

# Weekly Media Report - Sept 7-13, 2021

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#### 9/11 REMEMBRANCE:

#### NPS Honors Victims, First Responders, Service Members at 9/11 Remembrance Ceremony

(Navy.mil 10 Sept 21) ... Mass Communication Specialist 2<sup>nd</sup> Class Tom Tonthat (NPS.edu 10 Sept 21) ... Mass Communication Specialist 2<sup>nd</sup> Class Tom Tonthat

Students, faculty and staff at the Naval Postgraduate School (NPS) honored the nearly 3,000 lives lost on Sept. 11, 2001, and the continued commitment of first responders and service members in the 20 years that have followed, during a reverent and uplifting ceremony, Sept. 10, in front of the university's Herrmann Hall.

#### Monterey County to mark 20th anniversary of 9/11 with ceremonies

(Monterey Herald 9 Sept 21) ... James Herrera

Ceremonies to mark the 20th anniversary of the Sept. 11 terrorist attacks on the United States will take place around Monterey County this Saturday... The **Naval Postgraduate School** in Monterey plans a 9/11 Remembrance Ceremony on Friday for students, staff, faculty and guests only. This event is not open to the public.

### **EDUCATION:**

# Optimizing the Warfighter's Intellectual Capacity: The ROI of Military Education and Research

(CIMSEC 13 Sept 21) ... Dr. Johnathan Mun

Technology alone is not a capability. It requires people with the know-how to use it. At a time when great power competition is accelerating access to new technologies that can be employed by able minds to gain an advantage, the U.S. Navy is cutting its higher education funding in favor of platforms. The Fiscal Year 2022 budget request released on May 28, 2021, which includes cuts to the U.S. Naval Academy (USNA), **Naval Postgraduate School** (NPS), and U.S. Naval War College (NWC) by 20%, down from \$615M to \$498M—pennies in the big scheme of defense budgets, but a high opportunity cost.

#### NPS Collaboration Keeps NATO Up To Speed in Cyber Security

(Navy.mil 7 Sept 21) ... Mass Communication Specialist 2<sup>nd</sup> Class Lenny Weston (NPS.edu 7 Sept 21) ... Mass Communication Specialist 2<sup>nd</sup> Class Lenny Weston

The Naval Postgraduate School (NPS) and the NATO School Oberammergau (NSO) continue their collaboration in educating NATO members in cyber security. The NPS-NSO partnership offers classes led by NPS faculty at the NATO school and in select countries, strengthening the cyber posture of several NATO partners through advanced education.

#### Operational Readiness in an Evolving Emergency Management Environment

(Firehouse 11 Sept 21) ... Richard J. Blatus

Sept. 11, 2001, wasn't only a defining event for the nation but a day that forever will be etched in the memory of New York City's firefighters. Of the nearly 3,000 people who perished as a result of the terrorist attacks, 343 members of the FDNY who responded to the call of duty lost their life trying to save others. While our nation began













to recover and reshape its intelligence capabilities, emergency response agencies across the United States began to review their capabilities and readiness to respond to the possibility of another attack or major event in their city... Although organizational leadership always has been a strength of the FDNY, the 9/11 attacks brought new and innovative educational opportunities to the department. In 2002, the Department of Justice partnered with the Naval Postgraduate School to form the first master's degree in homeland security. The Center for Homeland Defense and Security, which is based at the **Naval Postgraduate School**, offered graduate education to senior leadership representing the local, state, tribal, territorial and federal agencies. The flagship program, which is a master's degree in homeland security studies, was unique, because it was one of the first online/in-residence models in government education that blended the participation of many agencies. The 18-month program focused on the development of critical thinkers within the department, emphasizing how a change to strategic thinking from strategic planning should be the critical part of an agency's strategy formation and implementation.

#### **RESEARCH:**

### Marine Special Ops Command Hones its 'Cognitive Raiders'

(National Defense 7 Sept 21) ... Scott R. Gourley

Marine Raiders are some of the nation's most elite warfighters, but Marine Corps Special Operations Command is pushing to make them even better with its "Cognitive Raider" initiative... To facilitate that understanding and adaptation, MARSOC has implemented an annual event called the Cognitive Raider Symposium, also known as CRS. Co-hosted with the **Naval Postgraduate School**'s Defense Analysis Department, the multi-day gatherings provide myriad learning venues designed to hone the Marine Raiders' tactical edges. Significantly, the symposium not only addresses the Cognitive Raider pathway, but also illustrates MARSOF as a true connector of ideas and concepts.

### Jarhead elites: Marine Raiders are aiming high

(MENAFN 12 Sept 21)

(Asia Times 13 Sept 21

"I'm not satisfied. There is more out there. There are ways to be better. There are ways to be more efficient. There are ways to be more lethal. And there are better ways to accomplish what we're trying to accomplish."... Cohosted with **the Naval Postgraduate School's** Defense Analysis Department, the multi-day gatherings provide myriad learning venues designed to hone the Marine Raiders "tactical edges," Gourley reported.

# ADA University wraps-up Advanced Regional Energy Security Symposium 2021 Caucasus with Closing ceremony

(MENAFAN 10 Sept 21)

(AzerTac 10 Sept 21)

The Closing ceremony of the Advanced Regional Energy Security Symposium 2021 – Caucasus was held on September 10 by the Center of Excellence in EU Studies at ADA University in partnership with the NATO Energy Security Center of Excellence, the **Naval Postgraduate School**, bp Azerbaijan, and State Oil Company of the Republic of Azerbaijan (SOCAR).

# <u>Southern Gas Corridor to support Europe's energy security for decades to come - US</u> ambassador

(MENAFAN 10 Sept 21)

US Ambassador to Azerbaijan Lee Litzenberger congratulated Azerbaijan on completing the Southern Gas Corridor (SGC), during the closing ceremony of Advanced Regional Energy Security Symposium 2021 – Caucasus, Trend reports... Advanced Regional Energy Security Symposium 2021 – Caucasus, was held Sept. 6-10, by the Center of Excellence in EU Studies at ADA University (Azerbaijan), in partnership with the NATO Energy Security Center of Excellence, the **Naval Postgraduate School**, BP Azerbaijan, and State Oil Company of the Republic of Azerbaijan (SOCAR).

# Azerbaijan's energy infrastructure to make it future supplier of hydrogen to Europe - US Ambassador

(AZER News 10 Sept 21)











The energy infrastructure that Azerbaijan built will make the country a future supplier of hydrogen to the European market, the US Ambassador to Azerbaijan Lee Litzenberger said during the closing ceremony of the Advanced Regional Energy Security Symposium 2021 – the Caucasus, Trend reports... Advanced Regional Energy Security Symposium 2021 – the Caucasus, was held Sept. 6-10, by the Center of Excellence in EU Studies at ADA University (Azerbaijan), in partnership with the NATO Energy Security Center of Excellence, the **Naval Postgraduate School**, BP Azerbaijan, and State Oil Company of the Republic of Azerbaijan (SOCAR)

#### **FACULTY:**

#### How 'climate warming' played role in intensification of Hurricane Ida

(ABC 12 10 Sept 21) ... Roxie Bustamante

As we keep an eye on what could be developing in the Gulf of Mexico, two scientists weigh in on what was learned from Hurricane Ida and how climate change is playing a role in active hurricane seasons... Eva Regnier, the professor of operations and logistics management at the **Naval Postgraduate School**, agrees.

### What do we know about U.S. counterterrorism spending? Not much.

(Market Place 10 Sept 21) ... Nancy Marshall-Genzer

The federal government expanded significantly after the 9/11 attacks. New agencies were created – like the Department of Homeland Security (DHS) and Transportation Security Administration (TSA). More money was spent on counterterrorism, to prevent another attack. How much? It's complicated..."We have been able to keep this country much safer than we had expected 10, 20 years ago," said Erik Dahl, a retired Naval intelligence officer now teaching at the **Naval Postgraduate School** in Monterey, California.

### **ALUMNI:**

### Mercyhurst welcomes new staff members

(The Merciad 8 Sept 21)

The academic 2021-2022 school year has brought about a lot of new faces to the Mercyhurst campus. Not only are we welcoming the incoming class of freshman students, but also our wonderful University President Kathleen Getz and twenty-seven new faculty members. The new faculty members spread wide across the various colleges and disciplines here at Mercyhurst University. It is very exciting to welcome these professors, some of whom you may know through classes that you are taking this semester... The Colonel is a graduate of the United States Military Academy at West Point, NY where he received his Bachelors of Science in Engineering and Leadership. He continued his education at The **Naval Postgraduate School** in Monterey, CA where he received his Master of Science in Financial Management. Correa served in uniform for twenty-four years until he retired from active duty in 1996 as a Lieutenant Colonel. Correa is a very active professor, "I believe in making education hands-on and interactive rather than a total 'Death By PowerPoint' experience. I am a strong advocate for experiential learning levered by technology," said Correa. One of Correa's favorite classes to teach is Business Intelligence as it, "Allows students to peel the onion of or-ganizations," said Correa.

# NAVAIR Change of Command: Peters Retires, Chebi Takes the Helm

(Southern Maryland Chronicle 10 Aug 21)

Vice Adm. Carl P. Chebi relieved Vice Adm. Dean Peters as commander, Naval Air Systems Command during a change of command ceremony Sept. 9 at Naval Air Station Patuxent River, Maryland... Chebi earned a bachelor of science in computer systems engineering and a commission as an ensign from the Naval Reserve Officer Training Corps at Rensselaer Polytechnic Institute. He is a graduate of the U.S. Naval Test Pilot School (USNTPS) and Navy Fighter Weapons School, and holds an executive master's degree in business administration from the **Naval Postgraduate School**.

### **UPCOMING NEWS & EVENTS:**

**September 14-16:** Center for Executive Education SPEAR Workshop

**September 20**: WIC Workshop 2021: Hybrid Force 2045 (Registration Open)

September 24: Summer Quarter Graduation Ceremony

September 27-30: Center for Executive Education LCSS Workshop











#### **REMEMBRANCE CEREMONY:**

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Students, faculty and staff at the Naval Postgraduate School (NPS) honored the nearly 3,000 lives lost on Sept. 11, 2001, and the continued commitment of first responders and service members in the 20 years that have followed, during a reverent and uplifting ceremony, Sept. 10, in front of the university's Herrmann Hall.

"Today, I welcome all of you because you are the faces of our nation," said NPS President retired Vice Adm. Ann Rondeau as she addressed attendees from all the military branches as well as civilian faculty and staff. "On behalf of those who serve with great gratitude, we thank each other for this moment of standing here together and saying to America, 'We are a great place. We are a great country."

While there are moments in the past 20 years that have cast a shadow of trauma, including recent events in Afghanistan, Rondeau added, "The honor of service, the honor of country, the honor of standing up for each other and for what we stand for as a nation that has done more good in mankind's history than ever before, is what America is and today we stand strong."

New York Police Department (NYPD) Capt. Brian Nyhus, an alumnus of NPS' Center for Homeland Defense and Security, served as the keynote speaker for the remembrance ceremony. He described the aftermath of the attacks, and his experience as a rookie police officer helping with the recovery efforts.

"While it was a bright, sunny day in New York City, lower Manhattan was dark and everything was covered in concrete dust," said Nyhus. "I saw the duty and bravery out there from a very close point of view. Rescue crews responded to Ground Zero and started doing the work. Iron and construction workers helped clear the remains of the buildings so people could do their work and help search for survivors.

"I also witnessed great acts of compassion from the public," continued Nyhus. "Clergy and business owners turned out to provide whatever comfort they could to victims like hot meals and clothing to those who were driven from their apartments and therapy to those who were trying to help deal with what they had witnessed."

Twenty years later, Nyhus reflected on the country's recovery from the attacks that include the rebuilding of One World Trade Center, repairs of the Pentagon, and multiple memorials including a 9/11 museum erected over the footprints of the original towers in honor of all the people who passed. He also talked about the lingering effects of the attacks that still remain to this day.

"While the physical damage of those attacks has been repaired, the acts of those terrorists 20 years ago are still taking people's lives," said Nyhus. "First responders and residents of lower Manhattan have died from cancer due to exposure to toxic materials due to those recovery efforts. Over 15,000 have developed serious illnesses due to those recovery efforts. To be truthful to the phrase 'Never forget,' Congress passed the James Zadroga Act to provide medical care and compensation to the victims and families for years to come."

Nyhus then acknowledged the sacrifices of the military who took the fight to the terrorists after 9/11. "After 9/11, the United States military deployed overseas to two war zones in Iraq and Afghanistan," he said. "Hundreds of thousands of service members endured long, dangerous deployments and hostile lands, fighting terrorists to ensure the safety of our country. As you know, some of these men and women did not come home making the ultimate sacrifice for the safety of their country."

No matter how many years have passed since 9/11, Nyhus called on everyone to continue remembering those who were lost that day.

"Today and on the 20th anniversary of the attacks, I ask you to not only remember those who died on that day, but to those who have fallen since then," said Nyhus. "I ask you to seek out those who are still being affected by the attacks and help them. Please, never forget all of the victims of 9/11."

The generations of Sailors who attended the ceremony took heed of Nyhus' speech.

"I'm very proud to be a part of this ceremony, which remembers those who perished that day and in the years that followed," said NPS Dean of Students U.S. Navy Capt. Brandon Bryan. "I was a fairly













young lieutenant on Sept. 11. At the time, I didn't fully understand what it meant to serve in the military with the emphasis on the word 'serve.' Since that day, and all the things that our country has been through and how we as a country responded to those attacks, I truly understand what it means to serve this country and I'm very proud to be able to do that."

"I feel honored to be a part of the ceremony and being able to have a role where I am honoring those who have lost their lives in an incident that shook America," said Yeoman 2nd Class Keyston Braxton, one of the honor guard members who folded and presented the American flag during the remembrance ceremony.

"As someone who was too young to remember the actual event, I still have an empathetic heart for all of the victims and service members who lost their lives. The folding and presenting of the American Flag honors the dead, and I am grateful that I was able to do that today."

After performing a flag ceremony and wreath presentation outside Herrmann Hall, the remembrance ceremony moved to NPS' Centennial Park, where a piece of steel salvaged from the rubble of the World Trade Center towers stands as a dedication to those who lost their lives during the attack 20 years ago.

Accepting a wreath from Sailors, Nyhus placed a wreath at the steel memorial. Beneath that memorial lies a plaque with a message that rings as true today as it did the day of the attacks ...

"These acts shatter steel, but they cannot dent the steel of American resolve."

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#### Monterey County to mark 20th anniversary of 9/11 with ceremonies

(Monterey Herald 9 Sept 21) ... James Herrera

Ceremonies to mark the 20th anniversary of the Sept. 11 terrorist attacks on the United States will take place around Monterey County this Saturday.

The "Resolve and Remembrance" ceremony will be held at Devendorf Park at the corner of Junipero Street and Ocean Avenue in Carmel starting at 9 a.m. Rep. Jimmy Panetta is scheduled to speak along with representatives from public safety agencies and church leaders. Music and vocals will accompany the event.

In Marina, Jews, Christians and Muslims United will hold an open house with food and music from 1-3 p.m. at the Epiphany Lutheran and Episcopal Church, 425 Carmel Ave. The open house is meant to lift the cooperation of these faiths and share in the concerns and needs of the community while setting aside differences and focusing on what people have in common, according to Father Jon Perez.

The Salinas Fire Department and Police Services will hold a ceremony at Salinas Fire Station No. 1, 216 W. Alisal St., beginning at 10 a.m. to commemorate the attack, the lives lost and the promise made to "never forget." Light refreshments will be served.

The Seaside Police and Fire departments will host the city's first 9/11 Anniversary Commemoration beginning at 8 a.m., at Seaside City Hall, 440 Harcourt Ave. The event will include a procession from the Seaside Fire Department to City Hall. City officials and members of the Seaside public safety teams will share some brief remarks and honor those lost with moments of silence. The Seaside High School Junior Reserve Officer Training Corps cadets will participate as the Honor Guard.

The King City Fire and Police departments will have a memorial procession and flag ceremony to honor the anniversary for those who lost their lives in the attacks. The procession begins at noon at King City High School, proceeds down Broadway Street to S. First Street, and ends at the fire and police departments on Bassett Street.

Each of the 9/11 anniversary memorial services are open to the public and all are welcome. Monterey County will lower its flags to half-staff beginning Friday to remember those lost in the 9/11 attacks.













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#### **EDUCATION:**

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Technology alone is not a capability. It requires people with the know-how to use it. At a time when great power competition is accelerating access to new technologies that can be employed by able minds to gain an advantage, the U.S. Navy is cutting its higher education funding in favor of platforms. The Fiscal Year 2022 budget request released on May 28, 2021, which includes cuts to the U.S. Naval Academy (USNA), **Naval Postgraduate School** (NPS), and U.S. Naval War College (NWC) by 20%, down from \$615M to \$498M—pennies in the big scheme of defense budgets, but a high opportunity cost.

This article attempts to shed some light on the value propositions and return on investment (ROI) of military education and research. Education and research are inextricably linked in that both aspects contribute to the value add of the warfighter of the future. The intangible value of military education is significant in developing skills in leadership; critical, creative, and strategic thinking; and quick tactical decision-making for junior and senior officers. In particular, as opposed to civilian universities, a military-oriented curriculum taught by faculty members with military-based academic and research backgrounds or special military knowledge allows the transfer of institutional knowledge and expertise to the students, as well as the development of deep intellectual capital in our defense-focused faculty. Strategic, tactical, and innovative changes and challenges in the future will require the continuous education of the joint forces to maintain a competitive advantage over our current and future adversaries.

The value of education and research has always been a simple concept to understand but one that is fairly difficult to measure. Generally, higher education adds significant value to the individual, both in terms of future economic returns through better and higher-paying jobs and in terms of incalculable and intangible values such as the deepening of one's knowledge and perspective and the enrichment of one's experience of the world. The literature is filled with descriptions of qualitative social benefits of higher education. The cost is relatively easy to calculate (particularly for parents of private school and college students). Contact the local private colleges' admissions or financial aid departments for a good wake-up call. However, the complete ROI for education is difficult to quantify economically and mathematically. And determining the value of highly specialized education such as military graduate education and research makes the value problem even more complex.

The U.S. Department of Defense (DOD) sends many of its mid-level officers (mostly O-2 to O-4 levels) to graduate programs to obtain graduate and advanced degrees or technical skills and nontechnical competencies that are highly valued in their respective billets. Sending a military officer to a 1.5–2-year graduate program costs upwards of \$250,000 plus the opportunity cost of lost services. A doctoral program costs upwards of \$500,000 per officer, plus their respective soft opportunity costs for being away for 3–4 years. The question is whether the benefits of such education are indeed more significant than the cost incurred by the DOD.

The U.S. Navy invests over \$3.3B across the Future Years Defense Program (FYDP) at **NPS**, NWC, and civilian schools.3 In the past, the ROI in sending officers to such in-residence on-campus education programs has been measured, to some degree, by retention or years of service beyond the education and requisite years of payback service. The assumption is that these officers will apply the knowledge and skills learned in their respective billets or positions. Retaining our warfighting top talent and broadening their skill sets with the strategic and critical thinking attributes honed by these educational and research













programs help build an officer corps that would be more capable of executing the DOD's strategy and enhancing American national security posture. The future demands leaders who possess both the knowledge and the moral capacity to decide and act, and education is the key. A 21st-century education for U.S. military forces is vital to national security.

This current article is a short executive summary of the detailed technical research sponsored by the Office of the Chief of Naval Operations (OPNAV) Naval Research Program by the author, which looked at various novel ways (stochastic forecasting, artificial intelligence and machine learning, data science analytics, and advanced simulation analytics) to value the monetary ROI of military education and research activities. 5 Although the intangible and qualitative aspects of military education are significant, our research focused on the more quantitative measure of ROI.

#### What's the State of the Art?

In considering the importance of education and its associated costs, previous research indicated that the overall benefits and ROI to the Navy from graduate education could be measured, given certain assumptions.6 The report analyzes the political landscape, military policies, and guidance on education and continues with a highly simplistic set of assumptions to generate said ROI. This indicates that even detailed studies fall short of determining an adequately robust ROI measure for military education. Such previous research reinforces the fact that ROI determination in military education and research is not an easy undertaking. Therefore, our research did not evaluate the efficacy of the political status or policy deliberations but focused on a singular goal: determining a set of potentially viable methodologies and techniques from which a robust ROI for military education and research can be triangulated and ultimately determined.

#### Challenges in Computing ROI in Military Education and Research

A decision maker's primary responsibility is how to decide which investment alternatives provide the greatest return with the least risk of loss. In civilian organizations, numerous methods and models assist with these decisions. But in military and government agencies, these methods often fall short because typical governmental and military investments do not provide for a monetary return. In other words, the government is not in the business of selling goods and services. Instead, it provides intangible returns such as national defense, public safety, goodwill, and other public goods that are difficult, but not impossible, to quantify. Scholarly research into assessing the ROI of complete military education and research is lacking or, at least at the time of writing, insufficient and unsatisfying.

The DOD sends its officers to graduate-level institutions each year to obtain advanced degrees primarily to fill positions in their services whose duties require the knowledge and skills gained in graduate school. Furthermore, the benefits of a graduate education extend beyond the specific assignment for which the officer was educated, applying to subsequent assignments. For fully funded education, the service must pay not only the cost of the education but also the pay and allowances associated with an officer's billet allocated for education as well as assume the opportunity cost of the missing officer's services, and that same officer will also have to forgo any experience that might have been gained while he or she is in school. Evaluating the quantitative effects of a graduate education poses multiple challenges. DOD educational policy suggests broader, more extensive use of graduate education than simply filling billets that have been determined to require it. The question, therefore, is whether the benefit gained from a graduate military education is worth the cost.

Several past studies of individuals with privately funded education such as an MBA or other technical master's degree show that they earn an average rate of return of at least 46% more than a bachelor's degree in a 2008 study... and the ROI ranges between 27% to 36% for an MBA.10 However, applying a similar methodology would not work well within the DOD because the U.S. military's human resource environment is such that it is a closed internal and hierarchical structure. For instance, an officer's pay is based on his or her rank and years of service, regardless of educational background. It can be argued that higher education may result in higher efficiency and productivity, thereby increasing the speed of promotions, but these are relatively difficult to quantify. An alternate approach might be to consider the years of service beyond the time the education was received. This amounts to the value of retention: how













much the military can save in costs by having a higher retention and reutilization rate than by having to educate a new officer to replace a billet due to attrition. Nonetheless, using comparables, traditional financial metrics can be applied to determine the ROI of education and research.

#### Research Methodology

In our research, multiple technical approaches were applied. More traditional ROI methods such as knowledge utilization, frequency and impact of knowledge used, statistical significance comparisons between the less and more educated cohorts' productivity and output, as well as the economics of a person's working life were computed. These were also combined with more advanced analytics such as Integrated Risk Management techniques where Monte Carlo simulations and stochastic forecasting were applied to determine the uncertainty of knowledge gained and used, the lifetime economics of the graduate, combined with data science and pattern recognition with artificial intelligence and machine learning methods. Models like multivariate autoregressive unequal variance heteroskedastic general linear models were applied.11 We applied said analytics to determine the ROI of NPS and NPS-based Acquisition Research Program (ARP), a program established in 2003 that delivers warfighter-focused research that informs and improves acquisition policy and practice.12

In addition, intangible and intrinsic value exists in military education and research but cannot be readily quantified in any standard ROI calculations. In nonmilitary college education in the private sector, higher education brings with it various intangible value-add (e.g., diversification and innovation of the economy, increased wages, and lowered crime rate). However, the intangible value of military education is different. The military is a closed vertical society. A survey of past naval students at NPS, NWC, and USNA indicated that approximately 96% agreed that formal education was extremely useful or very useful in their naval careers. The study found that military personnel have more positive perceptions of their institutions than civilian personnel. Our research results support this point of view.

#### **Key Conclusions**

In the research performed, the ROI for military-based research has significant qualitative intangible worth and quantitative economic ROI using secondary data. The ROI ranged from 240%–600% for various military research programs. For example, using standard industry best practices and a specific case study, we concluded that the average conservative ROI for the ARP to be approximately 304%. In the analysis of the ROI of the **NPS** education programs, we found that from the point of view of the DOD, for every dollar invested in **NPS** education, the benefits return anywhere between 5.7 and 7.7 times the investment, which represents expected ROIs between 469% and 673%. These ROI values are minuscule compared to the holistic, intangible, and qualitative value of a military graduate university to the DOD. The global average for DOD education and research, on average, provides the government an ROI of approximately 485%. This is a favorable ratio rarely achieved in most DOD programs. Follow-on research can, of course, be applied to further calibrate the analytical models.

The basic fighting unit in the U.S. Navy is more than a ship's hull, weapons, and systems, it is the Sailors that crew and fight the ship. Training only prepares the warfighter to deal with the known factors of conflict at sea (e.g., the importance of good seamanship), but education prepares warfighters to deal with the unknown factors (e.g., effective decision-making in risk-fraught rapidly changing circumstances). Well-educated warfighters create significant value-add and make up lethal and effective combat-ready units for the future.13

To echo the words of retired Admiral Henry Mauz (former Commander of U.S. Atlantic Fleet, U.S. Seventh Fleet, and Naval Forces Central Command), "My **NPS** education did more for my career than all of my other degrees combined. It taught me how to make the hard decisions under time pressure with insufficient information using the analytical decision-making I learned here."14

To conclude, we feel that the goal of the research in creating actionable intelligence for decision makers using an objective, valid, and defensible quantitative measure of a subjective value was achieved. Institutions like **NPS** should be valued as capabilities to optimize, not costs to minimize, and it deserves further attention from senior leadership on how the DOD can leverage NPS, NWC, and USNA for their comparative and competitive advantages.













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# NPS Collaboration Keeps NATO Up To Speed in Cyber Security

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The Naval Postgraduate School (NPS) and the NATO School Oberammergau (NSO) continue their collaboration in educating NATO members in cyber security. The NPS-NSO partnership offers classes led by NPS faculty at the NATO school and in select countries, strengthening the cyber posture of several NATO partners through advanced education.

The Naval Postgraduate School (NPS) and the North Atlantic Treaty Organization (NATO) initiated a relationship in 2004, with NPS serving as a United States' Partnership for Peace Training and Education Center. Since then, the university has developed a strong connection with the NATO School Oberammergau (NSO), launching the NPS-NSO Cyber Security Program, and later the Cyber Security Professional Program, to address the rising need for cyber awareness within NATO members and partners.

The NPS-NSO partnership goes beyond the Cyber Security Program, and when the partnership initially started it offered different courses in the fields of maritime security, energy security and cybersecurity. The cybersecurity program has been the most sought-after of the courses provided due to its rising need. To date, the program has successfully graduated over 1,200 students who together strengthen the organization.

Deciding who can instruct, as well as deliver, these courses is determined during an annual conference through NATO to identify its members and partners' educational needs and priorities. With NPS being a leader in cyber security and having programs already in place, the choice was obvious for NATO on who will teach these highly-valuable courses.

The NPS-NSO relationship began with a conversation between Alan Howard, who now serves as NPS Energy Academic Group (EAG) Associate Chair, and, at the time, NSO's Commandant U.S. Army Col. Mark Baines, who were determining how to align education and training throughout NATO.

"I said, how about we offer some of our education from NPS to the alliance at the NATO school?" Howard said. "I saw an opportunity for the NATO school to be, in a way, like the Naval Postgraduate School's European campus. Why not have a campus in Germany where people could go and take our classes, experience the kind of capabilities that NPS has and can offer, and ideally some percentage of those numbers that attend our courses at the NATO the school, would later become full-time resident students at NPS."

"The collaboration between NPS and the NSO allows the U.S. and, by extension, NATO to build internal and partner capacity in cyber expertise and capability," said NSO Dean of Academics and Senior National Representative for Student Affairs U.S. Air Force Col. Ryan B. Craycraft. "Having this capability throughout NATO and among NATO's partners adds a buffer of security that enhances the security of the alliance."

The Cyber Security Program officially started in 2010 with one course, and has since developed into what it is today, with seven different courses; Network Security, Network Vulnerability Assessment & Risk Mitigation, Cyber Incident Handling & Disaster Response, Network Traffic Analysis, Principles of Software Reverse Engineering, Mobile Applications, and Big Data Analytics.

"The first four courses are part of the Cyber Security Professional Program started in 2012 and the students spend more than 400 hours with lectures, labs, self-paced readings, quizzes, distance learning problem challenges, final exams and final projects," noted Howard













The program has had increasing popularity in recent years and has seen a tremendous increase in attendance within NATO. This rise has caused rapid expansion, offering classes more frequently and in some cases doubling the classroom size from 30 to 60 students.

"For anyone who has been even casually skimming the headlines for the past decade, the reason for this growth is rather obvious," said NPS Senior Lecturer and Cyber Security Professional Program developer Dr. J.D. Fulp. He attributes the increase in class size to three primary causes.

"First is the increase in the number and type of devices that rely on the proper and secure functioning of an operating system, application, or network service," Fulp explained. "Second is the increase in the degree of interconnectivity of these devices, something that will increase further as 5G technology brings higher bandwidths, think 10Gbps or more, to a greater number and variety of devices and people. And, the third is the increased exploitative sophistication of certain nation states investing heavily to enhance their offensive cyber capabilities."

Each course in the certificate program runs for 10 weeks, with two of those weeks taught in-residence with an NPS instructor, and the remaining 8 conducted virtually. After completing the Cyber Security Professional Program, students will understand operations, use, investigation and troubleshooting of cyber systems. The students also receive Certification as a Cyber Security Professional that is recognized within NATO and is a mandatory requirement by many of its members and partners.

"I would not have it any other way," said German Air Force Maj. Tim Schleimer. "I have only experienced NPS while on these courses but have never been disappointed. From the material presented to the instructors delivering it, it has all been great from my point of view."

"Without this collaboration, I don't think a program of the same caliber would be possible at NSO," added Schleimer, "which, in turn, would mean less NATO personnel trained in cyber security."

The collaboration not only benefits the students and countries who take the course, but also enables NPS professors to get insight from other countries on the things they see happening within cyberspace.

"It's common for students in the class to bring up new technology or new techniques that I was not aware of and a great thing about that is I can turn that around and incorporate it in the course for when I offer it at NPS," said NPS Distinguished Professor of Electrical and Computer Engineering Dr. John McEachen. "Our NPS students get the benefit of perspectives that are being used in other parts of the world. So, we see a lot of collaboration from these other countries."

McEachen noted that we are only as strong as our weakest link and mentioned that many smaller countries rely on contractors for their cyber needs making them more vulnerable.

"What we're doing is helping these countries develop an organic effort where they are vested in defending their nation," noted McEachen.

Not only are the courses offered at the NATO school in Germany, but also in several partner nations around the world.

"There's a huge demand for it," said Howard. "In addition to the courses we offer at the NATO School, NATO headquarters has asked us to deliver some of these courses directly to the receiving country." Direct courses have been available in Morocco, North Macedonia, Montenegro and Kuwait.

With cyber an integral part of everyday life and increasing threats within cyberspace, the need for this higher education in cyber security is imperative.

"Unlike direct physical attacks, many cyber-based attacks can go undetected, or even un-attributable, meaning we can't prove who did it even when they are detected," said Fulp. "Such exploitation can be executed to steal intellectual property, conduct espionage, manipulate opinion, deceive, degrade operations, or even bring about physical damage. NATO countries, among others, are aware of this threat and are pushing their people to get up-to-speed as quickly as possible."

The joint venture between NPS-NSO will continue to adjust its curriculum for new needs adding new courses as cyber is constantly changing.

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# Operational Readiness in an Evolving Emergency Management Environment (Firehouse 11 Sept 21) ... Richard J. Blatus

Sept. 11, 2001, wasn't only a defining event for the nation but a day that forever will be etched in the memory of New York City's firefighters. Of the nearly 3,000 people who perished as a result of the terrorist attacks, 343 members of the FDNY who responded to the call of duty lost their life trying to save others. While our nation began to recover and reshape its intelligence capabilities, emergency response agencies across the United States began to review their capabilities and readiness to respond to the possibility of another attack or major event in their city.

As the recovery efforts ended in May 2002, the FDNY began to focus on a review of its operational readiness and its capability to adapt to a changing emergency response environment. Areas of concern were identified, with an emphasis on the organization and the development of its members' abilities and the department's capability to operate in what wasn't an all-hazards environment. Although many initiatives were considered, four areas that directly affected the department's operational readiness are leadership/education, training, technology and adaptability/collaboration.

#### Leadership/education

Although organizational leadership always has been a strength of the FDNY, the 9/11 attacks brought new and innovative educational opportunities to the department. In 2002, the Department of Justice partnered with the Naval Postgraduate School to form the first master's degree in homeland security. The Center for Homeland Defense and Security, which is based at the **Naval Postgraduate School**, offered graduate education to senior leadership representing the local, state, tribal, territorial and federal agencies. The flagship program, which is a master's degree in homeland security studies, was unique, because it was one of the first online/in-residence models in government education that blended the participation of many agencies. The 18-month program focused on the development of critical thinkers within the department, emphasizing how a change to strategic thinking from strategic planning should be the critical part of an agency's strategy formation and implementation.

Since the program's inception, the FDNY has sent more than 70 of its members to the Center to help to refine their ability to devise and implement strategic initiatives. As a result of that, more than half of the FDNY's senior staff are graduates of the Center's master's degree or executive leadership program.

In partnership with Columbia University and General Electric Corp., the FDNY Officer Management Institute is executive leadership training that's offered to both fire and EMS officers. The seven-week program is an in-residence program that focuses on project management and team-building concepts.

The FDNY partnered with the Combating Terrorism Center at the United States Military Academy to conduct a one-week Counterterrorism Leadership Program. The program is offered to fire and EMS officers to assist them when it comes to recognizing the current threat environment and in regard to managing complex terrorist-related attacks.

#### **Training**

The Off-Site Campus Learning System offers various prerecorded classes and records a member's participation and completion of the prescribed program.

The establishment of the Remote Tactical Training Unit brings training out of the academy and directly to the members in the field. Using various technological platforms, the Division of Training can conduct drills on site while streaming the class to off-site departmental locations, such as firehouses and EMS stations. This affords members who are working in the field direct access to some of their senior and most experienced peers on a more frequent basis than otherwise.

Training videos on a wide range of operational and health/safety-related topics that are relevant to both fire and EMS are produced at the fire and EMS academies and may be viewed at work on the Diamondplate computer-based platform.













Using both hands-on and class-based instruction, the Emergency Response Plan Unit offers weekly classes on terrorist-related trends and threats.

#### **Technology**

After 9/11, the department outlined a plan to modernize electronic communications. Several initiatives enabled members to communicate both internally and externally in almost any environment.

In 2012, the Motorola XTS 3500 handie talkie that was in use in the field reached its end of life. After extensive research, testing and evaluation, Motorola's XTS 8000 was deployed throughout the department. The new capabilities that are afforded by the new radio include:

Multiband communication in VHF, UHF and 700/800 MHz frequencies, which enhances interoperability with other agencies; FDNY has included numerous interoperability channels on those frequencies and established an interoperability protocol with all adjoining fire departments as well as many other first-responding agencies that operate within and around the city

A multiscreen display that enables identification of members who are transmitting messages Display of the identity of a member who is transmitting by unit and position in plain English (alphanumeric identification)

Voice annunciation that announces zone and channel when powering up and changing channels Enhanced mayday and Emergency Alert Button (EAB) activation, by which any EAB activation triggers enhanced notifications and safety measures to readily identify the member who is transmitting and to alert members who are receiving an EAB Retention of the last 15 mayday transmissions

Multizone functionality that facilitates the ability to access numerous radio channels and communication systems, to allow members to monitor the NYPD, the Coast Guard, Borough Dispatch and other agencies, which can enhance situational awareness

An Auxiliary Radio Communication System (ARCS) facilitates radio communications in high-rise buildings. These systems provide a repeated radio system within the building to ensure that effective communications is possible throughout an incident. In 2014, the new NYC Fire Code 3 RCNY §511-01 (In-Building Auxiliary Radio Communication Systems) was passed. It codifies the requirement for ARCS in new high-rise buildings in New York City.

Many agencies recognize the need for such systems, and the FDNY has been coordinating with several federal and state agencies to incorporate ARCS in tunnel facilities throughout New York City.

Although the FDNY strives to address all potential communication issues that are readily apparent, there always is the unforeseen that must be accounted for. Emergencies occur in the water tunnels, the infrastructure conduits, and in large above- and below-ground areas, which makes communication difficult. The FDNY has committed to a communications project: The Kutta Radio System essentially is a portable communications repeater system. The system can be deployed readily by specially trained FDNY units to provide effective communications in any environment.

On 9/11, firefighter accountability was difficult, if not impossible, because of the large influx of firefighters coupled with the size of the incident. As a result, the department initiated the Fireground Accountability Program (FGAP).

The Emergency Fireground Accountability System (E.F.A.S.) is the foundation of the department's FGAP, which serves as a critical goal of the department to maintain the safety and accountability of each member during incidents of whatever sort. The E.F.A.S. is one application in a suite of applications that greatly enhances fireground accountability and increases the safety of firefighters, fire officers and EMS members while they are operating on scene of a fire or other emergency incident.

E.F.A.S. is installed on the mobile data terminal that's incorporated into the responding vehicle. It also can be carried by officers in the form of an E.F.A.S. Portable, which consists of a laptop computer that's linked to a radio/RF modem.

When an emergency alert signal is transmitted by a member at an incident, the officer/incident commander (IC) is provided with the ability to immediately identify the member (name, company, time and riding position) who is making the emergency call. The IC quickly can dispatch the Firefighter Assist Team (FAST Unit) to effect the rescue of the down or injured member.













The accountability application also allows the IC to perform a roll call and to manually assign a member a mayday to track members in distress.

#### **Interagency collaboration**

Realizing the need for an effective and concise flow of information, the FDNY formed the Center for Terrorism and Domestic Preparedness in the summer of 2004. Since its inception, the unit has evolved into one of the premier emergency management leaders in intelligence while focusing on several operational areas. In addition to its mandate to maintain active communication across several local, state and federal agencies, strategic initiatives that are part of the unit's realm include exercise design, weapons of mass destruction readiness and enhancements to technology of various types.

Also, the FDNY, in collaboration with the NYPD, formed an interagency rescue task force. The group consists of members of fire, EMS and NYPD operations personnel. Members of the interagency task force respond to incidents that involve aggressive deadly behavior, including active shooters, violent extremists and barricade situations. Members from fire and law enforcement who are selected for assignment to the interagency task force must undergo extensive team-based training.

Response guidance is outlined in standard operating procedures, which were developed solely for this type of interagency response.

#### **Forefront-focused**

In the 20 years that followed 9/11, the FDNY has worked diligently to maintain operational readiness while striving to remain at the forefront of innovation in areas of leadership, training, technology and collaboration.

As leaders, we're responsible for the preparedness of those who trust us to provide the tools to operate safely and effectively. Our mission always must be to keep our departments at the forefront of emergency response innovation and advancement. At the same time, we must continually fight to fund training and education, because those two elements are the foundation of our success. The safety and readiness of our members always must remain paramount.

May we never forget the sacrifice of those first responders who ran toward danger on Sept. 11, 2001, while exhibiting bravery and unmatched heroism: the 343 FDNY firefighters, the 37 police officers of the Port Authority Police Department, the 23 police officers of the NYPD, the 8 EMTs and the 1 member of the New York Fire Patrol.

May we never forget our members of the military who perished at the Pentagon nor the thousands of civilians who were killed in the coordinated attacks.

May we always remember the men and women of the armed forces who perished while protecting our great nation along with those who leave their families to serve.

I wish to thank Assistant Chief Michael Ajello, Deputy Assistant Chief Chris Boyle, Deputy Assistant Chief Frank Leeb and Deputy Chief Michael Woods for their contributions to this article.

#### **An App for Incident Command**

Among the numerous efforts that the FDNY put forth to modernize electronic communications after 9/11 is the Incident Command app. The mobile-operating, computer-based application provides incident commanders (ICs) with additional assistance when responding to, operating at, and managing resources at fire and emergency incidents.

The app's highlights include:

Real-time notification of incidents

Navigation assistance and both map views and pictures of the incident location

Display status of units that are assigned to the incident, including their arrival status

Allows ICs to account for the location of a unit within the fireground

Track and record a verbal roll call

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#### **RESEARCH:**

### Marine Special Ops Command Hones its 'Cognitive Raiders'

(National Defense 7 Sept 21) ... Scott R. Gourley

Marine Raiders are some of the nation's most elite warfighters, but Marine Corps Special Operations Command is pushing to make them even better with its "Cognitive Raider" initiative.

The Marine Corps Special Operations Forces 2030 strategic vision outlined the Cognitive Raider innovation pathway, asserting that troops sent into future special operations environments "must be able to understand them and then adapt their approaches across an expanded range of solutions," adding, "While tough, close-in, violent actions will remain a feature of future warfare, MARSOF must increasingly integrate tactical capabilities and partnered operations with evolving national, theater and interagency capabilities across all operational domains, to include those of information and cyber."

To facilitate that understanding and adaptation, MARSOC has implemented an annual event called the Cognitive Raider Symposium, also known as CRS. Co-hosted with the **Naval Postgraduate School**'s Defense Analysis Department, the multi-day gatherings provide myriad learning venues designed to hone the Marine Raiders' tactical edges. Significantly, the symposium not only addresses the Cognitive Raider pathway, but also illustrates MARSOF as a true connector of ideas and concepts.

Opening the third iteration of the symposium in early June, Col. John Lynch, MARSOC deputy commander, identified several key traits that help to define a Cognitive Raider, offering, "It starts with being a problem solver, one that never becomes complacent but instead remains adaptable and forward thinking."

He described an "edge" where the Marine Raider asserts, "I'm not satisfied. There is more out there. There are ways to be better. There are ways to be more efficient. There are ways to be more lethal. And there are better ways to accomplish what we're trying to accomplish.

"I cannot pick a single period of time in my career ... where we have been challenged to evolve at the pace we're being challenged to evolve right now," he added. "It is remarkable how fast we have to do it."

Douglas Borer, chair of the Defense Analysis Department at the **Naval Postgraduate School**, noted the conference's focus on "frontier technologies," offering both low-tech and high-tech examples while discussing how the technologies might alter tactical and strategic realities against a background of great power competition with nations such as China and Russia.

"When I asked what frontier technologies a Cognitive Raider mostly followed, the list included things like automation, AI, advanced manufacturing, biotech, quantum computing, 5G, next-gen hardware robotics and space," said Matt Stafford, a State Department representative. "These largely follow State's concerns. I know we both have much longer lists that we're also paying attention to, but it's good to hear that we share these worries. We also share some of your background worries about how these things will get used, or combined with each other, or just combined with existing technologies."

Master Gunnery Sgt. Mark Castille, command senior enlisted leader at the Marine Raider Training Center, engaged conference participants with a presentation focused on critical thinking tools and methods, capping the discussion with a participatory creative thinking exercise for attendees.

The CRS series brings in speakers from diverse and unique backgrounds. This approach was reflected in presentations by writers and analysts P.W. Singer and August Cole, co-authors of the novel Ghost Fleet, which has appeared on the Commandant of the Marine Corps' Professional Reading List.

Singer noted that he had been asked to speak on the topic "What comes next?" adding, "There is a challenge in that, particularly to the defense space, where the belief is that wrestling with the future is something that we shouldn't do, because we get it wrong so often."

Against that caveat, Singer discussed the implications of China's 19th Party Congress' order for the Chinese military to "accelerate the development of military 'intelligentization."

"We need to use new modes of visualizing and communicating about the future," he asserted. "Given all of this change, individuals, organizations and nations that don't recognize, wrestle with and try and make changes will be making a decision through their inaction. They will be making a decision to lose the future, and I hope none of us do that."













Cole said his and Singer's brand of FICINT — fictional intelligence — or "useful fiction," represents a new way to write realistic narratives in a way that helps the military plan and prepare for an uncertain future. He pointed to several of the frontier technologies and offered his own perspective on their impact for the Marine Raider community and Raider culture as well as the larger U.S. Special Operations Command enterprise.

Along with creative thinking and exploring "shifts in cognitive modalities," Raiders also received a number of program briefings from across the Defense Department and several industry partners.

Lt. Col. Glenn McCartan from the Defense Innovation Unit noted the distinction between "those who invent technology and those who take it and use it." DIU was created in 2015 to help connect the Pentagon with tech hubs such as Silicon Valley. McCartan identified the organization's value proposition for the special operations community as brokers with access to commercial dual-use technology, highlighting the importance of "bridging the gap" between commercial and military technology innovation.

Another DIU representative, Heather Ichord, pointed to several recent programmatic accomplishments.

McCartan observed, "It's not about finding the technology. It's about implementing it."

Not surprisingly, one of the Defense Innovation Unit's portfolios involves artificial intelligence and machine learning, an increasingly critical arena that served as the centerpiece for a dedicated "AI 101" presentation by Gokul Subramanian, engineering lead at defense technology company Anduril. He described the company's involvement in the development of counter-unmanned aerial system technology and cautioned the audience over the likely necessity to re-define "drone swarms" as scenarios shift from "four or five drones flown at a base" to "500 drones."

Subramanian identified "neural networks" as "the frontier of where we are going," supporting that with a wide-ranging presentation that addressed issues ranging from concepts for defeating increasingly common facial recognition software, to the possibility of inserting "AI poison" into a potential opponent's OODA — observe, orient, decide and act — loop.

The symposium included a panel on "AI Applications in Intel/ISR" led by representatives from the Johns Hopkins University Applied Physics Lab. Presenting their personal visions of future AI implications from spectrum superiority to safe and assured operations, they offered application examples for military intelligence, surveillance and reconnaissance while also acknowledging ongoing work on a "counter-AI initiative."

CRS presentations highlighted other specific military applications of the frontier technologies. One example that focused on space technology and great power competition was provided by Chief Master Sgt. John Bentivegna, senior enlisted leader for Space Operations Command.

Bentivegna emphasized the criticality of space domain awareness at a time when "space is becoming congested."

In the evolving era of great power competition, he expressed the command's desire to explore partnering with MARSOC and Special Operations Command, observing, "China has a satellite in space with a grappling arm. And Russia has anti-satellite weapons in orbit that could kinetically kill satellites. It's all in that gray area. What is an act of war in space and where is space going in the future?"

The symposium also included venues for Raiders to share their personal thoughts and field ideas through an essay contest co-sponsored by MARSOC and the **Naval Postgraduate School**. While 16 essays were received and posted to wide dissemination, the top three award winners presented their efforts directly to the audience.

One example was provided by critical skills operator Staff Sgt. Franklin Baker, who focused on the notional creation of what he called "the Greatest Mesh Network," through the integration of an Android Tactical Assault Kit device with a goTenna Pro X affixed under the wings of a Stalker VXE unmanned aerial system. Describing the architectural elements step by step, he said special operators could "create our very own mesh network with an aerial component that defeats line-of-sight obstacles in every operating environment."

Other award-winning essay presentations ranged from "Brilliance in the Basics" of space weather to "Edge Computing and Tomorrow's Operations" versus relying on the cloud.













The Naval Postgraduate School's presentations provided a critical strategic framework from which Raiders could view key technologies. As an example, Dr. Ryan Maness, assistant professor in the school's Defense Analysis Department and director of the DoD Information Strategy Research Center, asserted that China is the biggest threat to the United States right now but cautioned that the U.S. government might be "over-hyping" that threat, with some early evidence indicated that China "might be hitting a wall."

Offering examples of Chinese efforts to obtain rather than develop critical technologies, he observed, "It's difficult to innovate when you're cheating."

He characterized Russia as "outmatched in the conventional domain but punching above their weight in the cyber and information domains."

Dr. Tommy Jamison, assistant professor of strategic studies at the defense analysis department, outlined his perspective on technology and strategy in Chinese history.

Noting a great historical debate within China over a continental frontier versus a maritime frontier, he said, "In China today, the lessons of history are used as a springboard for military modernization."

"History and geography are fundamentally relevant to Chinese leaders," he added. "And for that reason, it is relevant to anyone who is serious about confronting China, and that would include everyone in this room as some of the most serious people engaged in that effort."

Looking forward, symposium attendees explored how the MARSOF 2030 vision links to an emerging Marine Special Operations Command focus on an operating concept identified as Strategic Shaping and Reconnaissance, or SSR.

Described as "encompassing those activities conducted by special operations elements in cooperation, competition and conflict to gain awareness of adversarial intentions and capabilities in order to deter, disrupt, deny or increase the adversary's risk," the concept includes a wide array of skills and equipment to provide shaping and influence effects to be achieved through a hybrid approach utilizing selected special operations core activities and programs applied through intelligence operations, direct and indirect actions, and persistent development of ally and partner relations.

The SSR concept is expected to be a focus for future iterations of the Cognitive Raider Symposium. In the meantime, Raiders are working to incorporate the lessons from this year's event across MARSOC, demonstrating the power of the "Cognitive Raider" initiative and its application for the future.

Marine Special Ops Command Hones its 'Cognitive Raiders' (national defense magazine.org)

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#### Jarhead elites: Marine Raiders are aiming high

(MENAFN 12 Sept 21)

(ASIA Times 13 Sept 21)

"I'm not satisfied. There is more out there. There are ways to be better. There are ways to be more efficient. There are ways to be more lethal. And there are better ways to accomplish what we're trying to accomplish."

— Col. John Lynch, MARSOC deputy commander

We know about the US Army Rangers and the illustrious Green Berets.

Elite special forces, who have seen action throughout Southeast Asia, the Middle-East and other theatres of war. They are legendary.

And then we have the famous US Navy SEALs, the guys who got Bin Laden, and, of course the top of the pyramid, the secretive Delta Force.

Britain's renowned SAS as well — who might actually be the best of the bunch — Russia's deadly Spetsnaz, and, Canada's small but effective JTF2.

Elite warfighters that are highly trained and thoroughly tested, experts in weapons and combat, counterterrorism, direct action (small raids and ambushes), reconnaissance, aerial and marine infiltration, hostage rescue and recovery, covert missions and more.













Not to be outdone, the US Marine Corps Special Operations Command (MARSOC) is now pushing its elite squadron, the Marine Raiders — the best of the best of the famed"leathernecks" — with its "Cognitive Raider" initiative.

Much like Britain's specialized "Increment" unit within the Special Air Service (SAS), Marines sent into future special ops environments "must be able to understand them and then adapt their approaches across an expanded range of solutions," Scott R. Gourley of National Defense reported.

We're not talking about a group of jar-heads, sent to defend a beach, hold it at all costs and take heavy casualties. This is normally what the Marines do.

Rather, according to the Marine Corps Special Operations Forces (MARSOF) 2030 strategic vision outlining the Cognitive Raider innovation pathway:

"While tough, close-in, violent actions will remain a feature of future warfare, MARSOF must increasingly integrate tactical capabilities and partnered operations with evolving national, theater and interagency capabilities across all operational domains, to include those of information and cyber."

To facilitate that understanding and adaptation, MARSOC has implemented an annual event called the Cognitive Raider Symposium, also known as CRS.

Co-hosted with **the Naval Postgraduate School's** Defense Analysis Department, the multi-day gatherings provide myriad learning venues designed to hone the Marine Raiders' "tactical edges," Gourley reported.

And I don't think this means going without sleep for a week, sitting in cold ocean water, or carrying a heavy"tree of woe" for hours on end, as Navy SEALs must do.

The symposium not only addresses the Cognitive Raider pathway, but also illustrates MARSOF as a true connector of ideas and concepts.

Opening the third iteration of the symposium, Col. John Lynch, MARSOC deputy commander, identified several key traits: "It starts with being a problem solver, one that never becomes complacent but instead remains adaptable and forward thinking."

He described an "edge" where the Marine Raider asserts, "I'm not satisfied. There is more out there. There are ways to be better. There are ways to be more efficient. There are ways to be more lethal. And there are better ways to accomplish what we're trying to accomplish.

"I cannot pick a single period of time in my career ... where we have been challenged to evolve at the pace we're being challenged to evolve right now," he added.

"It is remarkable how fast we have to do it."

Douglas Borer, chair of the Defense Analysis Department at the **Naval Postgraduate School**, noted the conference's focus on "frontier technologies," offering both low-tech and high-tech examples while discussing how the technologies might alter strategic realities in great power competition with China and Russia.

"When I asked what frontier technologies a Cognitive Raider mostly followed, the list included things like automation, AI, advanced manufacturing, biotech, quantum computing, 5G, next-gen hardware robotics and space," said Matt Stafford, a State Department representative.

"These largely follow State's concerns. I know we both have much longer lists that we're also paying attention to, but it's good to hear that we share these worries.

"We also share some of your background worries about how these things will get used, or combined with each other, or just combined with existing technologies."

One example of that was provided by Chief Master Sgt. John Bentivegna, senior enlisted leader for Space Operations Command.

Bentivegna emphasized the criticality of space domain awareness at a time when "space is becoming congested."

In the evolving era of great power competition, he expressed the command's desire to explore partnering with MARSOC and Special Operations Command, observing:

"China has a satellite in space with a grappling arm. And Russia has anti-satellite weapons in orbit that could kinetically kill satellites. It's all in that grey area. What is an act of war in space and where is space going in the future?"











Dr. Ryan Maness, assistant professor in the school's Defense Analysis Department and director of the DoD Information Strategy Research Center, asserted that China is indeed the biggest threat, Gourley reported.

But, he also cautioned that the US government might be "over-hyping" that threat, citing some early evidence indicated that China might be hitting a wall."

While he characterized Russia as "outmatched in the conventional domain but punching above their weight in the cyber and information domains," he noted of Chinese efforts to obtain rather than develop critical technologies, "It's difficult to innovate when you're cheating."

SOCOM has come a long way, since its inception in 2006 — a reaction to the 9/11 attacks in New York. Reportedly, was created to fill what the Pentagon prudently saw as a future gap in special-operations forces.

"The early years were tough. In the beginning, we didn't have jack shit. No weapons, no ammo, no ranges, no mission, no nothing. Both the Corps and SOCOM shunned us, while the SEALs [Naval Special Warfare Command] wanted to control us. We were the red-headed stepchild," a former Marine Raider told Business Insider.

"What we did have, however, was a solid bunch of guys, about 100 operators and support Marines. All of them were as solid as they come because the leadership had handpicked them. We're talking senior Recon men with years of experience and numerous deployments under their belts.

"Same goes for the support and intel guys. Top-notch Marines on their respective fields who could probably outperform grunts on basic infantry skills because they went through much of our training," the former Raider added.

During the Global War on Terror, MARSOC contributed to the fight, but as the wars concluded or drew down, Marine Raiders have found themselves competing for missions and funds with units such as US Army Rangers or the SEAL Teams.

Since MARSOC is the new kid on the block, it tends to be relegated to less active areas of operations — ironically, however, these regions can get quite busy, and Marine Raiders have participated in some important operations, such the response to al-Shabab's attack on the Kenyan military base at Manda Bay in January 2020.

Meanwhile, Marine Raiders recently completed RAVEN unit readiness exercises alongside Marines from across the Fleet Marine Force as well as US Army Special Forces, earlier this spring.

RAVEN is MARSOC's pre-deployment unit readiness exercise, designed to evaluate Marine Special Ops Teams as well as provide valuable training and experience.

"This exercise has evolved over time to encompass a broad range of military operations," said a Marine special opes commander. It stresses interoperability with partner nation forces, other services, and government agencies and departments."

Going forward, symposium attendees explored how the MARSOF 2030 vision links to a focus on an operating concept identified as Strategic Shaping and Reconnaissance, or SSR.

The concept — the focus for future iterations of the Cognitive Raider Symposium — includes a wide array of skills and equipment to provide shaping and influence effects to be achieved through a hybrid approach utilizing selected special operations core activities and programs applied through intelligence operations, direct and indirect actions, and persistent development of ally and partner relations.

If you're puzzled by all those big fancy military terms, so am I.

Essentially, I think it means "a thinking man's" Marine Raiders.

"Semper Fi" with an added sting.

Yes, they may still take that beachhead and hold it, but they just might have some surprises up their sleeve.

<u>Jarhead elites: Marine Raiders are aiming high | MENAFN.COM</u> Jarhead elites: Marine Raiders are aiming high - Asia Times

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# ADA University wraps-up Advanced Regional Energy Security Symposium 2021 Caucasus with Closing ceremony

(MENAFN 10 Sept 21) (AzerTac 10 Sept 21)

The Closing ceremony of the Advanced Regional Energy Security Symposium 2021 – Caucasus was held on September 10 by the Center of Excellence in EU Studies at ADA University in partnership with the NATO Energy Security Center of Excellence, the **Naval Postgraduate School**, bp Azerbaijan, and State Oil Company of the Republic of Azerbaijan (SOCAR).

The Symposium kicked off with the Opening ceremony on September 6. Both events brought together industry leaders, policymakers, and professionals of academic institutions, international organizations, and public-private sectors. Energy security, regional terrorism threats, and cyber attacks were underpinned as the main topics of discussion.

The panel session organized within the frame of Closing ceremony was moderated by Dr. Anar Valiyev, dean of the School of Public and International Affairs at ADA University.

H.E. Mr. Lee Litzenberger, Ambassador of the USA to the Republic of Azerbaijan addressed the attendees and delivered a keynote speech:

"Azerbaijan's energy sector has been transformative for the country and for European energy security. By growing its renewable energy potential, Azerbaijan can build upon its role as an important player in energy security in the region and beyond."

Dr. Vitaliy Baylarbayov, Deputy Vice-President of SOCAR for Investments and Marketing and the panelist of the discussion, talked about the current trends and challenges shaping the energy sector. He mentioned that Azerbaijan will continue to work with partners in ensuring energy security in the Caspian regions. Keeping the right balance of secure energy supply is one of strategic goals of SOCAR.

The next speaker, Dr. Brenda Shaffer, **Naval Postgraduate School**, said that traditional geopolitics of energy is still alive and well.

With the aim of rendering the Symposium more interactive, over 20 participants representing ministries, public agencies, and companies participated in a wide array of presentations, discussions, group works, case studies, and exercises delivered by distinguished local and international experts from the USA, Turkey, and Ukraine.

All the workshops were hosted on ADA University campus. However, the enriched program of the event also included a virtual meeting with Dr. Alparslan Bayraktar, Deputy Minister of Energy and Natural Resources of the Republic of Turkey.

At the end of the Symposium, attendees received their certificates on successful completion of the program.

ADA University wraps-up Advanced Regional Energy Security Sy... | MENAFN.COM
ADA University wraps-up Advanced Regional Energy Security Symposium 2021 – Caucasus with
Closing ceremony - AZERTAC - Azerbaijan State News Agency (azertag.az)

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# Southern Gas Corridor to support Europe's energy security for decades to come - US ambassador

(MENAFAN 10 Sept 21)

US Ambassador to Azerbaijan Lee Litzenberger congratulated Azerbaijan on completing the Southern Gas Corridor (SGC), during the closing ceremony of Advanced Regional Energy Security Symposium 2021 – Caucasus, Trend reports.

The ambassador noted that that SGC is the 'project that will support European energy security for decades to come'.

"I want to reaffirm the US support for SGC and for Azerbaijan's efforts to expand deliveries to many European countries. It's good for Europe and its good for Azerbaijan," he said.













Litzenberger pointed out that the US fully backs Azerbaijan's energy supplies to Europe and beyond. He also hailed Azerbaijan's building necessary energy-related infrastructure.

Advanced Regional Energy Security Symposium 2021 – Caucasus, was held Sept. 6-10, by the Center of Excellence in EU Studies at ADA University (Azerbaijan), in partnership with the NATO Energy Security Center of Excellence, the **Naval Postgraduate School**, BP Azerbaijan, and State Oil Company of the Republic of Azerbaijan (SOCAR).

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# Azerbaijan's energy infrastructure to make it future supplier of hydrogen to Europe - US Ambassador

(AZER News 10 Sept 21)

The energy infrastructure that Azerbaijan built will make the country a future supplier of hydrogen to the European market, the US Ambassador to Azerbaijan Lee Litzenberger said during the closing ceremony of the Advanced Regional Energy Security Symposium 2021 – the Caucasus, Trend reports.

"New wind and solar projects show that Azerbaijan plays an active role in fighting climate change. Market based reforms in the Azerbaijan electricity sector are critical to accelerating the transition to green energy. So we look forward to working in Azerbaijan in this direction," he said.

Litzenberger also said that the United States has a lot of expertise and a lot of companies with expertise in renewable technologies.

"I know that US companies are prepared to partner with Azerbaijan in bringing renewable to the market. The best way to get US companies involved is through the transparent tender process that will attract the best offers, the best talents, and the best solutions to the challenges Azerbaijan faces."

The Ambassador noted that the transformation of the Azerbaijan energy sector has been beneficial not only for the country but also for European energy security. By growing its renewable energy potential, Azerbaijan can become an important player in energy security in the region and beyond.

"Let me end by saying that the US is staying ready to continue supporting Azerbaijan in developing security sector and in its important contributions to energy security," he added.

Advanced Regional Energy Security Symposium 2021 – the Caucasus, was held Sept. 6-10, by the Center of Excellence in EU Studies at ADA University (Azerbaijan), in partnership with the NATO Energy Security Center of Excellence, the **Naval Postgraduate School**, BP Azerbaijan, and State Oil Company of the Republic of Azerbaijan (SOCAR)

Azerbaijan's energy infrastructure to make it future supplier of hydrogen to Europe - US Ambassador (azernews.az)

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#### **FACULTY:**

# How 'climate warming' played role in intensification of Hurricane Ida

(ABC 12 10 Sept 21) ... Roxie Bustamante

As we keep an eye on what could be developing in the Gulf of Mexico, two scientists weigh in on what was learned from Hurricane Ida and how climate change is playing a role in active hurricane seasons.

Dr. Hal Needham, a climate data and natural hazards scientist with Flood Information Systems in Galveston, responded to Louisiana as Hurricane Ida was making landfall last month.

"It showed us a lot of different things, one of which being a lot of people in New Orleans and southeast Louisiana really did not have time to evacuate," Needham said. "New Orleans needs about 96













hours to establish counter flow. That's when all the interstate lanes goes inland. They did not have that much time so they did not do an official evacuation. Even the emergency messaging boards in town in New Orleans, the day before landfall, said nothing about this hurricane. They just felt like they didn't have enough time to evacuate."

Needham said the lessoned learned is that there may not always be 96 hours, or even 72 hours, to evacuate in storms such as Ida that underwent rapid intensification, which can be a symptom of climate warming.

"Really, we need to be talking about these things and having a discussion," Needham said. "How do we quickly evacuate the coast if an explosive storm like Ida does not give us enough time to get everyone out of harm's way?"

Eva Regnier, the professor of operations and logistics management at the **Naval Postgraduate School**, agrees.

Regnier said due to global warming, storms like this could happen more often and with "very little warning.

"With climate change, and particularly global warming, it's warming up the oceans," Regnier said.
"It's warming up the atmosphere. That means the atmosphere takes or holds more water. It means the storms have more energy, and that energy is going to come out somehow and that water is going to come out somehow. So we aren't necessarily looking at more frequent hurricanes, and we're not necessarily looking at any more difficulty in forecasting, so that's the good news."

Needham said this means areas in our region that did not flood before in a previous storm may see flooding.

"Hurricanes throw three hazards at us: wind, heavy rain and salt water storm surge, and every hurricane is different," Needham said. "Stay tuned to your credible sources like ABC13, the work we're doing with flood information systems and the National Weather Service. We will give you great guidance, because every storm is different and you want to be on top of the latest information."

Needham said to find more stories and information about extreme weather and disaster science, visit GeoTrek.

<u>Tropical weather: How 'climate warming' played role in intensification of Hurricane Ida - ABC13</u> Houston

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#### What do we know about U.S. counterterrorism spending? Not much.

(Market Place 10 Sept 21) ... Nancy Marshall-Genzer

The federal government expanded significantly after the 9/11 attacks. New agencies were created – like the Department of Homeland Security (DHS) and Transportation Security Administration (TSA). More money was spent on counterterrorism, to prevent another attack. How much? It's complicated.

This much we know: President Joe Biden has included about \$52 billion for DHS in his 2022 budget request. The TSA is part of DHS and generally gets a roughly 10% slice of DHS's budget, according to Heidi Peltier, director of the 20 Years of War Project at Boston University.

"The entire budget for the Department of Homeland Security has been roughly \$1 trillion, cumulative, since 2003," Peltier said.

It's not so easy to tally up what the U.S. has spent on counterterrorism, since 9/11. The DHS didn't respond to interview requests, and counterterrorism spending extends beyond the agency. Mackenzie Eaglen, a defense analyst at the American Enterprise Institute, tries to track counterterrorism spending.

"There's no simple way to do that," she explained. "Partly because, I think there's obfuscation – partly by dysfunction and partly by design."

Eaglen says some spending, for example by intelligence agencies, is classified. And there's not even a government-wide definition of what counts as counter terrorism spending. So it can't be broken out of agency budgets, and added up. There's also less transparency now. The Office of Management and













Budget stopped tallying up the counterterrorism budget three years ago. Eaglen's best estimate is 15% to 20% of all discretionary government spending per year, goes to prevent terror attacks.

"And if you were to look holistically back, since 9/11, it's a number easily over \$3 trillion," Eaglen added.

Eaglen says if you can't fully track and account for each of those dollars it's hard to know if the money was well spent, or effective. But, the U.S. hasn't had another terrorist attack on the scale of 9/11.

"We have been able to keep this country much safer than we had expected 10, 20 years ago," said Erik Dahl, a retired Naval intelligence officer now teaching at the **Naval Postgraduate School** in Monterey, California.

What do we know about U.S. counterterrorism spending? Not much. - Marketplace

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#### **ALUMNI:**

#### Mercyhurst welcomes new staff members

(The Merciad 8 Sept 21)

The academic 2021-2022 school year has brought about a lot of new faces to the Mercyhurst campus. Not only are we welcoming the incoming class of freshman students, but also our wonderful University President Kathleen Getz and twenty-seven new faculty members. The new faculty members spread wide across the various colleges and disciplines here at Mercyhurst University. It is very exciting to welcome these professors, some of whom you may know through classes that you are taking this semester.

The Intelligence Program in particular has gained quite a few members including Dalene Duvenage and Brooke Shannon who are both Assistant Professors of Intelligence Studies. Peter Correa—oftentimes referred to as The Colonel—is also an Assistant Professor of Intelligence Studies. This is Correa's first year teaching full-time within Ridge College, but this marks his third year teaching at Mercyhurst. "I love teaching at Mercyhurst because of the quality of our students and because we are a university delivering cutting edge programs facilitated by professors with both real-world and academic credentials," said Correa.

The Colonel is a graduate of the United States Military Academy at West Point, NY where he received his Bachelors of Science in Engineering and Leadership. He continued his education at The **Naval Postgraduate School** in Monterey, CA where he received his Master of Science in Financial Management. Correa served in uniform for twenty-four years until he retired from active duty in 1996 as a Lieutenant Colonel. Correa is a very active professor, "I believe in making education hands-on and interactive rather than a total 'Death By PowerPoint' experience. I am a strong advocate for experiential learning levered by technology," said Correa. One of Correa's favorite classes to teach is Business Intelligence as it, "Allows students to peel the onion of or-ganizations," said Correa.

Mercyhurst is very fortunate to have an educator like Correa who believes in blending together handson learning with also technical learning skills and styles. The newly-instated Nursing Department is also very fortunate to have gained Professors Sara Finchio and Carolyn Zaffino who are both Instructors of Nursing, as well as Professor Colleen Miller who is not only an Instructor of Nursing but also a Clinical Simulation Coordinator. There were a few additions to the political science world here at Mercyhurst, as well. These include Abolghasem Bayyenat, who is an Assistant Professor of Political Science, and Eric T. Wagner, an Instructor of Political Science.

Alethea Gaarden is also an Instructor of not only Political Science but also an Instructor of English. Gaarden, who is a Mercyhurst alumna, is thrilled to be back on campus. When Gaarden was a Mercyhurst student she double majored in political science and English. She ended up focusing on English and received her Master's at Ohio University where she focused on Old and Medieval English. A little-known fact about Gaarden is that she worked with the Flagship Niagara League down on the bayfront where she got interested in maritime studies and literature of the sea. Gaarden worked as a mariner and carpenter for













the Flagship Niagara League for a couple of years, "It was nice to have that balance between academics and being engaged in the community in a different way," said Gaarden. She worked at Mercyhurst parttime for a while but was eventually drawn to become full-time here at Mercyhurst University. Gaarden says that her favorite part of working at Mercyhurst is the students, "Mercyhurst students are consistently so engaged. With everything that we have experienced over the last year and a half to two years, the effort that people put in and the work that they have done to still be present in their classes and in their departments has been amazing to see," said Gaarden. Some of the classes that Gaarden teaches are a few American Government courses, Intro to Technical Writing as well as Research and Writing. Gaarden is such a wonderful addition to our campus as she truly cares for her students and being a part of their journey through education.

Within applied forensic sciences, the University is pleased to welcome Kristine A. Kortonick as a Visiting Instructor of Applied Forensic Sciences and Stephanie Melillo as a Visiting Assistant Professor of Forensic Science. Anthony V. Lanfranchi is also an Instructor of Applied Forensic Sciences that is new on campus.

The university is fortunate to have gained professors in primarily nursing, intelligence studies, applied forensic sciences and political sciences, but there are also many new professors in other practices. These professors include the following: Derek Beeler is an Assistant Professor of Athletic Training as well as a Clinical Education Coordinator. Jesse Decker is an Instructor of Data Science. Lawrence M. Downey, Jr. is an Assistant Professor of Mathematics. Sey-ma Inan is an Assistant Professor of Psychology. Michelle Kephart is an Instructor of Sociology and Social Work. Sadia Yaqub Khan is an Assistant Professor of Marketing. William J. Meyer, Jr. is an Assistant Professor of Anthropology and Archeology. Julia M. Morgan is an Assistant Professor of Philosophy. Elizabeth M. Pyne is an Assistant Professor of Religious Studies. Katelyn S. Reisenau-er is an Assistant Professor of Physician Assistant Studies. Elizabeth M. Sanders is an Assistant Professor of Applied Sociology and Social Work. Michael Silker is an Instructor of Criminal Justice. Katie Summers is an Instructor of Fashion Merchandising. Qiuju Tian is an Instructor of Education. Bradley Treece is an Assistant Professor of Physics. It is wonderful to see the campus growing as these new faculty members begin their careers at Mercyhurst University.

Every person has their own unique story to share and each of these stories offers something different to everyone. As a campus community, we are blessed to have these twenty-seven new members, so be sure to welcome them in the classroom and around campus.

Mercyhurst welcomes new staff members – The Merciad

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#### NAVAIR Change of Command: Peters Retires, Chebi Takes the Helm

(Southern Maryland Chronicle 10 Aug 21)

Vice Adm. Carl P. Chebi relieved Vice Adm. Dean Peters as commander, Naval Air Systems Command during a change of command ceremony Sept. 9 at Naval Air Station Patuxent River, Maryland.

Chief of Naval Operations Adm. Mike Gilday presided over the ceremony after promoting Chebi to vice admiral. During his speech, Gilday highlighted the many achievements and traits that made Peters an effective and accomplished leader.

"It's a huge responsibility," Gilday said. "Our NAVAIR enterprise is foundational to generating American naval power where it matters most—overseas. Every day, over 45,000 dedicated Sailors and civilians and contractors support eight Fleet Readiness Centers, and 34 program offices across our Navy. Over the past three years, NAVAIR has delivered hundreds of new aircraft, tens of thousands of new lethal weapons, hundreds of aerial unmanned vehicles, many ground support systems for unmanned naval aviation vehicles, over 200 innovative training capabilities, repaired thousands of aircraft, thousands of aircraft engines, and hundreds of thousands of critical components to keep our fleet forward," Gilday said.

Gilday also recognized Peters for his leadership.













"Over the past three years, I have watched him provide some of the most effective, innovative and masterful leadership in the entire Navy. Aviation readiness and its lethality are soaring like never before," he said.

For Peters, the ceremony marked his retirement following a 36-year Navy career.

A 1985 graduate of the U.S. Naval Academy, Peters earned his wings in 1986 and flew SH-2F helicopters on deployments to the North Atlantic, Arabian Gulf and the Gulf of Mexico in support of antisubmarine warfare, surface warfare and counternarcotics operations.

Peters later completed tours as a test pilot, instructor pilot and squadron department head, including a stint as commanding officer of Air Test and Evaluation Squadron (HX) 21. His early acquisition assignments included avionics lead for the MH-60R Seahawk, deputy program manager for the Vertical Takeoff and Landing Unmanned Aerial Vehicle (UAV) program, and assistant program manager for systems engineering for all Navy and Marine Corps UAVs.

After reading his orders from the podium, Vice Adm. Carl Chebi, right, salutes Vice Adm. Dean Peters and assumes duties as Commander, Naval Air Systems Command on Sept. 9 at Naval Air Station Patuxent River, Maryland. (U.S. Nay photo by Peter Fitzpatrick/Released) Credit: Peter Fitzpatrick / U.S. Navy

Peters went on to serve as program manager of the H-60 and presidential helicopters program offices. In October 2014, Peters assumed command of the Naval Air Warfare Center Aircraft Division and served as NAVAIR's assistant commander for research and engineering. He remained in those posts until his arrival at Program Executive Office, Air, ASW, Assault, and Special Mission Programs. Peters assumed command of NAVAIR on May 31, 2018.

As NAVAIR commander, Peters was instrumental in leading NAVAIR into a new organizational structure known as a Mission Aligned Organization. The concept brings broader and stronger support for acquisition program managers and Fleet Readiness Centers, strengthens relationships throughout the Naval Aviation Enterprise (NAE) and supports the priorities of the Air Boss and Deputy Commandant for Aviation.

"You'll recall that a little over three years ago, we made a commitment to each other, a commitment to build on the efforts of those who had gone before, but specifically to achieve readiness and speed, like never before and to do it by shedding everything—and I mean everything—that did not directly tie to fleet outcomes," Peters said. "This mission aligned approach, as it would come to be known, would be very difficult, but absolutely necessary. We prioritized the health of naval aviation quality, reliability, training, and set out to make our Fleet Readiness Centers world class. We prioritized capabilities, focusing our research and test facilities on cutting-edge technologies that could be rapidly delivered to the fleet. And we prioritized affordability to ensure naval aviation could afford its future.

"Although there is still much work to do and opportunities for improvement in every area, significant progress has been made—better quality, high reliability, readiness, faster transactions, reduced costs and more equipment down range where it's needed. The credit is to you, our talented NAVAIR workforce and leadership teams."

Peters shared examples of the exemplary work, resilience and grit demonstrated by those under his command during two very trying events—the first being the response to back-to-back earthquakes that occurred in July 2019 at Naval Air Weapons Station China Lake, California, and the more recent challenges posed by the COVID-19 pandemic.

"In spite of COVID, you all met and exceeded all commitments and did it faster than ever before," he said.

Peters then introduced his successor, and asked the NAVAIR workforce to welcome him aboard.

"Naval aviation requires our best efforts every day," Peters said. "I commend to you Vice Adm. Carl Chebi, an experienced aviator, acquisition professional, a gifted engineer and program manager. He will absolutely lead NAVAIR to the next level in support of naval aviation. I ask only that you give him the same support and responsiveness that you provided me."

Chebi earned a bachelor of science in computer systems engineering and a commission as an ensign from the Naval Reserve Officer Training Corps at Rensselaer Polytechnic Institute. He is a graduate of













the U.S. Naval Test Pilot School (USNTPS) and Navy Fighter Weapons School, and holds an executive master's degree in business administration from the **Naval Postgraduate School**.

He served operationally as an F-14 pilot in Fighter Squadron (VF) 142 deployed with USS Dwight D. Eisenhower (CVN 69) and executive officer and commanding officer for Strike Fighter Squadron (VFA) 192 deployed with USS Kitty Hawk (CV 63) to Atsugi, Japan. During these tours, he participated in Operation Southern Watch and many Western Pacific deployments.

His shore tours include service as an aircraft and weapons test pilot in both Air Test and Evaluation Squadrons (VX) 23 and 30 and as deputy for Strike Aircraft Plans and Requirements for the Office of the Chief of Naval Operations.

Chebi also completed numerous acquisition tours beginning with the USNTPS, where he flew the Mirage 2000 aircraft in France. His program management experience includes serving as a deputy program manager for the F/A-18 and EA-18G Program Office, program manager for the Precision Strike Weapons Program Office, and program manager for the Naval Integrated Fires Program Office. He also served as NAVAIR vice commander and as the Program Executive Officer Command, Control, Communications, Computers, and Intelligence (C4I)/Program Executive Officer Space Systems. In September 2019, he assumed duty as the deputy program executive officer, F-35 Lightning II Joint Program Office.

Chebi has 3,700 plus flight hours and more than 700 carrier arrested landings. He has logged hours in the F/A- 18 A-F, Mirage 2000, F-14A-D, F-15, F-16, P-51 and numerous other aircraft.

"To the men and women of NAVAIR, I could not be happier rejoining this team," Chebi said.

"Our success is defined by delivering the right capability at the right cost, at the right time to ensure the fleet can successfully execute their mission and return home safely. Our job is clear, we must deliver integrated warfighting capability that is dominant, affordable and available. We must deliver that capability on an accelerated timeline.

NAVAIR Change of Command: Peters Retires, Chebi Takes the Helm - The Southern Maryland Chronicle

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