



# NPS IN THE NEWS

## Weekly Media Report – May 23- June 6, 2023

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### RESEARCH:

#### [Department of the Navy Recognizes Accomplishments on One-Year of Climate Action 2030 and Requests Innovative Ideas](#)

*(Navy.mil 24 May 23)*

Throughout the last year, the Department of the Navy (DON) and its partners made significant progress towards the priority initiatives outlined in its climate strategy, Climate Action 2030. These accomplishments improved installation resilience, operational efficiency, and generated significant financial savings. All this work improved the Department's national security footing and mission... The **Naval Postgraduate School** and The Stanford Doerr School of Sustainability established an educational partnership to combine research expertise and resources to explore and address the increasing challenges of global climate change, energy security, and sustainability for the military. The DON conducted two climate-focused tabletop exercises which examined the impacts that climate change has on mission, readiness, and warfighting capacity.

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#### [AT&T Awarded Naval Postgraduate School Foundation's 2023 Corporate Partner of the Year Award](#)

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The Naval Postgraduate School Foundation announced AT&T as its 2023 Corporate Partner of the Year during the 18th Annual America's Heroes Charity Golf Tournament Dinner on June 5. The award recognizes AT&T's strategic collaboration with the Naval Postgraduate School in support of education, research and applied solutions.

### STUDENTS:

#### [Fleet Tactics & Special Warfare - Naval Postgraduate School Essay Contest—First Prize](#)

*(USNI 1 June 23)* ... Kenneth Walls

Since its first publication in 1986, the three editions of Captain Wayne Hughes' Fleet Tactics and Naval Operations have become the definitive works on modern naval tactics in cyber, littoral, and fleet engagements. Despite the notable absence of Naval Special Warfare (NSW) from the text, NSW's capabilities can support Hughes' and coauthor Rear Admiral Robert Girrier's six fleet functions: scouting and antiscouting; command and control (C2) and command-and-control countermeasures (C2CM); and firepower and counterforce.1 Fleet Tactics describes best practices for winning individual battles; NSW can directly contribute to naval victory in



combat, especially in the littorals.<sup>2</sup> Indeed, special forces contributions are most applicable within these confined coastal spaces crowded by commercial and military traffic—or, as Fleet Tactics puts it, “where the clutter is.”<sup>3</sup>

## [2023 AESS Award Recipients](#)

*(IEEE 1 June 23)*

Congratulations to all AESS and RadarConf23 Award Recipients on these remarkable achievements. Thank you for your hard work, dedication, and contributions to the AESS and Radar communities... **FIRST PLACE:** Alexander Denton of the **Naval Postgraduate School**- Deep-Layer Training of CNN for SAR with Two-Stage Data Augmentation

## **FACULTY:**

### [National Security This Week – The Islamic Republic of Iran \[Audio Interview\]](#)

*(KYMN 24 May 23)* ... Jon Olson

Host Jon Olson talks with Professor Brenda Shaffer of the United States **Naval Postgraduate School** about the US’ turbulent relationship with Iran, and how that country’s government relates to both the rest of the world and its own people.

### [Remembering a Hero Through Outcomes](#)

*(DVIDS 29 May 23)* ... Maj. Gregory Carroll

A new formal agreement between the Deputy Commandant for Information (DC I) at Headquarters Marine Corps and the **Naval Postgraduate School** (NPS) established the Lt. Col. Kevin M. Shea USMC Chair for Information at NPS April 20, 2023 with efforts already underway to fill the position.

### [DLA R&D and the Navy Postgraduate School visit DLA Distribution Norfolk](#)

*(DLA 30 May 23)* ... Robert Doggett

Defense Logistics Agency Distribution Norfolk, Virginia, hosted staff from DLA Research & Development’s strategic distribution and disposition team, DLA Distribution Headquarters and the **Naval Postgraduate School** in support of DDNV’s Material Processing Center fleet-informed forecasting project, May 12. Dr. Jefferson Huang, **NPS**, Navy Lt. Cmdr. Adam Davidson, **NPS**, Danielle Williams R&D SDD, Jack Holmes, R&D SDD and Jamal Smith, DLA Distribution Headquarters, visited DDNV’s MPC, toured the USS Dwight D. Eisenhower (CVN 69) and held a mid-point project brief for the Fleet Type Commanders.

## **ALUMNI:**

### [Memorial Day Services](#)

*(Carroll County Messenger 23 May 23)* ... Thomas Clapper

Commander Ricky G. Wiley of Canton is the guest speaker for the Carrollton Memorial Day observance May 29 at Westview Cemetery in Carrollton...He received advanced education through the **Naval Postgraduate School** of Monterey, CA.

### [Retired Navy Captain from Alabama joins Naval Meteorology and Oceanography Command](#)

*(Montgomery Advertiser 22 May 23)* ... Jonathan Holloway

Recently, Alabama-native (Mobile) and U.S. Naval Academy graduate Todd Monroe joined the U.S. Naval Meteorology and Oceanography Command (Naval Oceanography) as the new Deputy Maritime Operations Center Director...Monroe served as a Surface Warfare Officer and Naval Oceanographer during 27 years of active service. He holds a dual Master of Science degree in Oceanography and Meteorology from the **Naval Postgraduate School**, a Master of Science degree in Hydrography from the University of Southern Mississippi, and a Certificate of Nonprofit Management from the University of San Diego.



## [Harvard Awards Six Honorary Degrees](#)

*(Harvard Gazette 25 May 23)*

Harvard presented six honorary degrees during Thursday's Commencement ceremony in Tercentenary Theatre... Among other things, he sought to mitigate an array of global security risks, advocated for international partnerships, advanced methods to combat terrorism, and oversaw the end of the policy barring military service by openly gay, lesbian, and bisexual individuals. A graduate of the U.S. Naval Academy and the **Naval Postgraduate School**, he served in numerous leadership roles before becoming chairman of the Joint Chiefs, including vice chief of naval operations, commander of U.S.

## [Admiral McRaven Quotes From the Retired Navy Admiral](#)

*(Every Day Power 24 May 23)* ... Stephanie Kirby

Take a look at these Admiral McRaven quotes by this high-achieving former Naval Officer.

William Harry McRaven was born in Pinehurst, North Carolina, in 1955.

He graduated from The University of Texas at Austin and has a master's degree from the **Naval Postgraduate School**.

## [HII's Mission Technologies Division Promotes Garry Schwartz to Chief Operating Officer and Todd Gentry to President of its C5ISR Business](#)

*(Yahoo Finance 1 June 23)*

HII's Mission Technologies division has promoted Garry Schwartz (left) to chief operating officer of the division and Todd Gentry to president of its C5ISR business group... Prior to joining HII, Schwartz served in various senior leadership roles for SAIC and Alion Science and Technology with responsibility for multimillion-dollar technology-based portfolios of domestic and international programs, supporting a broad array of defense and federal customers. Schwartz retired from the U.S. Marine Corps in 2004 with more than 21 years of service as an officer and enlisted Marine with multiple combat tours and a master's degree in operations research from the **Naval Postgraduate School**.

## [P-8A Poseidon: A Military System Designed To Win](#)

*(1945 6 June 23)* ... Ray Craig

In today's unstable global environment, the importance of multi-role, data-integrated weapons systems such as the P-8A Poseidon, has only increased... Ray Craig is a graduate of the U.S. Naval Academy, the U.S. **Naval Postgraduate School**, the U.S. Naval Test Pilot School, and holds a BS and Masters in Aeronautical Engineering. After his active duty naval service, Ray continued his career as a military and commercial test pilot for Boeing for over 27-years.

## [AI Is a Team Sport](#)

*(USNI 6 June 23)* ... Julia Weber

In 1996, Scottie Pippin, Dennis Rodman, and Michael Jordan led the Chicago Bulls to an 87-75 victory over the Seattle SuperSonics, winning the NBA Championship. It was not actually a great game for Jordan, who averaged just 26.3 percent from the field compared to his career average of nearly 50 percent, but the Bulls were able to capitalize on nearly a decade of team building among long-time members such as Jordan and Pippin, as well as among newcomers Rodman, James Edwards, and John Salley, who joined the team that year but who previously had played together for many years with the Detroit Pistons. The key takeaway? Championship teams are not built overnight, but through years of practicing together... If the Department of the Navy wants to develop, field, and maintain world-class AI tools that will help convince U.S. adversaries the fight is not worth it and ensure they will lose if they try, it needs to start intentionally building AI teams and providing them with the tools and equipment to train and operate as a team. A good starting point would be to put master's and PhD-level graduates of the **Naval Postgraduate School's** Computer Science, Operations Research, and Electrical Engineering Departments into teams, augmented by civilian data and DevSecOps engineers, as well as enlisted communication, intelligence, or autonomous vehicle operators as appropriate to the project. These teams then would need access to computing and programming resources, as well as sufficient time to develop and test algorithms.



## UPCOMING NEWS & EVENTS:

**June 8–9:** NWSI [AI Naval Innovation Exchange Workshop](#)

**June 16:** Spring Graduation Ceremony

**June 19:** Juneteenth (Federal Holiday)



## RESEARCH:

### Department of the Navy Recognizes Accomplishments on One-Year of Climate Action 2030 and Requests Innovative Ideas

*(Navy.mil 24 May 23)*

Throughout the last year, the Department of the Navy (DON) and its partners made significant progress towards the priority initiatives outlined in its climate strategy, Climate Action 2030. These accomplishments improved installation resilience, operational efficiency, and generated significant financial savings. All this work improved the Department's national security footing and mission.

DON has undertaken a comprehensive and multifaceted approach to address the urgent national security challenges posed by climate change. Through robust collaboration with partners, stakeholders, and experts in the field, the Department implemented a range of innovative measures that promote national security, force modernization, reduce energy demand, and enhance the survivability, adaptability, and lethality of our operations. One of these innovative measures was the issuance of a series of memorandums as DON Chief Sustainability Officer to set and shape the Department's sustainability policies and practices.

"The Department of the Navy is committed to ensuring that the Navy and Marine Corps is the world's greatest maritime fighting force and the partner of choice for our international allies and partners," said Assistant Secretary of the Navy (Energy, Installations, and Environment) and Chief Sustainability Officer Meredith Berger. "We do that by maintaining every competitive advantage, and for that reason we forcefully confront the national security threats posed by climate change. Through collaborative and innovative efforts, our Sailors, Marines, and dedicated civilians have demonstrated that climate readiness is mission readiness."

Some of the major DON accomplishments from the last year include:

- The **Naval Postgraduate School** and The Stanford Doerr School of Sustainability established an educational partnership to combine research expertise and resources to explore and address the increasing challenges of global climate change, energy security, and sustainability for the military. The DON conducted two climate-focused tabletop exercises which examined the impacts that climate change has on mission, readiness, and warfighting capacity.
- Marine Corps Logistics Base Albany became the Department of Defense's first energy "net-zero" military installation. MCLB Albany's energy improvements save hundreds of thousands of taxpayer dollars each year and reduce local pollution by utilizing clean energy and diverting landfill methane pollution into power. The improvements make the base and surrounding community more resilient to energy disruptions, and better equipped to fulfill its primary mission: ensuring that Marines around the world have what they need to fight and win.
- The Navy and the Port of San Diego signed a first-of-its-kind agreement to participate in the California Low Carbon Fuel Standard credit market. The Navy generated Low Carbon Fuel Standard credits equivalent to \$4.5 million by limiting emissions of greenhouse gases from pier side ships at Naval Base San Diego, and it will reinvest these savings into energy infrastructure.
- The Navy installed the advanced Global Energy Information Systems (GENISYS) upgrade in twenty-three Arleigh Burke-class guided-missile destroyers. GENISYS collects, consolidates, processes, and presents energy data that gives commanders the ability to make informed decisions on energy usage, availability, and efficiency.

Year in Numbers:

- 595,000 trees planted on DON lands
- 240,000 tons of carbon to be sequestered annually by 2050 from revegetation and restoration projects



- 926 electric vehicles ordered across DON
- 3 new microgrid projects awarded
- 10 installation natural infrastructure assessments
- 2 installation resilience plans finalized
- 6% reduction in purchased electricity from FY21 to FY22

DON Chief Sustainability Officer Serial Memos:

- Serial One: Infrastructure
- Serial Two: Water Security
- Serial Three: Nature-Based Resilience
- 

The Department of the Navy’s Sailors, Marines, and civilians are continuously identifying innovative practices and solutions to the Department’s complex problems. In order to tap into this innovation happening at the installation, team, and individual level, as well as to harness the best ideas to meet its climate and sustainability goals, interested members of the DON community are encouraged to contribute their ideas and information through the Department’s climate website: [www.secnav.navy.mil/climate](http://www.secnav.navy.mil/climate). If the Department proceeds with a submitted idea, they will be recognized by the Assistant Secretary (Energy, Installations, and Environment) to the individual(s) involved. This new website also features EI&E-focused news from around the DON and a one-stop-shop for all EI&E resources.

The Department’s Climate Action 2030 strategy document is available for download [here](#).

[Department of the Navy Recognizes Accomplishments on One-Year of Climate Action 2030 and Requests Innovative Ideas > United States Navy > News Stories](#)

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## **NPS Professor and Student Develop Patented Self-Sealing Fuel Line**

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NPS associated professor Dr. Ray Gamache and U.S. Marine Corps Maj. Christopher Phifer, an NPS alumnus, recently received a patent for a self-sealing fuel line which benefited from their novel application of elastomeric materials.

Patents from the Naval Postgraduate School (NPS) are a measure of novel inventions, but each also tells a story of a relevant idea with warfighting impact. NPS Department of Physics Associate Professor Ray Gamache and his former graduate student, NPS alumnus U.S. Marine Corps Maj. Chris Phifer, developed and recently patented a new polymer-based, self-sealing fuel line capable of withstanding a .50 caliber bullet without losing so much as a single drop.

“We’re not just a physics department, we’re the applied physics department,” Gamache said. “While we’re doing things that involve fundamental research, what we’re ultimately doing is pursuing applied solutions with our military students that are important to the warfighter.”

Gamache credits the operational experience and tenacity of Phifer to develop and test multiple prototypes for his thesis to arrive at the right design of a “heterogeneous elastomer system” for a pressurized fuel line to immediately snap back into position sealing simulated combat damage.

“It was a process to build, test, learn until we got it right,” Phifer recalled. “The challenge was that I had to worry about both entry and exit points, so we created multiple 8-inch lengths of hose made from the polymers we selected, sealed on one side and a pressure fixture on the other, and found certain properties performed better on sealing the entry wound and others performed better sealing the exit wound.



“It was during the second phase of this process that we decided to incorporate multilayered polymers with opposing material characteristics, and discovered through trial and error that too many layers reduced the performance but the design with two different composites was able to self-seal.”

Self-sealing technology has been around for some time – since World War I, to be precise. Legacy systems relied on specific interactions with fossil fuels to function and thus proved obsolete with the introduction of new types of fuel. The challenge, Gamache explained, was finding the correct materials to employ.

After testing out various materials to varying effects, Gamache and Phifer found that polyureas and polythioureas worked best. Capable of 300 percent elongation – “rubber on steroids,” according to Gamache – the materials immediately “snapped back” after being pierced by the bullet.

“It isn’t rocket science,” Gamache said. “You simply need a material that has elongation and strength to it so that it has a memory of what it used to be like. When the bullet pokes a hole through it, it just goes back and pushes everything to where it used to be.”

While the research by Gamache and Phifer was initially conceived for aviation applications, Gamache noted that the technology can also apply beyond fuel lines.

“It can be any kind of line,” he said. “It’s a technology that gives you self-sealing and – most importantly – instantaneous self-sealing. There’s a lot being published on self-healing, i.e., closing up over time, but you don’t want self-healing on a fuel line because you’re going to be out of gas before long. Self-sealing is what we are after and elastomeric materials do that.”

Phifer is now stationed at U.S. Army Tank-automotive and Armaments Command (TACOM) helping develop the joint Advanced Reconnaissance Vehicle (ARV) for the Marine Corps, and agreed that the technology is important, but so is the process.

“This was a team effort with Dr. Gamache, the machine shop, the physics lab techs and even a summer high school intern,” Phifer added. “I have used what I learned from both my physics studies and my applied research process in my role with the ARV program. My time at NPS allowed me to work and understand physics and engineering concepts and develop my problem-solving skills to address the daily issues that arise in a program office.”

The research into self-sealing fuel lines may not fundamentally alter the face of modern warfare, but the technology developed has the potential to provide a marked battlespace advantage for America’s military forces. Increased survivability of warfighter and equipment, extended loiter times and decreased maintenance demands are just a few examples of this technology’s potential impact.

Entitled “Self-Sealing Hose,” the patent went public in November 2022 and is available for licensing through NPS’ Technology Transfer Program.

Innovation driven, NPS develops warfighters and warfighting solutions. Read more about the technology patent:

<https://techlinkcenter.org/technologies/self-sealing-hose/7b946c58-00de-4437-8505-e98747d7295e>

The primary objective of the NPS Technology Transfer Program is to initiate partnerships with industry and/or academia, license existing technologies, and encourage and assist faculty and staff to transfer newly-developed technologies to the private sector. For more information on the program and how to work with NPS, visit <https://nps.edu/web/research/technology-transfer>.

[NPS Professor and Student Develop Patented Self-Sealing Fuel Line - Naval Postgraduate School](#)

[NPS Professor and Student Develop Patented Self-Sealing Fuel Line > United States Navy > News](#)

[Stories](#)

[Navy Develops Patented Self-Sealing Fuel Line - MilitarySpot.com](#)

[Self-sealing fuel line ‘can withstand .50 cal bullet without losing a single drop’ \(imeche.org\)](#)

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## **AT&T Awarded Naval Postgraduate School Foundation's 2023 Corporate Partner of the Year Award**

*(EIN 6 June 23)*

The Naval Postgraduate School Foundation announced AT&T as its 2023 Corporate Partner of the Year during the 18th Annual America's Heroes Charity Golf Tournament Dinner on June 5. The award recognizes AT&T's strategic collaboration with the Naval Postgraduate School in support of education, research and applied solutions.

AT&T formalized its collaboration with the Naval Postgraduate School in July 2020 with a three-year Cooperative Research and Development Agreement (CRADA). The agreement allows NPS faculty and students, and AT&T representatives to explore and develop "5G at Sea" and edge computing-based maritime solutions aimed at benefiting national defense, homeland security, and industry.

In its third year, the Corporate Partner of the Year Award is presented to a company that has enabled interdisciplinary and innovative collaboration and empowered the NPS community to drive world-changing advancements for defense, industry, technology, climate and more — right now and into the future.

"We are honored to be recognized as 'Corporate Partner of the Year' by the Naval Postgraduate School Foundation," said Lance Spencer, Client Executive Vice President – Defense, AT&T Public Sector. "It's a considerable vote of confidence and further inspiration in our quest to deliver the benefits of AT&T 5G to our nation's defense and across the private and public sectors. We are enormously grateful to our collaborators at the Naval Postgraduate School for sharing our commitment to continuous innovation with 5G."

Under the agreement, AT&T has installed a 5G millimeter wave antenna atop a 50-foot tower at the NPS Beach Lab in Monterey. The antenna supports course and lab work at NPS, facilitates research and development in support of U.S. Indo-Pacific Command, and enables an all-domain research environment for shared collaboration with the U.S. Navy and other industry partners. AT&T is working with NPS staff to install seven additional 5G antennae on the NPS campus to enable highly secure 5G connectivity in the academic quad and connect to the existing antenna at the Beach Lab.

The Naval Postgraduate School Foundation has supported the AT&T and NPS collaboration by providing more than \$450,000 in funding to convert an old county wastewater treatment plant into what is now the NPS Beach Lab where AT&T's 5G antenna is sited. By leveraging some of the funding provided by the NPS Foundation, NPS was able to institute a \$42 million dollar, 5-year funding vehicle to expand collaborative agreements in the development and fielding of autonomous systems and robotics. This funding vehicle enabled the initial SLAMR Defense Network, a consortium of public and private organizations exploring 5G-powered solutions that will connect ships, unmanned systems and sensors at sea. Under the CRADA and as part of the ongoing initiative, NPS, AT&T and Ocean Power Technologies (OPT) are exploring the deployment of a self-powered buoy equipped with Wi-Fi capabilities that will be positioned approximately 5-8 nautical miles offshore in Monterey Bay to connect manned and unmanned aircraft and vessels operating in the littorals.

"AT&T is an exemplar of continued innovation and support for the warfighter and national security," said Rich Patterson, NPS Foundation CEO and President. "This award is reflective of AT&T's commitment to enable rapid prototyping and experimentation at the Naval Postgraduate School so that faculty and students can deliver transformative solutions to the Fleet and Force."

AT&T has held capability briefs and panels on the NPS campus, provided guest lecturers to NPS courses, and supported thesis experiments and demonstrations alongside multiple NPS students. The Company is working with NPS faculty and staff to extend the current CRADA in support of ongoing and future research and solutions.

The Naval Postgraduate School educates strong national security leaders and develops advanced technologies to ensure our military remains the most capable in the world. As a partner in NPS' mission, the Naval Postgraduate School Foundation connects with industry partners in critical emerging technology areas and invests in NPS research and initiatives that advance defense capabilities, deter and





defeat threats, and equip our service members with skills and technologies that keep them safe abroad and protect us all at home.

[AT&T Awarded Naval Postgraduate School Foundation's 2023 Corporate Partner of the Year Award - EIN Presswire \(einnews.com\)](#)

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## STUDENTS:

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### **Fleet Engagements and Special Operations**

SEALs fast rope onto the deck of the expeditionary sea base USS Miguel Keith (ESB-5) in the Philippine Sea. ESBs are designed to facilitate aviation and special operations forces, including launch and recovery of small craft, and would be well suited for deploying Naval Special Warfare forces. U.S. Marine Corps (Christopher W. England)

The exclusion of special operations may result from the book's heavy emphasis on missile warfare. Or perhaps it is because of the text's assumptions that the purpose of naval operations, especially in littoral zones, is to support objectives on land.<sup>4</sup> Special forces do not obviously fit into missile combat, and it is easy to assume any fleet effort that requires significant land forces would involve massed Marines or soldiers, eliminating the need for small units. It is an easy omission to make. Even retired Admiral William McRaven, perhaps the most notable contemporary scholar on special operations, sees special forces as small units capable of achieving victory over superior numbers through “relative superiority,” not as a component of a larger naval engagement.<sup>5</sup>

However, McRaven cites examples of special forces in littoral combat, such as the Italian manned torpedo attack at Alexandria in 1941 and the British attack on the battleship Tirpitz in 1943, which demonstrate a definite role for small units in naval tactics. These methods may simply need to be updated for 21st-century combat.<sup>6</sup> NSW has proven itself capable of McRaven's version of special operations, but it has much to contribute to national defense through support of the larger Navy.

### **SOF Supporting the Six Fleet Functions**

NSW comprises theater-deployed forces that are manned, trained, and equipped by Naval Special Warfare Command. Most military members are familiar with the SEAL teams, but NSW is also home to special reconnaissance teams, special boat teams, and SEAL delivery vehicle teams. These NSW components all have niche capabilities and deploy together in various configurations based on the operating area. Most common is the “task unit,” which is an O-4-led formation containing boat detachments, special reconnaissance capabilities, and SEAL platoons, supported by a small headquarters and staff. This operational structure is adaptable and expeditionary and could support each of the six fleet tactical functions.



Hughes and Girrier note the potential of unmanned vehicles to address the challenges of scouting and antiscouting operations.<sup>7</sup> Naval Special Warfare invested heavily in unmanned assets and associated tactics during the war on terror. As a result, NSW has a robust inventory of unmanned aerial systems and experts and has made significant progress in integrating unmanned underwater systems. These robotic platforms would make effective tools for littoral scouting and reconnaissance—as well as useful decoy and deception platforms—without risking human life or significant financial loss. The new expeditionary sea base (ESB) platform is designed to facilitate aviation and special operations forces, including launch and recovery of special operations craft, and to provide the most straightforward avenue to include NSW in naval operations. It would be well suited for deploying these expeditionary systems.<sup>8</sup>

The surface fleet is investing in developing unmanned systems, but it could be more expedient and cost-efficient in the near term to take advantage of NSW's established capabilities rather than creating new programs from scratch. The flexible nature of special operations forces allows NSW to adjust quickly to new tactical requirements, test new ideas without disrupting existing fleet doctrine, and identify the resulting successful equipment and practices.<sup>9</sup> Incorporating robotic platforms into scouting and antiscouting operations is a new construct for the fleet, but as Hughes and Girrier note, "The great constant of scouting seems to be that there is never enough of it."<sup>10</sup> It would be prudent to integrate NSW's unmanned systems to add depth to the Navy's scouting arsenal.

Hughes and Girrier assert that on land and sea, many "battles have been lost by abrupt degradation of control, followed by confusion and then fatal chaos."<sup>11</sup> NSW has a variety of tools it can bring to bear on what they describe as command and control and command-and-control countermeasures.<sup>12</sup> A properly equipped SEAL element could cause chaos among enemy defense networks by targeting communication infrastructure or disrupting transportation. Naval special operations have their roots in near-shore scouting, and the sustained special reconnaissance mission has kept SEAL platoon skills sharp in covert inland patrolling and over-the-beach insertions.<sup>13</sup> As Hughes and Girrier point out, in the age of missile warfare, "a substantial part of a coastal fleet may be land-based," and it is reasonable to view land-based defenses as part of the naval engagement.<sup>14</sup> SEALs could identify and mark targets, man forward observation posts, and perform battle damage assessments from within hostile territory. The combination of accurate targeting information and sabotage of enemy C2 infrastructure would sow discord within the enemy ranks, offering fleet commanders another method to achieve a decisive, early advantage in battle.

Aircraft might likewise perform the C2 and C2CM roles, but launching and recovering jets requires commanders to bring more of their fleet, including aircraft carriers, within range of littoral threats such as antiship cruise missiles and mines. SEALs on the ground could provide longer duration and more flexibility than unmanned craft and would allow the fleet to stay safely out to sea.

During a naval battle, firepower and defense are the primary considerations for the tactician. In the age of missile warfare, victory usually goes to the side able to "attack effectively first," which becomes the ultimate purpose of all other fleet functions.<sup>15</sup> Taken as a whole, NSW has two main proficiencies in this domain. First, a flotilla of small, short-range, low-signature craft could perform or prevent asymmetric attacks on capital ships and exploit the "clutter of islands and neutral shipping" to attack enemy combatants in small seas and shallow waters.<sup>16</sup> This tactic would be especially effective in areas with plentiful safe-haven or allied ports nearby—such as the Mediterranean, Baltic, and North Seas—to alleviate the demands of launching and recovering at sea in such places.<sup>17</sup> NSW will need to make some technical adjustments to its combatant craft to take on this role, but the transition could be assisted by a clearly defined requirement from numbered fleet commanders.

Second, SEALs can be inserted over the beach to ambush port infrastructure, sabotage enemy airfields, attack missile launch sites, or enable cyberattacks against enemy defense networks. In this context, the SEALs would be employed like a vessel on land to neutralize enemy defenses that may be otherwise unreachable by the fleet—perhaps this could be the confined seas equivalent of a destroyer screen. There is significant potential in this capability if NSW is pushed to continue development of unmanned systems proficiency within the SEAL platoons, which would allow for a small team of humans to control many small robots. Employing small elements inside hostile territory comes with risk, and the typical points of failure in this approach are insertion and extraction.<sup>18</sup> The fleet and special operations



forces will need to relearn how to coordinate and conduct the in-and-out part of these operations before they can be used in combat again.

### **Gaps, Limitations, and Risks**

The use of NSW over the past two decades was effective at the tactical level but has normalized bureaucratic processes that have created an ever-widening gap between NSW and the Navy. Specifically, NSW forces deploy under the operational command of theater special operations commands (TSOC) rather than numbered fleets. This drives NSW training toward TSOC requirements, which generally focus on counterterrorism operations and partner engagements with friendly special operations forces. As a result, the overwhelming majority of NSW training is designed to satisfy the needs of the TSOCs, with nominal effort put into the development of naval tactics.

While NSW's reconnaissance capabilities do not add much additional risk to fleet operations—other than small material costs in the event of a system loss—insertion and extraction of NSW forces can be extremely risky. To maximize C2, C2CM, and counterforce functions, NSW forces need to get into the area of operations, but these efforts can go awry, as they did in the U.S. invasion of Grenada. If done properly, as during Operation Earnest Will in the late 1980s, special operations significantly enhance the tactical performance of conventional naval forces.<sup>19</sup> Special forces, by their nature, conduct operations at a steep numerical disadvantage and rely on a combination of surprise, speed, and purpose to achieve success.<sup>20</sup> Surprise depends in large part on successful insertion; a bungled extraction or rendezvous can jeopardize troops by slowing the pace of operations. And if the purpose is too broad or complex, a special forces element may not have the capability or the time to achieve it. All of this requires commanders in the fleet and NSW to understand the risks and be willing to commit resources to training and rehearsals to mitigate them.

Fleet commanders may be dismayed by the risks associated with NSW forces ashore and might seek lower-risk options—with manned aircraft, for example, or even the exclusive use of unmanned systems. After three decades of total air superiority in the Middle East, these options seem attractive. However, unmanned systems technology still depends heavily on human operators to manage the system and make real-time moral and legal decisions.<sup>21</sup> Relying on manned aircraft to perform these functions not only increases risk to valuable aircraft carriers, aircraft, and aircrew, but also raises the possibility of a downed aircrew, which could require the insertion of a recovery team anyway. The benefit of special operations, whatever mission they perform, is an adaptable human warfighter capable of making quick decisions in keeping with commander's intent. In the end, the answer may be a combination of humans and machines. A small group of special operators managing unmanned systems at close range to land-based targets would be a powerful asset for littoral operations.

### **Fleet Tactics**

Maritime special forces should have a role in naval operations in confined, littoral waters around the globe. But the tactical integration of NSW into the functions and counterfunctions of scouting, command and control, and firepower is underdeveloped. It needs to be improved by integrating NSW and fleet tactics, training, and exercises to become viable in combat.<sup>22</sup> NSW has proven its tactical capability in counterterrorism missions, but the nation's premier maritime special operations force must be able to contribute to fleet-level operations against peer threats in the maritime environment. NSW and the Navy need to improve their understanding of each other before the fight begins.

[Fleet Tactics & Special Warfare | Proceedings - June 2023 Vol. 149/6/1,444 \(usni.org\)](#)

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## 2023 AESS Award Recipients

(IEEE 1 June 23)

Congratulations to all AESS and RadarConf23 Award Recipients on these remarkable achievements. Thank you for your hard work, dedication, and contributions to the AESS and Radar communities!

### Student Paper Award

This year, the student paper competition is dedicated to the memory of Dr. Graeme Smith whose dedication to education and radar science was unparalleled.

Finalists

FIRST PLACE: Alexander Denton of the **Naval Postgraduate School**- Deep-Layer Training of CNN for SAR with Two-Stage Data Augmentation

SECOND PLACE: Thomas Kramer - Compact Parameterization of Non-repeating FMCW Radar Waveform

THIRD PLACE: Christoph Kammel - MIMO Radar-Based Rotation Parameter Estimation of Non-Cooperative Space Debris Objects

Pirmin Schoeder - Waveform Analysis and Digital Predistortion for Modulation-Based Radar Target Simulators

Bahozhoni White - Alternative “Bases” for Gradient-Based Optimization of Parameterized FM Radar Waveforms

First Alternate

Jonathan Owen - On the Optimality of Spectrally Notched Radar Waveform & Filter

Second Alternate

Lizette Lorraine Tovar Torre - Automotive Radar Interference Avoidance Strategies for Complex Traffic Scenarios

[2023 AESS Award Recipients | IEEE AESS \(ieee-aess.org\)](#)

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## FACULTY:

### National Security This Week – The Islamic Republic of Iran [Audio Interview]

(KYMN 24 May 23) ... Jon Olson

Host Jon Olson talks with Professor Brenda Shaffer of the United States **Naval Postgraduate School** about the US’ turbulent relationship with Iran, and how that country’s government relates to both the rest of the world and its own people.

[National Security This Week – The Islamic Republic of Iran – KYMN Radio · Northfield, MN · AM 1080 & FM 95.1](#)

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## Remembering a Hero Through Outcomes

(DVIDS 29 May 23) ... Maj. Gregory Carroll

A new formal agreement between the Deputy Commandant for Information (DC I) at Headquarters Marine Corps and the **Naval Postgraduate School** (NPS) established the Lt. Col. Kevin M. Shea USMC Chair for Information at NPS April 20, 2023 with efforts already underway to fill the position.

The establishment of the chair was formerly announced by Gen. David H. Berger, 38th Commandant of the Marine Corps, during the 4th Annual Information Awards Dinner.

The newly established chair honoring Lt. Col. Shea will strengthen communication between Headquarters Marine Corps and NPS. The new agreement is aimed at outcomes furthering DC I priorities in the information environment by aligning the research conducted by warrior-scholars assigned to NPS to larger Marine Corps initiatives.

“The Marine Corps and the Naval Postgraduate School in Monterey, California there will be, starting next year, a professor at the Naval Postgraduate School and in professorships each of those chairs have a name and that one will have the Shea name. That’s an amazing tribute that will go on forever,” stated Berger.

### More than a Name

Lt. Col. Kevin M. Shea was a communications officer deployed with Regional Combat Team 1 (RCT-1) in support of Operation Iraqi Freedom II when he was killed by rocket fire in Al Anbar province Iraq near Fallujah, September 14, 2004.

“When he was a communications officer with Regional Combat Team-1 his focus was to make sure we communicate, and he did that. He did a great job at it,” stated retired Lt. Gen. John A. Toolan, former commanding officer of RCT-1. Of the numerous commands Toolan held, April 5, 2003, Toolan was assigned by then Maj. Gen. James Mattis as the commander of RCT-1. “Kevin was someone who deeply loved his Marines and would do anything for them,” said Toolan.

Toolan went on to joke as commander of RCT-1 his staff was needy and Shea meet the demands of his high caliber staff which consisted of Marines such as now Gen. Eric M. Smith, Assistant Commandant of the Marine Corps, Maj. Gen. Austin E. Renforth, commanding general, Marine Corps Air Ground Combat Center, and Lt. Gen. David G. Bellon, commander, U.S. Marine Corps Forces Reserve and U.S. Marine Corps Forces South. Toolan stated, “Kevin was surrounded by all these people, and they put high demands on him, and he delivered every time.”

Lt. Col. Shea graduated from the U.S. Air Force Academy before joining the Marines. While at the academy, he lettered in football, played in the 1987 Freedom Bowl and was a member of the 1989 rugby team which won the collegiate national championship. He later taught and coached rugby at the U.S. Naval Academy (USNA). He was promoted to the rank of major in 1999 and earned a master of science degree in electrical engineering at NPS.

Gen. Berger went on to talk about Lt. Col. Shea’s connection to NPS. “He graduated from the Naval Postgraduate School. I think it’s going to be fantastic when we get out there and see whoever the professor is that occupies the Shea chair, pretty amazing and I think the great part about it is it’s not just in Monterey but that person is going to tie in to your office (in reference to Lt. Gen. Matthew G. Glavy, Deputy Commandant for Information) and experimentation and that’s the lynch pin, just going to be fantastic,” remarked Berger.

In the memorandum of agreement for the newly established chair it highlights how the new position will assist DC I to integrate ongoing and planned efforts across Headquarters Marines Corps, the Marine Corps’ supporting establishment, the Naval Education Enterprise, the Naval Research and Development Establishment and the Fleet Marine Forces.

In correspondence with Col Jason Perry, Senior Marine Representative at NPS, efforts are already underway to hire a candidate for the position. The application deadline for the position closed May 5, applications have been received and the interview process in underway.



## Continued Service

As Gen. Berger concluded his remarks about the newly established chair he mentioned Lt. Col. Shea's daughter, Capt. Brenna L. Shea, was not able to make the ceremony due to training. Brenna is an MV-22B Pilot, currently assigned to Marine Medium Tiltrotor Squadron (VMM) 162 (REIN) preparing to deploy with the 26th Marine Expeditionary Unit.

A story published May 4, 2023 by the 26th Marine Expeditionary Unit stated, "U.S. Marines and Sailors of the 26th Marine Expeditionary Unit (26th MEU), embarked aboard the three ships of the Bataan Amphibious Ready Group (BAT ARG), successfully completed ARG/MEU exercise (AMX). During AMX, the 26th MEU successfully achieved C5ISR capabilities, capacities, and battlestaff competencies across MEU Mission Essential Tasks (METs), to include the ability to integrate with elements of Naval Special Warfare and NATO partners, from distributed locations within the littorals of eastern North Carolina, Virginia, South Carolina, Georgia, and Florida, April 13 to May 3, 2023."

Gen Berger ended his comments by saying Brenna is a lot like her dad speaking as if Brenna, "Given the opportunity, a choice to train, fly my Osprey and train to get ready to go on a deployment with a MEU or spend a night at the table with the Commandant, I think I'll go fly."

Brenna, oldest of two, was 10 at the time her father was killed in action with her younger brother Michael who was seven. When asked why she decided to serve she stated, "Definitely my father and growing up a lot of the Marines he served with like General Toolan [Lt. Gen. Toolan] and General Nicholson [Lt. Gen. Nicholson], all these Marines like General Renforth [Maj. Gen. Renforth] who had served with my dad."

Brenna went on to talk about the Marine Corps family that never stopped providing support stating, "While I was growing up, they would spend a lot of time checking in on me and making sure I was doing well. I really loved the camaraderie and the brotherhood of the Marine Corps so when it was time for me to go to school, I looked at going to the Naval Academy because my dad taught there for a few years. I was really drawn to being a part of this."

Once arriving on campus at the USNA, it reinforced her desire to be a Marine. She said, "I ended up going to school at Navy and while I was there, I met a lot of amazing Marines. I continued to fall in love with the Marine Corps. I then got lucky enough to get a commission in the Marine Corps after doing Leatherneck in 2016. Then I joined and never looked back."

Brenna met her husband at Leatherneck. Small world, she married a communications officer who graduated from the Air Force academy and commissioned as a second lieutenant in the Marine Corps. Her husband, Capt Nolan Sheahan is currently assigned to 1st Marine Raider Support Battalion, Marine Corps Forces Special Operations Command.

Having just returned from training and completing AMX, Brenna expressed excitement as she prepares for her upcoming deployment stating, "For me this will be my first deployment and especially with the emerging events in Sudan, [being a part of the 26 MEU] is really starting to feel like the big leagues now for me. I would hear all these stories about deployments from my dad's buddies. It's just kind of surreal, like now it's my turn."

## Outcomes

In reference to the newly established Lt. Col. Kevin M. Shea USMC Chair for Information at NPS Brenna stated, "It's really humbling and makes me really proud that years later people are still seeking to remember and honor my father. It makes me happy that now it will be in a way that promotes Marines and their own careers in education."

Approximately 250 Marine warrior-scholars are enrolled in 24 different curricula from categories including Engineering and Applied Sciences, International and Defense Studies, Operational and Information Sciences and Defense Management.

Truly making an impact across the Marine Corps, more than 300 NPS Marine graduates, ranging in rank from staff sergeant to lieutenant colonel currently serve at 78 different organizations and across 30 separate bases and stations.

[DVIDS - News - Remembering a Hero Through Outcomes \(dvidshub.net\)](https://dvidshub.net)



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## **DLA R&D and the Navy Postgraduate School visit DLA Distribution Norfolk**

*(DLA 30 May 23) ... Robert Doggett*

Defense Logistics Agency Distribution Norfolk, Virginia, hosted staff from DLA Research & Development's strategic distribution and disposition team, DLA Distribution Headquarters and the **Naval Postgraduate School** in support of DDNV's Material Processing Center fleet-informed forecasting project, May 12. Dr. Jefferson Huang, NPS, Navy Lt. Cmdr. Adam Davidson, NPS, Danielle Williams R&D SDD, Jack Holmes, R&D SDD and Jamal Smith, DLA Distribution Headquarters, visited DDNV's MPC, toured the USS Dwight D. Eisenhower (CVN 69) and held a mid-point project brief for the Fleet Type Commanders.

"The visit to DLA Distribution Norfolk, Virginia, was phenomenal. We were able to tour the Material Processing Center where we learned how inventory is inducted, where the inventory comes from, the different types of inventory received, how it is processed and how it is stored and sent to the destined ship. Additionally, the tour of the USS Dwight D. Eisenhower allowed us to better understand not only what the user's needs are, but how they process and store the goods sent to them. It was an eye-opening experience to understand the process on the ship to better understand how the MPC supports the ship. The visit allowed us to gain additional insight on information that should be factored in for the Phase I Feasibility Study of workload predictability of the MPC. Thank you very much to Capt. Lewis, Mr. Creekmore, Lt. Cmdr. Doggett and the Norfolk team for hosting us," said Williams.

DDNV's Fleet-Informed Forecasting Project is a partnership between DDNV, DLA R&D, DLA Future Plans and NPS to develop a more predictive workload forecasting tool based on customer operational schedules rather than historical data alone. This effort will inform manpower requirements to meet customer demand throughout the year with the goal of delivering material to the end user as expeditiously as possible. This innovative effort is in line with Navy's "Get Real, Get Better" initiative.

[DLA R&D and the Navy Postgraduate School visit DLA Distribution Norfolk > Defense Logistics Agency > News Article View](#)

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## **ALUMNI:**

### **Memorial Day Services**

*(Carroll County Messenger 23 May 23) ... Thomas Clapper*

Commander Ricky G. Wiley of Canton is the guest speaker for the Carrollton Memorial Day observance May 29 at Westview Cemetery in Carrollton.

The ceremony will begin at 11 a.m. with the singing of the National Anthem by Collin Meek and an invocation by American Legion Post 428 Chaplin Tim Cashen. The Carrollton Warrior Marching Band will present selections followed by remarks from Wiley.

Wiley is a graduate of Stark State College and Malone University with degrees in Marketing and Business.

He received advanced education through the **Naval Postgraduate School** of Monterey, CA. He served in the military more than 35 years in the enlisted and officer ranks prior to his retirement in 2022. Wiley was commissioned as a Naval Officer after 16 years of enlisted service, obtaining the rank of Chief Petty Officer. He's a licensed real estate agent and nationally accredited as professional in human resources.

His naval service includes shipboard tours onboard the USS Dwight D. Eisenhower (CVN 69) at Norfolk, VA, and the USS Steven W. Groves (FFG 29) at Mayport, FL, along with Air Squadron



assignment at Naval Air Station, Cecil Field, FL. His tours included United States Joint Forces Command, Norfolk, VA, United States Forces Japan, Yokota, Japan, Naval Surface Warfare Center, Dahlgren, VA, Naval Surface Warfare Center, Crane IN, Naval Sea Systems Command Surge Maintenance Head Quarters, Washington, D.C., Expeditionary Combat Readiness Center, Norfolk, VA, and McCrady Training Center Fort Jackson in Columbia, SC. His assignments included Commanding Officer, Officer in Charge, Assistant Officer in Charge, Executive Officer, Human Resources Director and Manning Officer, National Administrator, Operations Officer, Training Officer and Administrative Officer.

He wears the Aviation Warfare Insignia. His awards include the Defense Meritorious Service Medal, Meritorious Service Medal (two awards), Navy Commendation Medal (four awards), Navy Achievement Medal (five awards), Army Achievement Medal, Armed Forces Service Medal, Military Outstanding Volunteer Service Medal, Armed Forces Reserve Medal and Expert Pistol Medal along with various other personal, expeditionary and unit awards.

Wiley and his wife, Lori, have a son, married to Helena, and one granddaughter, Oaklyn Marie. VFW Post 3301 members Bob King and Jack Rutledge will place a wreath at the veterans memorial and VFW Auxiliary members Tammy Newbold and Tammy Jones will place a wreath at the unknown soldiers memorial.

The ceremony follows the annual Memorial Day Parade, which begins at 10 a.m. Lineup begins at 8:30 a.m. on Third St. NE (former high school street). Entries will march south on N. Lisbon St., around the west side of Public Square, and past the Carrollton Post Office. Parade participants are invited to attend the ceremony at Westview Cemetery.

## **Malvern**

Malvern's Memorial Day ceremony and parade will be held May 29, starting in front of the Malvern Historical Society's Memorial Wall at 9 a.m.

Following the service, the parade will march down E. Porter St., making a stop at St. Xavier Catholic Church cemetery, then moving on to Bethlehem Cemetery on Alliance Rd. where guest speaker Patrick Hudson will give a speech.

Lunch will be served at Malvern American Legion Post 375 Post Home at 203 Bridge St. following the parade and services.

Hudson was raised in Malvern with four brothers. His parents are John and Dolores Hudson. He currently resides in Kensington with his wife, Carol, and two sons, Caleb and Kyle.

Hudson is employed at American Axle in Minerva as Manager Plant Maintenance. He joined the United States Air Force in May 1988. He was Honorably discharged in May 1992, achieving the rank of Senior Airmen.

He attended Basic Training at Lackland Air Force Base in Texas and received a military occupation training as a Firefighter / Rescue Specialist at Chanute Air Force Base in Illinois. His duty stations include Dover Air Force Base, Delaware, and Soto Cano Air Base, Honduras. As a Gulf War Veteran, he served two tours in support of the liberation of Kuwait.

Military achievements include Dover A.F.B. Firefighter of the Quarter and Firefighter of the Year in 1989, Senior Airmen below the zone, Military Airlift Command Professional Image Award in 1991, Joint Service Achievement medal, Joint Meritorious Unit Award, Air Force Outstanding Unit Award, National Defense Service medal, Southwest Asia Service Medal with 3 devices, Saudi Arabia Medal for the Liberation of Kuwait and the Kuwait Liberation Medal.

Hudson is a member of American Legion Post 375, Life Member of V.F.W. Post 4120 and a Life Member of the Combat Veterans Motorcycle Association. He served 31 years on the Minerva / Sandy Creek Fire District, retiring as the Assistant Chief.

In 2019 he was selected as the Minerva Person of the Year.

## **Pre-Memorial Day Events**

Ceremonies will take place at area cemeteries May 28 beginning at 10:30 a.m. with Herrington-Bethel Church, followed by Mechanicstown at 11 a.m., Scroggsfield at 11:30 and Harlem Springs at noon.





The West Township Memorial Association will host a Memorial Day service May 29 at Moultrie Chapel, located on State Route 172, Moultrie.

The march to decorate the graves will begin at 2 p.m., led by Don V. Cross American Legion Post #357 from Minerva. Amelia Whiteleather, fifth grader from Minerva Elementary, will recite the Gettysburg Address. Patriotic music and taps will be provided by the Minerva Community Band. The program inside the chapel will include speaker Lt. Col. Vito J. Abruzzino from Lisbon.

Abruzzino serves as the Columbiana County prosecuting attorney, taking office in January 2021. He is also a Lieutenant Colonel in the US Air Force Reserve Judge Advocate General's (JAG) Corps and the Staff Judge Advocate (SJA) for the 914th Air Refueling Wing in Niagara Falls, New York.

He is in command of the station's legal office, serving the 2,000+ Airmen. In his role, Abruzzino is a legal advisor to senior-military commanders, an ethics counselor, prosecutor and estate planner. Prior to joining the 914th, Abruzzino was the Deputy Staff Judge Advocate (DSJA) of the 910th Airlift Wing, Youngstown Air Reserve Station, Vienna and was the Senior Defense Counsel (SDC) for Team 8, Tennessee Valley Region, 154th Legal Operations Detachment, Alexandria, VA.

Abruzzino enlisted into the U.S. Army Reserve after high school, attended basic combat training at Fort Sill, OK, in the summer of 2000 and immediately joined the West Virginia University U.S. Army ROTC Battalion, commissioning out of that program in May of 2004. Following commissioning, he attended West Virginia University College of Law, graduating in 2007 and assessed into the active duty JAG Corps in early 2008.

He has served as a legal assistance attorney, trial counsel, Special Assistant U.S. Attorney, senior trial counsel, tax center OIC, and defense counsel at different times in his career.

Veterans attending the observance will be recognized. Special music will be provided by Kendra Bertsch. Joseph Ellis will lead the congregation in a group singing. Ice cream will be served after the service.

The West Township Memorial Association includes Shirley Whiteleather Fox, president; Jeff Haynam, vice president; Diana Richeson, secretary; William Ellis, treasurer; Stephen Smith, Joseph Ellis, and Sarah Ellis.

The chapel is located two miles east of the intersection of SRs 183 and 172. Address for GPS is 23577 St. Rt. 172, Minerva.

[Memorial Day Services - The Carroll County Messenger \(theccmonline.com\)](http://theccmonline.com)

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## **Retired Navy Captain from Alabama joins Naval Meteorology and Oceanography Command**

*(Montgomery Advertiser 22 May 23) ... Jonathan Holloway*

Recently, Alabama-native (Mobile) and U.S. Naval Academy graduate Todd Monroe joined the U.S. Naval Meteorology and Oceanography Command (Naval Oceanography) as the new Deputy Maritime Operations Center Director.

Monroe's outstanding Navy career is full of invaluable experiences that have allowed him a high-level of subject matter expertise in all things maritime.

Monroe served as a Surface Warfare Officer and Naval Oceanographer during 27 years of active service. He holds a dual Master of Science degree in Oceanography and Meteorology from the **Naval Postgraduate School**, a Master of Science degree in Hydrography from the University of Southern Mississippi, and a Certificate of Nonprofit Management from the University of San Diego.

Monroe served on a variety of sea tours. Highlights include participation in Operations DESERT SHIELD and DESERT STORM as Gunnery Officer and Navigator; as well as Operation ENDURING FREEDOM immediately following 9/11, where he was Surface Strike and Tomahawk Launch Area Coordinator aboard USS ENTERPRISE (CVN-65) Battle Group. As an oceanographer, he was the first Officer in Charge of Fleet Survey Team (FST) at Stennis Space Center, MS, charged with developing



small, rapidly deployable field-charting teams to assure U.S. Naval access and key partnerships worldwide. Monroe returned to FST in 2005 as its first Commanding Officer.

Monroe's shore tours include leadership, operational, and staff jobs on every coast, including Executive Officer at the Naval Oceanographic Office, and executive assistant for the OPNAV N3/N5 staff at the Pentagon. In 2010 he commissioned Fleet Weather Center San Diego as its first Commanding Officer, consolidating and streamlining Navy's Weather Services across two thirds of the globe.

After retirement from active-duty in 2013, Monroe joined the Wyakin Warrior Foundation in Boise, Idaho as Executive Director, assisting severely wounded and injured post-9/11 Veterans in the pursuit of education and employment through financial, mentoring, professional development and community service offerings.

Most recently, Monroe has been employed by General Dynamics Information Technology (GDIT), assisting with project management, strategic planning, and Naval Oceanography requirements for Commander, Naval Information Forces.

Monroe's decorations include the Legion of Merit, the Bronze Star, Meritorious Service Medals, Navy and Marine Corps Commendation Medals, and the Combat Action Ribbon.

Monroe is married to Denise Bridget Laired of Mobile, Alabama. They reside in Bay Saint Louis, MS with Maggie the dog. Brandon (23) and Hannah (25) Monroe live in Boise and New Orleans.

Naval Meteorology and Oceanography Command directs and oversees more than 2,500 globally-distributed military and civilian personnel who collect, process, and exploit environmental information to assist Fleet and Joint Commanders in all warfare areas to make better decisions faster than the adversary.

[Retired Navy Captain joins Naval Meteorology and Oceanography Command \(montgomeryadvertiser.com\)](http://montgomeryadvertiser.com)

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## Harvard Awards Six Honorary Degrees

*(Harvard Gazette 25 May 23)*

Harvard presented six honorary degrees during Thursday's Commencement ceremony in Tercentenary Theatre.

Jennifer A. Doudna

Doctor of Science

Jennifer Doudna has dedicated her career to understanding the molecular structure of RNA and thereby improving the human condition. With Emmanuelle Charpentier, she received the 2020 Nobel Prize in chemistry for pioneering work on CRISPR-Cas9, a high-precision technology that enables targeted changes to the genome, with widespread applications across biology and medicine. Raised in Hawaii, she received her B.A. from Pomona College and her Ph.D. from Harvard. She served on the Yale faculty until 2002, when she moved to the University of California, Berkeley, where she is the Li Ka Shing Chancellor's Professor of Biomedical and Health Sciences; professor of biochemistry, biophysics, and structural biology; and a Howard Hughes Medical Institute Investigator. She is a founder of the Innovative Genomics Institute, which deploys genome engineering to address problems in health, climate, and agriculture. Her many honors include the Breakthrough Prize in Life Sciences, the Gruber Genetics Prize, the Canada Gairdner International Award, the Japan Prize, the Kavli Prize in Nanoscience, and the Wolf Prize in Medicine. She is co-author of "A Crack in Creation," a personal account of her research and the social and ethical implications of gene editing.

Thomas Jeffrey Hanks

Doctor of Arts

Tom Hanks is a renowned actor, producer, writer, director, and humanitarian, affectionately known as "America's Dad." A Hollywood icon, he has appeared in scores of movies over more than four decades,



including romantic comedies, riveting dramas, and everything in between. His credits include Oscar-winning roles in consecutive years in “Philadelphia” and “Forrest Gump,” as well as award-winning performances in “Apollo 13,” “Cast Away,” “Saving Private Ryan,” “Sully,” and “The Post,” among many others. He is also an acclaimed producer of films and television series, including the Emmy-winning miniseries “From the Earth to the Moon,” “Band of Brothers,” and “The Pacific.” A devoted philanthropist, he has helped raise support for AIDS and cancer research, space exploration, and the national World War II Memorial, among other causes. He is campaign chair of Hidden Heroes, which supports military caregivers’ work with veterans. His honors include the American Film Institute’s Life Achievement Award, the Hollywood Foreign Press Association’s Cecil B. DeMille Award, a Kennedy Center Honor, and the Presidential Medal of Freedom. He is the author of a short-story collection, “Uncommon Type,” and a new novel, “The Making of Another Motion Picture Masterpiece.”

#### Katalin Karikó

##### Doctor of Science

An intrepid biochemist fascinated by the therapeutic potential of messenger RNA, Katalin Karikó is a professor at the University of Szeged and adjunct professor of neurosurgery at the University of Pennsylvania’s Perelman School of Medicine. A native of Hungary, she received her bachelor’s degree and Ph.D. from the University of Szeged. She worked at the Hungarian Academy of Sciences before immigrating to the U.S., where in time she joined the Perelman School of Medicine to investigate how RNA could activate the immune system. With Drew Weissman, she discovered how to engineer mRNA so that it can be used to produce desired proteins after being introduced into mammalian cells. This innovation propelled the COVID-19 vaccines developed by Pfizer-BioNTech and Moderna and holds promise for treatment of many other diseases. One of Time’s 2021 “Heroes of the Year” and Carnegie Corporation of New York’s 2021 “Great Immigrants,” she has received the Japan Prize, the Canada Gairdner International Award, the Breakthrough Prize in Life Sciences, the Lasker-DeBakey Clinical Medical Research Award, and the National Academy of Sciences’ Kovalenko Medal. She served as senior vice president of BioNTech from 2013 to 2022.

#### David Levering Lewis

##### Doctor of Laws

An eminent historian and biographer, David Levering Lewis is the Julius Silver University Professor Emeritus at New York University. He is best known for his magisterial two-volume biography of the sociologist, author, and Civil Rights activist W.E.B. Du Bois. Each of the volumes earned a Pulitzer Prize; the first was also recognized with both the Bancroft Prize and the Francis Parkman Prize. His wide-ranging expertise encompasses 20th-century U.S. social history, 19th-century Africa, 20th-century France, and Muslim Iberia. His books include biographies of Martin Luther King Jr. and Wendell Willkie, as well as works on the Dreyfus Affair, the Harlem Renaissance, European colonialism and African resistance, and Islam and the making of Europe. A graduate of Fisk University (B.A.), Columbia University (M.A.), and the London School of Economics (Ph.D.), he went on to become the Dr. Martin Luther King Jr. Professor of History at Rutgers University, where he served for nearly two decades before moving to NYU. Past president of the Society of American Historians and a former MacArthur and Guggenheim fellow, he has been honored with the Biographers International Organization’s highest award and the National Humanities Medal.

#### Hugo Noé Morales Rosas

##### Doctor of Humane Letters

Hugo Morales is a pathbreaking figure in public broadcasting and a lifelong advocate for elevating marginalized voices. He is executive director of Radio Bilingüe, which he founded in 1976 in Fresno, California, together with agricultural workers, community activists, and others. Radio Bilingüe, the National Latino Public Radio Network, encompasses numerous public radio stations in California and the U.S. Southwest, as well as many affiliated stations across the U.S. and in Mexico. It produces and provides news and talk shows as well as musical and cultural programming aimed especially at



traditionally underserved audiences. An Indigenous Mixtec immigrant from Oaxaca, Mexico, who grew up working in the farm fields of California, he earned his A.B. and J.D. degrees from Harvard. As a student, he was a founder of Harvard-Radcliffe RAZA and launched an innovative bilingual Chicano-Boricua radio show on WHRB. Co-founder of the Central California Hispanic Chamber of Commerce, past trustee of California State University, and former MacArthur Fellow, he has received the Corporation for Public Broadcasting's Edward R. Murrow Award, the National Endowment for the Arts' Bess Lomax Hawes National Heritage Fellowship, and the Lannan Prize for Cultural Freedom.

Michael Glenn Mullen

Doctor of Laws

Adm. Michael Mullen, U.S. Navy (retired), is a decorated military leader who served for 43 years, ultimately as chairman of the Joint Chiefs of Staff. As the nation's highest-ranking military officer from 2007 to 2011, serving under presidents of both parties, he guided the armed forces through a critical period of transition. Among other things, he sought to mitigate an array of global security risks, advocated for international partnerships, advanced methods to combat terrorism, and oversaw the end of the policy barring military service by openly gay, lesbian, and bisexual individuals. A graduate of the U.S. Naval Academy and the **Naval Postgraduate School**, he served in numerous leadership roles before becoming chairman of the Joint Chiefs, including vice chief of naval operations, commander of U.S. Naval Forces Europe, commander of Allied Joint Force Command Naples, and chief of naval operations. Since retiring from the Navy, he has served as a faculty member at the Naval Academy and Princeton University, as president of MGM Consulting, and on the boards of organizations supporting veterans and their families. His honors include the Defense Distinguished Service Medal and the Navy Distinguished Service Medal.

[Six receive honorary degrees from Harvard – Harvard Gazette](#)

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## Admiral McRaven Quotes From the Retired Navy Admiral

*(Every Day Power 24 May 23)* ... Stephanie Kirby

Take a look at these Admiral McRaven quotes by this high-achieving former Naval Officer.

William Harry McRaven was born in Pinehurst, North Carolina, in 1955.

He graduated from The University of Texas at Austin and has a master's degree from the **Naval**

### **Postgraduate School.**

McRaven is a retired Navy four-star admiral who became the ninth commander of the United States Special Operations Command from 2011 through 2014.

You will also enjoy our articles on:

McRaven went through BUD/S training and became a Navy Seal in 1978.

He then served under the command of the legendary Commander Richard Marcinko.

He rose to the rank of assault team leader before being let go by Marcinko due to differing ideas on leadership.

He was assigned to an East Coast Seal Team, where he continued to serve and eventually became the leader of the "Task Force 714" battle group, which focused on targeting Al Qaeda in Iraq.

Take a look at these Admiral McRaven quotes to learn more about his career.

Here are some of the best Admiral McRaven Quotes!

1. "I'm not a political guy." — Admiral McRaven
2. "At some point, we will all confront a dark moment in life." — Admiral McRaven
3. "Work hard. Be humble, and I think that will serve you well in life." — Admiral McRaven
4. "Changing the world can happen anywhere, and anyone can do it." — Admiral McRaven
5. "That obstacle course is going to beat you every time unless you start taking some risks." —

Admiral McRaven



6. “SEALs aren’t the only heroes out there. Everyone who puts on a uniform meets that threshold.” — Admiral McRaven
7. “Sometimes, no matter how well you prepare or how well you perform, you still end up a ‘sugar cookie.’” — Admiral McRaven
8. “I think ninjas are probably quieter than SEALs, but we are better swimmers, and also better with guns and blowing things up.” — Admiral McRaven
9. “It is easy to think that where you were raised, how your parents treated you, or what school you went to is all that determines your future. Nothing could be further from the truth.” — Admiral McRaven
10. “But if you take some risks, step up when times are toughest, face down the bullies, lift up the downtrodden, and never, ever give up—if you do these things, then you can change your life for the better... and maybe the world!”— Admiral McRaven
- Here are some wise quotes from Admiral McRaven
11. “Keep your cool, even when those around you can’t.” — Admiral McRaven
12. “If you want to change the world, find someone to help you paddle.” — Admiral McRaven
13. “If you can’t do the little things right, you will never do the big things right.” — Admiral McRaven
14. “If you want to be a SEAL, you must do two things: Listen to your parents and be nice to the other kids.” — Admiral McRaven
15. “Without courage, men will be ruled by tyrants and despots. Without courage, no great society can flourish.” — Admiral McRaven
16. “Bullies are all the same, whether they are in the schoolyard, in the workplace, or ruling a country through terror. They thrive on fear and intimidation.” — Admiral McRaven
17. “Our struggles in this world are similar, and the lessons to overcome those struggles and to move forward changing ourselves and changing the world around us will apply equally to all.” — Admiral McRaven

These quotes from Admiral McRaven are sure to inspire you to greatness!

18. “Sometimes all it takes is one person to make a difference.” — Admiral McRaven
19. “Help as many people as you can. Make as many friends as you can.” — Admiral McRaven
20. “I realized that the past failures had strengthened me, taught me that no one is immune from mistakes.” — Admiral McRaven
21. “With hope, you can inspire nations to greatness. With hope, you can raise up the downtrodden.” — Admiral McRaven
22. “In a special operations mission, the concept of speed is simple. Get to your objective as fast as possible.” — Admiral McRaven
23. “True leaders must learn from their failures, use the lessons to motivate themselves, and not be afraid to try again or make the next tough decision.” — Admiral McRaven
24. “Life is a struggle, and the potential for failure is ever present, but those who live in fear of failure, or hardship, or embarrassment will never achieve their potential.” — Admiral McRaven
25. “And if by chance you have a miserable day, you will come home to a bed that is made – that you made – and a made bed gives you encouragement that tomorrow will be better.” — Admiral McRaven

In June 2014, Admiral McRaven retired from his 37-year career, and in 2015 he became the chancellor of the University of Texas System.

He served in this role until 2018, when he stepped down due to health and a desire to spend time with his family, including his wife, Georgeann Brady, and their three children.

Please share these Admiral McRaven quotes with your friends and family and post any comments about the Admiral in the comment section below.

[25 Admiral McRaven Quotes From the Retired Navy Admiral \(everydaypower.com\)](http://everydaypower.com)

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## **HII's Mission Technologies Division Promotes Garry Schwartz to Chief Operating Officer and Todd Gentry to President of its C5ISR Business**

*(Yahoo Finance 1 June 23)*

HII's Mission Technologies division has promoted Garry Schwartz (left) to chief operating officer of the division and Todd Gentry to president of its C5ISR business group.

McLEAN, Va., June 01, 2023 (GLOBE NEWSWIRE) -- HII's (NYSE: HII) Mission Technologies division announced the promotions of Garry Schwartz to chief operating officer of the division and Todd Gentry to president of its C5ISR business group. Schwartz and Gentry both report to Mission Technologies President Andy Green.

"To drive growth and opportunity across the division, we continue to optimize business operations and overall performance," Green said. "Garry and Todd's proven expertise building large business operations at HII, paired with their long history of success across the defense industry, demonstrates they are the exceptional leaders to support our customers' missions and help us achieve our growth objectives."

"I'm excited to continue working with them to expand the division and deliver advanced capabilities to the warfighters," Green added.

### **Garry Schwartz, Chief Operating Officer**

With nearly 40 years serving national security missions across the U.S. military and defense industry, Schwartz has led and expanded HII's largest technology-centric business groups.

Prior to joining HII, Schwartz served in various senior leadership roles for SAIC and Alion Science and Technology with responsibility for multimillion-dollar technology-based portfolios of domestic and international programs, supporting a broad array of defense and federal customers. Schwartz retired from the U.S. Marine Corps in 2004 with more than 21 years of service as an officer and enlisted Marine with multiple combat tours and a master's degree in operations research from the **Naval Postgraduate School**.

"Since joining HII, Garry has demonstrated the specialized skills and disciplined operational approach to expand his partnerships with the executive team to drive optimal performance across Mission Technologies' diverse global portfolio," Green said.

### **Todd Gentry, President, C5ISR**

Gentry previously served as senior vice president of Mission Technologies' C5ISR business group. He joined HII in 2019 and has served in successive programmatic and operations leadership positions since then. Prior to joining HII, Gentry served as director of the advanced aviation assessment portfolio under the U.S. Army's Aviation and Missile Command. He also served in various positions in direct support of the U.S. Special Operations Command and its service component commands. Gentry retired from the U.S. Army in 2013 with more than 25 years of service.

"With an entrepreneurial spirit, a mission-focused mindset and a deep understanding of our customers' needs, Todd has demonstrated exceptional strategic leadership with a successful track record of delivering program growth," Green said. "With Todd's leadership, HII intends to continue growing the C5ISR business and deliver advanced capabilities to support our warfighters."

About HII

HII is a global, all-domain defense provider. HII's mission is to deliver the world's most powerful ships and all-domain solutions in service of the nation, creating the advantage for our customers to protect peace and freedom around the world. As the nation's largest military shipbuilder, and with a more than 135-year history of advancing U.S. national security, HII delivers critical capabilities extending from ships to unmanned systems, cyber, ISR, AI/ML and synthetic training. Headquartered in Virginia, HII's workforce is 43,000 strong. For more information please visit:

[HII's Mission Technologies Division Promotes Garry Schwartz to Chief Operating Officer and Todd Gentry to President of its C5ISR Business \(yahoo.com\)](https://www.yahoo.com/news/hii-mission-technologies-division-promotes-garry-schwartz-to-chief-operating-officer-and-todd-gentry-to-president-of-its-c5ISR-business-1200000000.html)

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## **P-8A Poseidon: A Military System Designed To Win**

(1945 6 June 23) ... Ray Craig

In today's unstable global environment, the importance of multi-role, data-integrated weapons systems such as the P-8A Poseidon, has only increased.

A P-8A Poseidon assigned to Patrol Squadron (VP) 16 is seen in flight over Jacksonville, Fla. (U.S Navy photo by Personnel Specialist 1st Class Anthony Petry)

Aircraft are a critical component of modern naval forces. They have the ability to greatly extend surface ship detection areas while providing offensive and defensive capability for war at sea and power projection ashore. They are part of a complex strategic system designed to work together for maximum impact.

There are various aircraft the Navy employs to perform combat functions such as a C-130 cargo aircraft, the F/A-18 multi-role fighter and the F-35B/C Joint Strike Fighter. In today's unstable global environment, the importance of multi-role, data-integrated weapons systems such as the P-8A Poseidon, has only increased.

Like other naval aircraft, the Poseidon is capable of performing several different missions, including surveillance, intelligence, and reconnaissance, as well as search and rescue. What makes it unique is its ability to conduct both anti-submarine and anti-surface warfare missions. It's the only active U.S. naval aircraft able to detect, track, and eliminate adversarial submarines.

The current military threat environment is perhaps the most challenging environment we have experienced in the past 50 years. Recent national media coverage has detailed very serious threats to world peace.

These reports have detailed the alarming expansion of the PRC Navy and North Korea's testing of nuclear weapons. This information has set U.S. and Allied navies on high alert and has resulted in improved defensive agreements and treaties. Weeks ago, a Newsweek article revealed that the Russian Navy has produced "nuclear-capable 'super torpedoes,'" to be used on the Belgorod nuclear submarine.

The U.S. and our Allies must be ready to respond to such global threats. A significant aspect of preparing for conflict is securing military equipment essential for the mission. Degradation of shipbuilding capabilities in the U.S. means the lead time for new surface and subsurface combatants is measured in decades rather than years. Fortunately, we have a weapons system in current production, the P-8A Poseidon, that can be ready today to defend against tomorrow's threats.

As an Engineering Test Pilot for the U.S. Navy, I flew the P-3 Orion, the turboprop predecessor to the P-8A, during some dedicated evaluation flights. Subsequently, while planning North Atlantic operational missions for my Carrier Air-Wing, I learned how important integrating the P-3 and AGM-84 Harpoon missile with the Carrier Strike Group could be. After leaving active duty, I worked as an engineering test pilot for commercial aircraft, including the 737, 777 and 787. My flight test experience provided me an appreciation for FAA Part 25 Certification requirements when applied to an aircraft weapons system.

During my postgraduate studies in Aeronautical Engineering, I learned that systems designed in terms of separation and redundancy are keys to combat survivability. My work in the defense industry proved that those factors are also keys to reliability. An airplane designed to fly 12 hours a day, 365 days a year with 99.7% dispatch reliability means it is a robust design.

The P-8A Poseidon is the militarized version of the 737NG and shares 86 percent commonality with its commercial counterpart. That makes the Poseidon a formidable opponent given the proven airframe, advanced on-board technology, and readily-available parts and labor. The 737 Type aircraft is also supported by a large, global, established supply chain that provides for quick repair and speedy return to operations

The Navy assessed that 138 P-8A Poseidon aircraft would be needed in the fleet to meet operational demands and pace the threat posed by our adversaries. This "full warfighting requirement" was validated in 2018. However, only 128 aircraft have been procured to date and no additional aircraft have been requested by the Navy since Fiscal Year 2020. Congress has intervened in the past to ensure that "active and reserve squadrons" would be fully equipped as the last P-3 aircraft retired. Given the unique function and capability of the Poseidon, it's important that Congress fully fund the program and give the Navy the ability to acquire the remaining 10 P-8s necessary to meet its warfighting requirement.



Current military threats are significant and wide-ranging. For our aircraft carriers, submarine fleets, and other maritime programs, the P-8 serves defensively as their eyes and ears while offensively providing precision weapons delivery. The Poseidon weapons system includes an impressive array of extremely accurate standoff weapons, including the AGM-84 Harpoon, SLAM ER, and HAAWC. The 10 P-8A aircraft represent a fraction of the total defense budget. The increased warfighting capability those airplanes represent is beyond measure in terms of being able to combat the current threats.

Ray Craig is a graduate of the U.S. Naval Academy, the U.S. **Naval Postgraduate School**, the U.S. Naval Test Pilot School, and holds a BS and Masters in Aeronautical Engineering. After his active duty naval service, Ray continued his career as a military and commercial test pilot for Boeing for over 27-years.

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## **AI Is a Team Sport**

*(USNI 6 June 23)* ... Julia Weber

In 1996, Scottie Pippin, Dennis Rodman, and Michael Jordan led the Chicago Bulls to an 87–75 victory over the Seattle SuperSonics, winning the NBA Championship. It was not actually a great game for Jordan, who averaged just 26.3 percent from the field compared to his career average of nearly 50 percent, but the Bulls were able to capitalize on nearly a decade of team building among long-time members such as Jordan and Pippin, as well as among newcomers Rodman, James Edwards, and John Salley, who joined the team that year but who previously had played together for many years with the Detroit Pistons. The key takeaway? Championship teams are not built overnight, but through years of practicing together.

Like the Chicago Bulls, if the Department of the Navy (DoN) wants to produce and employ winning artificial intelligence (AI) tools, it needs to intentionally build teams of AI experts and enable them to train together over extended periods. These teams need players with diverse skills—uniformed subject matter experts, network engineers, development, security, and operations (DevSecOps) or software engineers, data engineers, data scientists, machine learning engineers, and robotics experts—who can train and work together over the service life of an AI tool.

## **IT Takes a Team and Time**

Like the Chicago Bulls, who capitalized on years of team building and practicing together to win the 1996 NBA Championship, AI teams need players with diverse skills who can train and work as a group over the life of an AI tool. AP (Michael Conroy)

There are a number of reasons DoN is failing to field AI tools at the desired rate. First, unlike the Defense Advanced Research Projects Agency, the U.S. Army Software Factory, and some of the military research labs, few DoN organizations have bothered to build AI-capable teams with all the requisite personnel for the project being pursued. At present, most of the personnel with AI-relevant skills are distributed in ones and twos across service headquarters, logistics organizations, and acquisition organizations in “analyst” positions or in tactical-level communication and intelligence units. These individuals also are usually the only people in their organizations with formal training in AI, computer programming, data science, or robotics.

Both the Navy and Marine Corps have a bad habit of having their uniformed masters-level computer scientists, data scientists, and information technology (IT) managers serve as generals’ or admirals’ aides or in other high-profile, demanding, but non-IT-related positions. When actually serving in analyst positions, these individuals sometimes can develop a small prototype or justify investment in a one- or two-year project, but once they rotate, the initial funding runs out; a real-time data feed, user interface, or maintenance plan is needed for tool deployment; or the senior leader who authorized the project moves on





and the project dies. A few computer and data scientists exist in DoN, but data engineers and software or DevSecOps engineers—key components of any AI team—are nonexistent in most organizations.

In addition, many senior leaders do not have the patience to wait for an AI team to collect data, prototype and determine the most effective algorithms, and test them under deployment or combat conditions, etc. Many expect results on par with what is being produced by commercial companies such as Google and Amazon—companies that are decades into their efforts—without understanding the years of data collection, research and development funding, and man-hours that went into generating those results.

Because they rotate to new positions after two or three years, most unformed senior leaders are unwilling to commit funding to long-term AI projects unless they see proof of a validated application of the AI tool within a year or two. They prefer “quick wins” that highlight their leadership abilities and help their chances for promotion.

Two examples of this are the Marine Corps’ enlisted retention model and supply chain digital twin efforts. The enlisted retention model was a machine learning project intended to identify correlating factors for and forecast enlisted retention rates. From initiation, the project team indicated it would need at least five years of data collection before it could produce statistically viable results, but the project is stalled at the three-year mark and at risk of losing funding.

The supply chain digital twin effort sought to provide visibility into the supply chain and optimize the flow of parts from suppliers, through the Defense Logistics Agency, all the way to tactical-level units based on forecast demand levels. The team working on it had just gotten access to enough of the requisite data to develop prototype algorithms when Marine Corps leaders decided not to renew its funding.

Indeed, the few Department of Defense AI projects that are beginning to show signs of success are past the five-year and, in some cases, approaching the ten-year mark. Project Maven, for example, is a computer vision project intended to “autonomously extract objects of interest from moving or still imagery.”<sup>1</sup> Originally overseen by the Under Secretary of Defense for Intelligence, it struggled for years because of both project leaders who lacked the requisite technical background and an insufficient amount of accurately labeled training data. It has survived numerous funding and personnel hurdles and, it is hoped, will become fully operational in its new home under the National Geospatial-Intelligence Agency’s Chief Digital and AI Office.<sup>2</sup>

Another example is the Army Special Operations Aviation Regiment’s predictive maintenance effort intended to reduce maintenance costs by optimizing when and what maintenance is performed on its aircraft. It took nearly ten years to install equipment, establish the necessary data flows, and get pilots and maintainers to buy in to the process, but successive unit leaders were committed to the project, and the team has now deployed several AI algorithms that are facilitating maintenance processes.

## **Outpaced by Competitors**

In contrast to DoN, the People’s Liberation Army (PLA) has started developing and deploying AI-capable teams—known as strategic support teams—down to the battalion level. These are elements of the Strategic Support Force trained to “operate AI-enabled platforms to provide other branches of the Chinese military with sound situational awareness and support decision-making through rapid intelligence processing.”<sup>3</sup> While these teams may not be AI experts at present, they are at least out practicing.

In addition, the PLA has been hosting a series of AI challenges targeted at young, innovative tech talent from both within and outside the PLA. Its 2020 “Stratagem at Heart, Jointness to Win” competition called for participants to “develop and train AI to carry out decision-making and operation planning for complex operations that include target reconnaissance, electromagnetic countermeasures and coordinated firepower strikes” during a joint island strike operation to resolve a “disputed sovereignty issue pertaining to an island that is currently occupied by the adversary.”<sup>4</sup> That sounds a lot like what DoN leaders have called on the Navy and Marine Corps to do in publications such as *Advantage at Sea* and *A Concept for Stand-In Forces*. The difference is that DoN is struggling to simply collect, manage, and share its data, as evidenced by shortfalls in Joint All-Domain Command and Control efforts, much less apply AI to that data.<sup>5</sup>



If the Department of the Navy wants to develop, field, and maintain world-class AI tools that will help convince U.S. adversaries the fight is not worth it and ensure they will lose if they try, it needs to start intentionally building AI teams and providing them with the tools and equipment to train and operate as a team. A good starting point would be to put master's and PhD-level graduates of the **Naval Postgraduate School's** Computer Science, Operations Research, and Electrical Engineering Departments into teams, augmented by civilian data and DevSecOps engineers, as well as enlisted communication, intelligence, or autonomous vehicle operators as appropriate to the project. These teams then would need access to computing and programming resources, as well as sufficient time to develop and test algorithms.

Small projects intended to be quick wins and the individual efforts of an intrepid few will not produce the AI-capable workforce or the AI tools DoN will need to prevail in great power competition.v Major Weber, a recent graduate of the **Naval Postgraduate School's** master's in operations analysis program, is I Marine Expeditionary Force's intelligence systems officer. She previously has served as both a UH-1 Huey pilot and financial management officer (comptroller) in multiple assignments stateside and overseas, including in Afghanistan, Pakistan, and Guatemala.

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