Navy’s cyber chief, NPS alumnus emphasizes adaptive leadership to Fall grads

By MC2 Tom Tonthat

U.S. Navy Vice Adm. Timothy White, Commander, U.S. Fleet Cyber Command/U.S. 10th Fleet, addressed graduating students, family members, faculty and staff during Naval Postgraduate School’s (NPS) 2019 Fall Quarter Graduation ceremony held in King Auditorium, Dec. 20. NPS said farewell to 397 graduates, including 25 international students from 18 countries, during the ceremony.

“This event is a celebration of individual commitment, persistence, perseverance and personal accomplishment,” said NPS President retired Vice Adm. Ann Rondeau before conferring the advanced degrees to the graduating students. “We are here today among family, friends and faculty dedicated to this mission to express our pride in or students’ academic achievements.”

White began his speech congratulating the graduating class and how each field of study contributed to technological development.

“During your time at the Naval Postgraduate School, you’ve had the opportunity to delve deeply into challenging national security issues during a wide variety of degree programs,” said White. “You have reason to be proud of this tremendous accomplishment. You represent the best our nation, our allies and our partner nations have to offer.”

White took a moment to give respect to late NPS professor retired Navy Capt. Wayne P. Hughes.

“[NPS] was where I first became acquainted with and was taught by Capt. Wayne Hughes, a lifelong learner and mentor” said White. “He was the best of us and our Naval service. A true gentleman, a superb commander, and an exceptional mentor. He made us better.”

White praised NPS and its students as they study to face inevitably oncoming technological challenges.

“Today’s investment in your education is essential to the competition we face in the years ahead,” said White. “I am thrilled to see more than 180 of our officers in the Navy’s Information Warfare community enrolled at the Naval Postgraduate School. I applaud the Naval Postgraduate School’s push to increase the number of graduates pursuing STEM degrees regardless of warfare, community, or prior non-STEM degrees. Technical experience among our warfighters, thinkers and policy makers is only becoming more crucial with the development of sophisticated warfighting technologies.”

In this era of renewed Great Power Competition, I leave you with this charge: Take your education back to the fleet and pursue change in our Navy with vigor. Have the fortitude to inspire and act at every turn, fight and beat the bureaucracy. Congratulations to you and your families and thanks again for the opportunity to speak with you today.”

—Commander, U.S. Fleet Cyber Command/10th Fleet U.S Navy Vice Adm. Timothy White

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Commandant explores student research, addresses Marines during visit to NPS

By MC2 Tom Tonthat

Just five months into his tour as the Marine Corps’ 38th Commandant, Gen. David H. Berger paid a visit to the Naval Postgraduate School (NPS), Dec. 5, to explore relevant research and engage university leadership, faculty and students on future possibilities.

Berger wanted to see the Marine Corps’ investment in education first-hand, and to see how student research is addressing critical service challenges. The visit also provided him with a chance to personally interact with the NPS Marines as well as those of the nearby Defense Language Institute Foreign Language Center.

One of Berger’s five priority focus areas as outlined in the “Commandant’s Planning Guidance” – the strategic direction for the Marine Corps – is education and training. According to the guidance, which places an emphasis on being a successful learning organization able to think, innovate and change, Marine Corps innovation needs to use wargaming, experimentation and modeling & simulation (M&S) to test and refine ideas and concepts translating them into action – which are key NPS education and research capabilities.

While at NPS, Berger met with university leaders for a roundtable discussion on capabilities and research opportunities, received student thesis briefs on current research directly applicable to current Marine Corps challenges, toured NPS’ Modeling, Virtual Environments & Simulation Institute (MOVES), and concluded the day sharing his service’s future plans during NPS’ latest Secretary of the Navy Guest Lecture (SGL) series.

“Your Marine Corps and your naval force are built perfectly for about 1990,” said Berger in his SGL address. “If there were another Desert Shield or Desert Storm, which I was in, we’re built for it. But we’re not optimized today for gray zone competition that’s below the threshold of war or open conflict against our pacing threats.”

While he has a plan for where the Marine Corps needs to go in the future, Berger said, the solutions on how to get there come from the bottom up.

“Thank you for helping me understand what this place is all about and what I need to do to support it,” said Berger. “[Our] biggest weapon system is right between your ears, and this year, you’re adding to it.”

Exploring many of those future solutions through student research, NPS Marine Corps students are key players in the development of those “bottom up” solutions.

Berger’s tour of the MOVES Institute, which the Marine Corps has sponsored since 2015, demonstrated a small piece of that cutting-edge research with direct impact back to the fleet. Virtual reality simulations that more accurately evaluate differences in human behavior, especially in application to wargaming scenarios, was just one of several student projects reviewed.

“Commandant of the Marine Corps Gen. David H. Berger talks about the current and future shape of the force to Marines studying at the Naval Postgraduate School and nearby Defense Language Institute Foreign Language Center during the latest Secretary of the Navy Guest Lecture held on the university campus, Dec. 5. (U.S. Navy photo by Javier Chagoya)
**NPS initiates Meyer Scholar Program to develop air and missile defense experts**

*By MC2 Tom Tonthat*

Responding to the real-world challenges of air and missile defense, the Naval Postgraduate School (NPS) has initiated the Meyer Scholar program, named for the Father of the AEGIS Combat System, retired Navy Rear Adm. Wayne E. Meyer. The objective of the Meyer Scholar program is to develop officers who are exceptionally well-educated in the science and engineering disciplines associated with Integrated Air and Missile Defense (IAMD). The program selects current NPS students and focuses their academic courses and research projects toward the technical and operational challenges of IAMD.

“We wanted to honor the contribution of Rear Adm. Meyer, and to preserve the fundamental principles he developed for combat systems engineering,” said Hammerer. “We think his vision and principles are so important that we decided to embrace them in the Meyer Scholar program.”

Meyer Scholar Lt. Justin Williamson, who has devoted his career to the maintenance and operation of the AEGIS Combat System, believes the combination of his operational experience and NPS education will lead to compelling thesis work.

“Meyer Scholar collaborations and our future thesis work are going to be exciting because of what they could lead to,” said Williamson. “I believe we all will contribute to the advancement of naval strategy, tactics and Admiral Meyer’s vision of the integrated combat system.”

According to Meyer Scholar Lt. Erick Samayoa, the program allows students the opportunity to present research to key leadership, as well as the ability to tap into NPS’ resources to significantly impact IAMD research and development.

“Being a Meyer Scholar gives us the opportunity to present our thesis topics to key IAMD leaders,” said Samayoa. “The Meyer program gives us the opportunity to pursue research projects that will help bring promising technology to the fleet and return to the Fleet as officers who understand the intricacies and challenges of Integrated Air Missile Defense.”

The Meyer Scholar Program is now working on integrating the NPS educational experience with material development and operational training. One such initiative is to develop a continuum of NPS education and Surface Warfare Tactics Instructor (WTI) training. While at NPS, Meyer Scholars will collaborate with WTIs already in the fleet to research and develop operational problems. Once graduated from NPS, officers would then attend WTI training and continue the work they started at NPS. After WTI production tours, they would head to Department Head School and then to assignments as well trained and educated Weapons and Combat Systems Officers.

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Naval Postgraduate School (NPS) Provost Dr. Steven R. Lerman announced the recipients of the 2019 Menneken Awards, Dec 10. Made possible by the NPS Foundation through a grant from the Carl E. and Jessie W. Menneken Foundation, the awards recognize NPS researchers for highly meritorious research with significant impact on the Department of the Navy.

**Associate Professor Jeremy Kozdon** from the Department of Applied Mathematics was named recipient of the award for Highly Meritorious Research by a Junior Naval Postgraduate School Faculty Member, and Professors Susan Sanchez and Thomas Lucas from the Department of Operations Research were named joint recipients of the Significant and Sustained Contribution award.

Kozdon was awarded for his involvement in the development of adaptive numerical methods and their implementation in high-performance codes running on current and emerging computer architectures. For two years, Kozdon was the co-principal investigator and main architect of the computational infrastructure of the Climate Machine (CLIMA) project, which is intended to build a new climate modeling system.

Sanchez and Lucas collaborated for nearly 20 years on research underpinning advances in how scientists and engineers use high-performance computing to obtain insights from complex models, and co-founded the Simulation Experiments and Efficient Designs (SEED) Center for Data Farming.

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Navy’s focus on education an opportunity for NPS
By NPS Public Affairs

A comprehensive study and subsequent report released by the Department of the Navy in late 2018 is proving to be a significant opportunity for NPS.

Titled the Education for Seapower study (E4S), senior leaders across the Navy and Marine Corps are now implementing recommendations from this comprehensive analysis of naval education. Paired with the guidance of senior Navy leaders and the school’s long-term plan, NPS officials are capitalizing on a perfect opportunity to invest in its Monterey campus, and potentially beyond it.

“The alignment of the Navy’s E4S study, the guidance of our senior leadership, and our own 2018-2023 NPS Strategic Plan created an opportunity to advance our mission of graduate education and research,” said NPS President retired Vice Adm. Ann Rondeau. “We must work swiftly to capitalize on this outstanding opportunity to invest in the education and research facilities that support our innovative students and faculty.”

Some of these efforts are already underway, with the university securing financial support to invest in its Energy and Energetics Laboratory Complex, a collection of four labs focused on varied engineering and applied science disciplines in operation since the 1960s.

The university is exploring the potential for near-term growth in responding to another component of the Navy’s strategic vision: external partnerships. Across DOD, a priority has been placed on partnerships between the military, academia and industry in our efforts to solve national security’s most challenging problems, and fast-track innovative solutions to the warfighter.

With this in mind, NPS is currently exploring the option of leasing a facility in the immediate Monterey Peninsula region that could support its academic and research endeavors, although the institution will likely not be able to fully execute on the initiative until the end of the current fiscal year, Rondeau said.

Navy leaders press ahead, funding Naval University System
By NPS Public Affairs

Acting Secretary of the Navy Thomas Modly signed a memorandum, Dec. 9, directing senior Navy leaders to find the required funding to press forward on the Naval Education Strategy detailed through the results of the Education for Seapower (E4S) study and subsequent report. Launched in 2018, E4S provided Navy leaders with a comprehensive analysis of education in the Department of the Navy (DON), with its findings serving as the foundation for the sea service’s overarching Naval Educational Strategy.

Since the E4S results and subsequent recommendations were announced, “the DON Chief Learning Officer (CLO), John R. Kroger, has worked with the Deputy Chief of Naval Operations for Warfighting Development (OPNAV N7), and the Deputy Commandant for Combat Development and Integration (DC CD1), to create a budget that would fulfill the direction of the reference, as well as my personal order to fully fund the Naval University System and Naval Education Strategy to the maximum extent possible, with immediate effect,” Modly wrote.

With the directive detailed in the memorandum, Modly requested senior Navy and Marine Corps leaders to find an immediate increase of just over $109 million for FY20, increasing to nearly $350 million in FY25. Overall, the move represents a 22% increase in naval education spending.

“The memorandum released today by Acting Secretary Modly requesting to fund the Naval University System is the next step in a process our senior leaders began months ago with the Education for Seapower study,” said NPS President retired Vice Adm. Ann Rondeau. “The funding decision fundamentally represents a commitment to the value of education across the Navy and Marine Corps.

“Ultimately, this is about warfighting competence and effectiveness, and the role that advanced education plays in developing the critical thinking and technical acumen necessary to lead in a complex world,” she continued. “I am grateful for the persistent guidance and steadfast support provided by DON, Navy and Marine Corps senior leaders as well as for the particular support of Acting Secretary Modly. I am also enthusiastic about the direction of the Naval University System, and for the opportunities our campus and capabilities at NPS will have to support this critical strategic initiative.”
Army graduate turns to NPS to advance education for acquisition pros

By John T. Dillard, Senior Lecturer, Dept. of Systems Engineering

The first cohort of 30 Army Acquisition Corps Officers graduated from a new degree curriculum, called 522, at NPS with a Master of Science Degree in Systems Engineering Management, Dec. 20. Additionally, most of those graduates will have completed their Joint Professional Military Education (JPME) and Army intermediate-level education at the Naval War College’s Monterey satellite campus.

Over the course of their graduate studies at NPS, students received 34 different Defense Acquisition University course equivalencies as a concurrent benefit that saves them valuable time away from the acquisition work that needs to be done.

Those 30 officers can credit their new systems engineering management degrees to Lt. Gen Paul Ostrowski, the principal military deputy to the assistant secretary of the Army for acquisition, logistics and technology and NPS President, retired Vice Adm. Ann Rondeau, who sought for and steered the changes to the NPS curriculum in Army acquisition.

“We need more technical, less managerial,” he said. “Our folks already know how to lead people. What they really have to manage in the acquisition arena is complexity. Recent studies of military capacity to execute national security and defense strategies showed a shrinking technological edge over our near-peer threats.

Over the next year, the NPS Department of Systems Engineering assembled the needed courses and faculty members to modernize and satisfy our sponsor’s shifting educational needs. With a sense of urgency coming from the Pentagon and global challenges on the horizon, the Army’s 18-month master’s degree program at NPS reorganized to provide Level III Defense Acquisition Workforce Improvement Act (DAWIA) training equivalencies in three different disciplines: systems engineering, program management and contract management; with Level II in test and evaluation.

Ostrowski often says of the new programs, “This is what right looks like!” and added, “President Rondeau understands our current national security environment and helped us forge the path to meeting our new educational requirements.”

NPS leadership not only welcomed the changes Ostrowski requested, but also helped build a correlated distance learning program, curriculum 722, and awarding the same degree, for the Army’s multifunctional career field civilians in acquisition. As a part-time, 24-month degree program, it delivers DAWIA Level III certified training equivalencies in program management and systems engineering, along with Level II in test and evaluation and contracting fundamentals.

The latest investment by the Army at NPS is the establishment of a new military position on the faculty, the Systems Engineering and Army Acquisition Chair, to help administer the Army’s programs and oversee them for the military deputy and DACM. Col. Joyce B. Stewart will be the first in the position, arriving in April of 2020. Coming from the Army’s Office of the Chief Systems Engineer and a seasoned program manager. Col. Stewart will bring Army relevance and current perspectives from her recent experiences.

A cohort of 30 Army Acquisition Corps officers are the first graduates from NPS’ new curriculum 522 in Systems Engineering Management. Developed with direct input from senior Army acquisition leaders, the modified curriculum represents a critical shift in advanced acquisition education. (U.S. Navy photo by Javier Chagoya)
In Memoriam: Legendary strategist and Fleet Tactics
Author Wayne P. Hughes

By MC2 Taylor Vencill

The Naval Postgraduate School (NPS) lost one of its most treasured teachers with the passing of retired Navy Capt. Wayne P. Hughes, professor of practice in military operations research and Dean Emeritus of the Graduate School of Operational and Information Sciences ... Hughes passed away on Dec. 3 at the age of 89.

“Wayne Hughes is a national treasure, a man who was dedicated to service, to scholarship, and to educating naval officers and future leaders,” said NPS President retired Vice Adm. Ann Rondeau. “He was a giant among naval strategists, an enormously dedicated teacher and deep patriot of the first order who was both warfighter and scholar.”

Hughes was a fundamental figure in naval warfare, and influenced how the U.S. Navy conducts naval operations through many of his published works, most notably, “Fleet Tactics and Naval Operations.”

“The best litmus test you can do on the impact that Wayne has had is in the fact that the past seven or eight Chiefs of Naval Operations (CNO) have known him by name,” said Hughes’ longtime friend and colleague retired Navy Capt. Jeff Kline, also an NPS Professor of Practice in operations research. “His writing has inspired both tactical and operational thought throughout the fleet.”

When former CNO Adm. John Richardson asked Hughes to write a third edition of “Fleet Tactics,” Hughes gladly obliged. Richardson specifically asked him to include several chapters codifying the importance of information warfare within naval warfare at the operational level.

“When people need a reference for the next 15 to 20 years on information and cyber warfare, they’ll pull this book off of the shelf,” said Kline. “The impact he has had is immeasurable ... providing the foundational thought for many of the future discussions on how we shape and employ our forces.”

Hughes was a gifted lifelong teacher, with a rare ability to inspire learning in generations of naval officers. Hughes’ impact has not only influenced the Navy as a whole, but it has left a lasting impression on many of the students and Sailors he has taught and led, many of which are captains and admirals in the fleet today.

“His classroom experiences really had a substantial impact on how his students viewed the way that the Navy worked,” said Dr. Matt Carlyle, Chair of the NPS Department of Operational Research. “He had a deep understanding of how the Navy worked. His teaching style, advisement style, and the way he interacted with everyone he mentored gave them a deeper appreciation for all of the mechanisms of the Navy and the way it operates.”

“He was quick to welcome me to campus when I showed up here and was equally quick to include me, very generously, into his circle of fellow thinkers,” said Navy Capt. Chuck Good, NPS Surface Warfare Chair. “He was very generous with providing people who weren’t on his level with the access to what people on his level were talking about. He was just very generous in allowing those of us here on campus to share in that dialogue.”

Hughes, a 1952 graduate of the U.S. Naval Academy, commanded the minesweeper USS Hummingbird and destroyer USS Morton, and served as Chief of Naval Education and Training Support, Deputy Director of the Systems Analysis Division in the office of the CNO, and was the Executive Assistant to the Undersecretary of the Navy.

“When I first came aboard, I had no Navy background,” said Carlyle. “Captain Hughes was one of those people that every time I sat down with him, I realized I was going to get important information from him. He was a consummate professional.”

Hughes will not only be missed as a teacher and scholar, colleagues noted. His kindness, generosity and understanding of life seem equally powerful parts of his revered character.

“As a friend, he influenced me more than anything else,” said Kline. “No other man I know personified the order of priority in one’s life to find harmony ... God, family, country and his Navy, and I think he had that in the right order.”

While Hughes’ intellect and legacy will continue on for generations, the university proudly featured the iconic strategist discussing the core principles of Fleet Tactics in the inaugural “Seapower Conversations” YouTube series, released last month. In what will be an ongoing effort, Seapower Conversations highlights the expertise of NPS faculty through informal dialogue on the trends, technologies and tactics that shape modern seapower.

And while that common site of Professor Hughes and his smoldering pipe reviewing papers in the Glasgow Hall courtyard may physically not be with us, Hughes legacy as a strategist, a gentleman and a patriot will live on this campus, forever.
Any Day at NPS

The Superior Civilian Service Award was presented to NPS Electrical and Computer Engineering Distinguished Professor Phil Pace, right, by department Chair, Professor Douglas Fouts, left, during Pace’s retirement ceremony at Bayonet Black Horse, Dec. 4. Pace served as an NPS professor from September 1989 to November 2019. He is a fellow of the Institute of Electrical and Electronics Engineers and is one of the world’s leading experts in Radar and electronic warfare technology. (U.S. Navy photo by Javier Chagoya)

Deputy Prime Minister, Minister of Defense of the Republic of Latvia Dr. Artis Pabriks, center, and staff met with NPS President retired Vice Adm. Ann Rondou, center right, and NPS leadership and were provided an overview of NPS’ mission. They also met with a cadre of U.S. Foreign Area Officers in the Executive Briefing Center, Dec. 5. (U.S. Navy photo by Javier Chagoya)

NPS students from the class of Fall 2019 gather for a selfie before their graduation ceremony, Dec. 20. (U.S. Navy photo by MC2 Tom Tonthat)

NPS graduates of the Fall 2019 quarter line up before heading to King Hall for their graduation ceremony, Dec. 20. (U.S. Navy photo by MC2 Nathan K Serpico)

Lt. j.g. Brian Pajarillo, USN

NPS Colleagues,

The Presidents Board for Student Affairs (PBSA) is a student-led bridge between the NPS leadership and the student body. Our ultimate goal is to make the students tenure at NPS as simple and streamlined as possible.

The PBSA owes a heart-felt thank you to the NPS students who recently graduated this past December, who have diligently worked to complete their studies and are ready to return and thrive in the fleet. The PBSA would like to thank our own outgoing Chair (TSgt Gerald McLaughlin), Vice Chair (LT Christina Gatti), and other PBSA members for all their efforts during their time at NPS. Their dedication to helping other students laid the foundation for the next generations of students pursuing their graduate education.

Our current ongoing projects include the quarterly student survey results, scale up the virtual bookstore, and streamline the SGL nomination process.

PBSA’s big push this spring is to help create a culture among the student body that spans across the four core schools. Students spend a lot of time on their theses and we want students from different departments to know what their peers are working on. We will continue to be the voice of the students and help them thrive during their time at NPS.

With Warm Regards,

Brian Pajarillo

Don’t hesitate to contact us at PBSA@nps.edu

Chair:
Lt. j.g. Brian Pajarillo, USN
Vice-Chair:
Lt. j.g. Jude Apkpunku, USN

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Public Affairs is constantly seeking interesting news and stories for Update NPS. Send your tips to pao@nps.edu.
**Historical Highlights**

“Someone has said that engineering is one part arithmetic and two parts common sense, and that of these the common sense is the more difficult to acquire. Naval post graduate education aims to develop this quality of common sense in the student. He is taught to think logically and his judgment is trained.”

-- Lieutenant Commander John J. Halligan, American Society of Naval Engineers, February 1916

As 2020 begins, we’d like to turn backwards for a moment to share “Historical Quotes on the Promise and Value of an NPS Education,” a document from Dudley Knox Library’s Special Collections & Archives.

The quotes gathered here, over the last 100+ years, capture important, enduring philosophies about the necessity of advanced education to prepare for the future.

Read “Historical Quotes on the Promise and Value of an NPS Education” (https://calhoun.nps.edu/handle/10945/48148)

Photo: Detail, Class of 1913. Postgraduate Department of the Naval Academy. Special Collections & Archives, Dudley Knox Library, NPS.

Historical Highlights are provided by the Dudley Knox Library.