger A. Brown USA, Retired	1962	LTC Martin C. Smith USA	1982
COL Wayne D. Miller USA, Retired	1951	COL Robert Bruce USA, Retired	1963	Mr. Richard A. Day	1986
Lt Col Ernest G. Rose USAF, Retired	1951	Maj Rocco P. MacAllister USAF, Retired	1963	Mr. Ted E. Johnston	1986
LTC Robert W. Snyder USA, Retired	1951	Mr. Franklin D. Knight	1964	LTC John E. Maloney USA, Retired	1986
COL John R. Witherell USA, Retired	1952	Mr. Thomas L. Legan	1964	Mr. Brian T. Jackson	1992
LTC John D. Meglen USA, Retired	1953	CPT John S. Price USA, Retired	1964	LTC Pedro R. Espinoza USA, Retired	1993
Lt Col Herbert S. Schaeffer Jr. USAF, Retired	1953	Mr. Richard G. Williams	1964	CPT James C. Gallagher USA	2008



# Past in Review



## Napoleon of West Point

By Keith J. Hamel, WPAOG Staff

It is no secret that the military strategies of Emperor Napoleon Bonaparte I greatly influenced the early leaders of the United States Military Academy and that those leaders went on to influence a vast number of officers of the U.S. Army. Sylvanus Thayer, Class of 1808, reportedly once subscribed to the *National Intelligencer*, a Washington, DC journal that particularly covered the latest news of Napoleon's exploits, and, as West Point's Superintendent, Thayer adopted the methods he observed at France's Ecole Polytechnique, which was established during the French Revolution and brought to perfection under Napoleon. There was also Dennis Mahan, Class of 1824, who founded the "Napoleon Club" (also known as the "Napoleon Seminar") and, as West Point's Professor of Engineering and Military

Science from 1830 to 1871, made cadets read "*Traité des Grandes Operations Militaire*" by Antoine Henri Jominie, a Swiss officer who was attached to Napoleon's headquarters in 1806 and wrote prolifically on Napoleonic strategy. Finally, there is Robert E. Lee, Class of 1829, who, as a plebe in 1826, checked out volumes of Napoleon's 1825 memoirs (*Bonaparte, Ses Memoires Ecrites par Montholon et Gourgaud*) from the USMA library six times in a little under three months. While these facts might not startle many readers, what might be surprising is that one of the cadets immersed in the Napoleon obsession dominating antebellum West Point was Napoleon himself; well, Jerome Napoleon Bonaparte II, Class of 1852, that is.

Jerome N. Bonaparte was born in 1830. His father, the senior of the same name, was the son of Jerome Bonaparte, Napoleon the Great's younger brother by 15 years and often called "the little hellion" by the famous French general. When Jerome was 18 years old, Napoleon sent him to the West Indies as a junior officer with a naval squadron. Shortly thereafter, Jerome left his post for the United States, ending up in Baltimore, Maryland, the third largest American city at the time. There he met Elizabeth Patterson, daughter of prosperous ship-owner and merchant, and the two got married. When the Emperor heard the news of his brother's unarranged marriage, he summoned him back to France—alone! But Elizabeth did come along, and pregnant at that. When their ship encountered the Continental

**Above:** Portrait of Jerome Napoleon Bonaparte as a cadet in 1850 by artist Ernst Fisher, from the collection of the Maryland Historical Society.



Blockade near Lisbon, Portugal, Jerome was taken off the ship and brought to Napoleon, who “allowed” his younger brother to abandon his American wife in exchange for the throne of Westphalia (a “realm” in northwestern Germany), while Elizabeth was forced to sail to England, where she soon gave birth to Jerome Napoleon Bonaparte.

Nicknamed “Bo,” Jerome’s son was brought back to America by Elizabeth. He graduated from Mount St. Mary’s College in 1817 and then received a law degree from Harvard. But instead of practicing law, he became a farmer, chaired the Maryland Agricultural Society, and was the first president of the Maryland Club. In 1829, he married Susan May Williams, and the couple had two sons: Jerome Napoleon Bonaparte II and Charles Joseph Bonaparte.

While not nobility, Jerome Jr.’s family was not destitute. Jerome Sr. had money from his mother’s estate (valued at \$1.5 million), and Susan was the daughter of Benjamin Williams, a prominent Baltimore merchant and one of the founders of the Baltimore and Ohio Railroad, the first railroad company in the United States. As a boy, Jerome Jr. was educated at several private schools near Baltimore, and then entered Harvard in 1847. The following year he accepted an appointment to the U.S. Military Academy, graduating 11th in his class in 1852. Upon graduation he was assigned to the Regiment of Mounted Rifles and served on the frontier, in Texas, for approximately two years. According to Claude Violler, former Professor of French at West Point, Jerome Jr. was a francophile through and through: “His fencing master was French. He had his weapons, his saddles, even the cloth for his uniform imported from [France]. He had been raised in a family milieu centered on French culture and all things French.” When news reached the frontier regarding Napoleon III, his second cousin and the President of France, transforming the Second Republic of France into the Second French Empire with himself as Emperor, coincidentally in the same year that he graduated from West Point, Jerome Jr. requested a leave from the U.S. Army and headed for the Continent.

Arriving in France, Jerome Jr. was amazingly welcomed with open arms by the Bonaparte family, including Napoleon III, with whom he was granted a private audience, making him the only American Bonaparte ever recognized by the Imperial Court. The Emperor, likely aware of West Point’s reputation for training fine military officers, persuaded Jerome Jr. to accept a commission in the Army of the French Empire; so, in 1854, he resigned as an officer in the U.S. Army but became an officer in the Regiment of Dragoons, taking part in several expeditions against the Kabyles and Arabs as part of both the light and heavy cavalry. He also served with the unit through the Italian Campaign. Jerome Jr. rose through the ranks of the Empire’s army, always on merit, becoming a lieutenant colonel and commandant (major) with the Dragoons of the Empress, an elite regiment of the Imperial Guard, at the outbreak of the Franco-Prussian War in 1870. Also of note, Jerome Jr. was an officer in the *Légion d’Honneur*, France’s highest order of merit for military personnel, which was

established by Napoleon Bonaparte himself in the same year as West Point’s founding, 1802. Unable to get definite orders after the overthrow of the Imperial Government, Jerome Jr. withdrew his regiment for Paris, formed part of the garrison during the siege, and participated in several sorties. Learning that his name was on an arrest list of the new Revolutionary Government, Jerome Jr. devised a strategy to elude the spies and guards of the Commune and returned to America. In 1871 he married Caroline LeRoy Edgar, the granddaughter of Daniel Webster, and the couple had two children: a daughter, Louise Eugenie, and a son, Jerome Napoleon Charles.

Emperor Napoleon’s grand-nephew died on September 3, 1893 and has generally been forgotten as a member of the Long Gray Line. Instead, Jerome Jr.’s younger brother, Charles Joseph, became part of America history. A lawyer and political activist, he served in the cabinet of President Theodore Roosevelt. He’s known for being the 46th U.S. Attorney General and for founding the agency that eventually became the FBI, but he got his start serving the nation as none other than the U.S. Secretary of the Navy. Yep, every family, even the Bonaparte clan, has someone cheering for the wrong team! ★



Jerome Napoleon Bonaparte in French Uniform-Captain of Spahis (1852).



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