



# NPS IN THE NEWS

## Weekly Media Report – February 15-21, 2022

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### RESEARCH:

#### [NPS, U.S. Pacific Fleet launch Nimitz Research Group](#)

*(CPF 16 Feb 22) ... U.S. Navy Lt. Cmdr. Ed Early*

*(NPS.edu 16 Feb 22) ... U.S. Navy Lt. Cmdr. Ed Early*

*(Military Spot 18 Feb 22) ... U.S. Navy Lt. Cmdr. Ed Early*

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#### [U.S. Pacific Fleet Will Leverage Knowledge, Expertise of Naval Postgraduate School With New Nimitz Research Group](#)

*(Sea Power Magazine 16 Feb 22) ... Edward Lundquist*

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#### [Innovation Lab Hosts Modeling and Simulation Toolbox Hackathon](#)

*(Southern Maryland Chronicle 16 Feb 22)*

At the start of a cold Thursday in January, a group of more than 20 scientists and engineers from the Naval Surface Warfare Center Dahlgren Division (NSWCDD) filed into the Innovation Lab, or iLab, for a day of learning and executing new skills. The NSWCDD innovators participated in the iLab's second Modeling and Simulation Toolbox (MAST) Hackathon on Jan. 27... While the Dahlgren-created model supports analysis efforts, current naval warfighters receive exposure to the toolbox, which is currently in use with Valiant Shield exercises out in the Pacific, through wargaming exercises and research was done at **Naval Postgraduate School** in Monterey, California.

### STUDENTS:

#### [Politics and Pressure are Sabotaging Women in Special Operations](#)

*(Task and Purpose 15 Feb 22) ... U.S. Army Maj. Meg Tucker*

In March 2020, Military.com announced that, for the first time ever, a female had been selected for Special Tactics, an elite Air Force organization that conducts challenging missions in some of the most dangerous parts of the world. However, outrage over women's integration into elite special operations units has flared up once again... Maj. Meg Tucker has been in the Army for eleven years, serving as a Kiowa Warrior pilot and Army Special



Operations as a Psychological Operations officer. She has deployed to Southern, Central and Indo-Pacific Commands and taught in the PSYOP school. She has been published in Special Warfare Magazine and Small Wars Journal. She owns and operates The Valkyrie Project and is currently pursuing a Master of Science degree in Information and Political Warfare at the **Naval Postgraduate School** in Monterey, California.

### **NPS Student, Professor Win 2021 USNI Information Warfare Essay Contest**

*(Navy.mil 15 Feb 22)* ... Mass Communication Specialist 2<sup>nd</sup> Class Huy Tonthat

*(NPS.edu 15 Feb 22)* ... Mass Communication Specialist 2<sup>nd</sup> Class Huy Tonthat

U.S. Navy Cmdr. Edgar Jatho, a doctoral student in the Naval Postgraduate School (NPS) Department of Computer Science, and his advisor Assistant Professor Joshua A. Kroll have been named the winners of the U.S. Naval Institute (USNI) 2021 Information Warfare Essay Contest for their piece, "Artificial Intelligence: Too Fragile to Fight?"

### **China Coast Guard: On a Trajectory for Peace or Conflict?**

*(CIMSEC 16 Feb 22)* ... Ahmed Mujuthaba

Coast guard roles are envisaged to lay a bridge between state enforcers on land and those beyond state waters. Understanding the fundamental application of coast guard organizations is important, especially given their varying roles and responsibilities in the maritime domain. Today's coast guards are engaged in an operational spectrum spanning from an array of combat to civil defense roles, resulting in organizations that are seemingly limitless in their roles, authority, and capabilities.1 One such ostensibly boundless organization is the China Coast Guard (CCG)... LTC Ahmed Mujuthaba was the Principal Director of the Maldives National Defense Force Coast Guard, and is currently pursuing an MSc in Information Strategy and Political Warfare at the U.S. **Naval Postgraduate School**. He is trained in salvage diving from the PLA Navy Submarine Academy and also holds an MSc in Defense and Strategic Studies upon completion of the Indian Defense Services Staff College. You can follow him on Twitter: @mujuthaba. The views and opinions expressed are his own and do not reflect those of the U.S. Naval Postgraduate School, Maldives National Defense Force, or the Government of Maldives.

## **AWARDS:**

### **NPS ITACS Department Honored for Achievement with DON IT Excellence Award**

*(NPS.edu 18 Feb 22)* ... U.S. Navy Lt. Cmdr. Ed Early

*(Navy.mil 18 Feb 22)* ... U.S. Navy Lt. Cmdr. Ed Early

The Information Technology and Communications System (ITACS) department at the Naval Postgraduate School (NPS) received the prestigious Department of the Navy (DON) IT Excellence "Defend" Award on Feb. 16 at the West Coast DON IT Conference in San Diego.

## **WEST 22:**

### **Panelists Challenge U.S. Navy's Strategic Thinking**

*(AFCEA 18 Feb 22)* ... George I. Seffers

A WEST conference and exhibition panel discussion designed deliberately to be provocative questioned whether the U.S. Navy's strategy permits the kind of innovation necessary to vie with peer competitors such as China.

Vice Adm. Ann Rondeau, USN (Ret.), president, **Naval Postgraduate School**, moderated the discussion. The panel also included Adm. James Winnefeld Jr., USN (Ret.), former vice chairman, Joint Chiefs of Staff; Bran Ferren, co-founder and chief creative officer, Applied Minds LLC; and Steve Blank, adjunct professor, Stanford University and senior fellow for innovation, Columbia University.

## **FACULTY:**

### **Happiness Drives Performance**

*(WFMZ 16 Feb 22)*

According to new research released today in MIT Sloan Management Review, employees with high measures of well-being upon starting a job deliver superior performance at a dramatically higher rate than those with lower measures of happiness... Paul Lester, associate professor of management at the **Naval Postgraduate School**, Martin Seligman, director of the University of Pennsylvania's Positive Psychology Center, and Ed Diener, influential American psychologist, followed nearly 1 million U.S. Department of Defense employees (the single largest



employer in the world) for five years, measuring their relative happiness and optimism using 25 questions drawn from PANAS and the Life Orientation Test. The participants spanned across all job functions (infantry soldiers, office workers, pilots, engineers, truck drivers, medical professionals, logistics experts, etc.).

## **ALUMNI:**

### **[HySpecIQ Expands with Two Key Hires](#)**

*(SatNews 15 Feb 22)*

This January, HySpecIQ, a satellite-powered hyperspectral analytics company, added two key hires to its Business Development team. Farris ElNasser will serve as the General Manager for the Middle East and Todd J. Woods will serve as the Global Director of Partnerships and Marketing. . . ElNasser is a first-generation American of Jordanian descent, and has traveled extensively throughout the Middle East region. He holds a Bachelor's Degree from the United States Air Force Academy and a Master's Degree in Middle East Studies from the United States **Naval Postgraduate School**.

### **[Hodgson Assumes Command of AEGIS Technical Representative](#)**

*(NavSea 15 Feb 22)*

Capt. Sid Hodgson relieved Capt. Philip Mlynarski as the fifteenth commanding officer of AEGIS Technical Representative (AEGIS TECHREP) during a ceremony at Lockheed Martin Main Plant, Moorestown, New Jersey on 11 Feb. . . . Hodgson is from Philadelphia, Penn. Area, was a Presidential Scholar, he graduated cum laude and received his commission in May 1997 from Villanova University as the Distinguished Naval Grad. He earned a Master in Business Administration (MBA) from the George Washington University and a Systems Engineering Master degree (with distinction) from the **Naval Postgraduate School** in Monterey, CA. He is a member of the Acquisition Professionals Corps and is DAWIA Level III certified in Program Management and Level II certified in Systems Planning, Research, Development and Engineering.

### **[Veteran NASA Astronauts David Leestma, Sandy Magnus and Chris Ferguson to be Inducted at Kennedy Space Center Visitor Complex, June 2022](#)**

*(SpaceRef 15 Feb 22)*

Veteran astronauts David Leestma, Sandy Magnus and Chris Ferguson, who have all demonstrated outstanding accomplishments in furthering NASA's mission of exploration and discovery, have been selected to receive one of the highest honors in their industry. . . . A 1971 graduate of the U. S. Naval Academy, Leestma obtained his master's degree in aeronautical engineering from the **Naval Postgraduate School** and attended Navy flight school, where he earned his wings and was assigned to fly the F-14A Tomcat.

### **[Poor History and Failed Paradigms: Flawed Naval Strategy and Learning the Wrong Lessons from a Century of Conflict](#)**

*(MWI 15 Feb 22)* ... R.B. Watts

In 2006 the United States Navy published a startling photograph. The picture clearly showed a Chinese submarine, periscope raised, with the USS Kitty Hawk in the background. That the photo was taken by an antisubmarine helicopter hovering over the submarine was lost in the initial wave of reactions but the point was clear: a new, modern force had arrived, and it posed a direct threat to our primary naval strike power. US naval power and strategy has a rich history that includes epic battles, catastrophic losses, and stalwart traditions. Around the globe, naval forces have long been the power of empires and used to extend a nation's reach beyond its geographic homeland. At the dawn of the twentieth century, it was not uncommon to hear British and German naval officers toasting with De Tag! (To the Day!) and to clink their raised glasses in the acknowledgement that they would one day meet in a decisive battle at sea. For navalists, a battle between the world's greatest navies was a certainty. . . . Dr. R. B. Watts is a professor of national security strategy at the National War College. He retired from the US Coast guard as a captain after serving twenty-six years on active duty, including six sea tours with both the Navy and the Coast Guard. He holds an advanced degree from the Naval War College in strategic studies, master's degrees from Old Dominion University in history, American Military University in international naval studies, and the **Naval Postgraduate School** in homeland security, and a PhD from the Royal Military College of Canada in war studies.



## **Broadcast Microwave Services, LLC Names Navy Veteran and Defense Industry Leader, Jay Kadowaki, to Head the Global Sales & Marketing Team**

*(Bakersfield 16 Feb 22)*

*(Business Wire 16 Feb 22)*

Broadcast Microwave Services (BMS, LLC), a global leader in Aircraft Video Downlink (AVDL) systems, announced today the addition of Jay Kadowaki, former Navy Captain and defense industry leader, as the Vice President of Global Sales and Marketing... Jay Kadowaki graduated from the United States Naval Academy with a Bachelor of Science degree in Economics. He earned a Master of Science degree in Information Technology Management from the **Naval Postgraduate School** and a Master of Arts degree in National Strategy and Strategic Studies from the Naval War College. Jay has served in the Defense industry in both Sales and Business Development roles, and is an Entrepreneur in Residence at the EPIC SBDC small business accelerator at the University of California, Riverside.

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

**Mar 7-9:** [Center for Executive Education LCSS Workshop](#)

**Mar 14:** [NWSI Seapower Conversation: Fighting the Fleet: Operational Art and Modern Fleet Combat](#)

**Mar 14-18:** [Center for Executive Education LCA Course](#)

**Mar 21-24:** [NWSI Nimitz Rsearch Group Warfare Innovation Workshop](#)



## RESEARCH:

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The Naval Postgraduate School (NPS) and Commander, U.S. Pacific Fleet (PACFLT) are joining forces to establish the Nimitz Research Group, an organization which will leverage NPS' educational and research capabilities and institutional knowledge to meet the needs of the Pacific Fleet.

Created under the aegis of NPS' Naval Warfare Studies Institute (NWSI), the Nimitz Research Group will consist of NPS faculty and students who will serve as an extension of the PACFLT staff in Hawaii, participating in fleet exercises and events and providing additional research capacity and subject matter expertise.

The launch of the Nimitz Research Group was announced on Feb. 16 by the president of NPS, retired Vice Adm. Ann E. Rondeau, and Adm. Samuel Paparo, Commander, PACFLT.

"The establishment of the Nimitz Research Group marks a further evolution in our outstanding partnership with the U.S. Pacific Fleet," said Rondeau. "We have always seen NPS as a center of excellence and innovation, a place where our faculty and students work together to solve the operational challenges of our fleet and force. Through the Nimitz Research Group, we will be able to provide those solutions by deploying our talent and our experience in direct support of our Pacific Fleet partners."

The Nimitz Research Group is modeled after NWSI's Bucklew Research Group, which already provides similar support to Naval Special Warfare (NSW) through studies and research by Navy SEAL officers attending NPS on a two-year master's degree program. Bucklew scholars serve as an extension of NSW Group commands, who in turn benefit from the SEALs' education, research efforts, interactions with the academic community, and proximity to Silicon Valley.

During a meeting with academic and industry leaders at NPS in October 2021, Paparo – a graduate of NPS' Systems Analysis program – expressed a desire to similarly leverage the unique capabilities of NPS to support COMPACFLT's priorities and research needs. Paparo recognized the value of utilizing the deep expertise of NPS faculty members as well as the operational experience of NPS' 2,500 mid-career officers, senior non-commissioned officers and civilians.

The example set by the Bucklew Research Group proved to be an ideal model for PACFLT's requirements. As a result, the Nimitz Research Group was conceived with the goal of providing coherence and unity of action for NPS' support to PACFLT.

"The Nimitz Research Group links the intellectual rigor of NPS, its key location in the nation's hub of technical innovation and the expertise of innovative warfighters in the Pacific Fleet to research, develop and implement new and dynamic combat capabilities," said Paparo. "Together we will build critical advantages over our competitors to maximize our strengths – battlespace awareness, agility, maneuverability and collective capabilities of the joint forces."

According to U.S. Marine Corps Col. Randy Pugh, deputy director of NWSI, the main idea behind the Nimitz Research Group is its multi-disciplinary nature. As the group consists of members from all services, warfare communities and academic programs, every problem is analyzed and solved using many different lenses and with a tremendous wealth and diversity of experiences and expertise.

"As a result, you end up with a really rich and well-informed solution to a particular problem," Pugh said. "The general theme is that this is not just the collective activity of individuals, but rather a whole which is very much greater than the sum of its parts."

[NPS, U.S. Pacific Fleet launch Nimitz Research Group > U.S. Pacific Fleet > News \(navy.mil\)](#)

[NPS, U.S. Pacific Fleet Launch Nimitz Research Group - Naval Postgraduate School](#)

[Pacific Fleet Launches Nimitz Research Group - MilitarySpot.com](#)

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## **U.S. Pacific Fleet Will Leverage Knowledge, Expertise of Naval Postgraduate School With New Nimitz Research Group**

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The Naval Postgraduate School at Monterey, California, and Commander, U.S. Pacific Fleet are joining forces to harness educational and research knowledge and expertise specifically as it pertains to the Indo-Pacific region with a new effort, the Nimitz Research Group.

Nimitz Research Group will fall under NPS' Naval Warfare Studies Institute, which will provide NPS faculty and students who will "serve as an extension of the PACFLT staff in Hawaii by participating in fleet exercises and events and providing additional research capacity and subject matter expertise," according to an Naval Postgraduate School press release.

The Nimitz Research Group was launched Feb. 16 by the NPS president, retired Vice Adm. Ann E. Rondeau, and Adm. Samuel Paparo, commander of the U.S. Pacific Fleet.

"The establishment of the Nimitz Research Group marks a further evolution in our outstanding partnership with the U.S. Pacific Fleet," said Rondeau. "We have always seen NPS as a center of excellence and innovation, a place where our faculty and students work together to solve the operational challenges of our fleet and force. Through the Nimitz Research Group, we will be able to provide those solutions by deploying our talent and our experience in direct support of our Pacific Fleet partners."

According to NPS spokesman Lt. Cmdr. Ed Early, the Nimitz Research Group is modeled after Naval Warfare Studies Institute's Bucklew Research Group, which already provides similar support to Naval Special Warfare. Early said the Navy SEAL officers who are Bucklew scholars attending NPS on a two-year master's degree program serve as an extension of Naval Special Warfare Group commands, who in turn benefit from the SEALs' education, research efforts, interactions with the academic community, and proximity to Silicon Valley.

"The example set by the Bucklew Research Group proved to be an ideal model for PACFLT's requirements," Early said. "As a result, the Nimitz Research Group was conceived with the goal of providing coherence and unity of action for NPS' support to PACFLT."

Paparo, himself a graduate of NPS' Systems Analysis program, wanted to leverage the Bucklew Research Group model to focus the unique capabilities of Naval Postgraduate School faculty members as well as the operational experience of NPS' 2,500 mid-career officers, senior noncommissioned officers and civilians to support the commander of Pacific Fleet's priorities and research needs.

"The Nimitz Research Group links the intellectual rigor of NPS, its key location in the nation's hub of technical innovation and the expertise of innovative warfighters in the Pacific Fleet to research, develop and implement new and dynamic combat capabilities," said Paparo. "Together we will build critical advantages over our competitors to maximize our strengths — battlespace awareness, agility, maneuverability and collective capabilities of the joint forces."

[U.S. Pacific Fleet Will Leverage Knowledge, Expertise of Naval Postgraduate School With New Nimitz Research Group - Seapower \(seapowermagazine.org\)](https://seapowermagazine.org)

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## **NPS Conducts Comprehensive Study Bridging Cyber and Electronic Warfare**

*(Navy.mil 16 Feb 22) ... Matthew Schehl*

In a way that only the Naval Postgraduate School (NPS) can, researchers are wrapping up a major foundational study exploring the convergence of Electronic and Cyber Warfare.

The TS/SCI-classified study, commissioned by the Office of Naval Research (ONR), identifies a roadmap to meet the technological and acquisitional challenges inherent in ensuring American dominance across the future Electromagnetic Spectrum (EMS). This has the potential to inform the Naval Research Enterprise's investment portfolio for years to come, according to the project's NPS lead U.S. Navy Cmdr. Chad Bollmann, director of the university's Center for Cyber Warfare (CCW).



“The focus of this study was mainly technology, essentially the vision for the convergence of electronic and cyber warfare,” he said. “We identified many current gaps – including some doctrinal and authorities ones – and recommended areas for investment with approximate resource estimates, timelines and, most importantly, how the gaps and proposed solutions interact.

“Having the best technology is the first step, but you also have to acquire, integrate and practice that technology if they’re going to be effective,” Bollman continued.

The study was solicited by ONR’s Code 31 (its Electronic Warfare [EW] section) as a means to guide technologies investment by the Navy over the near to mid-term.

Working closely with Naval Information Warfare Center Pacific (NWC-PAC)’s deep EW bench over the last year, an interdisciplinary team of nine researchers - military and civilian, field practitioners and academics - brought their strong expertise to the table.

For example, NPS faculty members Bret Michael, chairman of the Cyber Academic Group, and Ric Romero, who runs the Center for Joint Services Electronic Warfare, each brought a wealth of field experience in EW and Cyber Security, respectively. Lt. Col. Michael Senft, Military Faculty Lecturer in the computer science department, is a career Army Information Network Engineering Officer. CCW Faculty Research Associate Darren Rogers recently retired following a 24-year Navy career as enlisted and an Information Warfare Officer.

“Having been part of the Navy starting in the early 90s, I’ve seen first-hand how things have changed with the ever-networked world and the proliferation of technologies the Navy has leveraged in the Electronic and Information Warfare environments,” Rogers said.

It’s the ability to tap into expertise like this that truly sets NPS apart, Bollman stresses, uniquely positioning the university to undertake this study.

“NPS is by nature joint and interdisciplinary,” Bollmann said. “Our ability to combine both the deep academic expertise plus the military practitioners in uniform with diverse kinds of Fleet experience and Fleet connections really is why we were chosen to conduct this study.”

Following an initial classified and unclassified literature review, the NPS-NIWC team engaged their extensive networks to interview subject matter experts at major Combatant Commands, the heads of various services’ research labs and functional commands.

“We talked with Fleet Cyber Command, Army Cyber Command and Marine Forces Cyber Command,” Bollmann recalled. “In all, we conducted approximately 40 in-depth interviews in order to identify specific technological gaps in the convergence of Electronic and Cyber Warfare.”

While the study takes a deep dive into specific technologies and their platforms, a common theme emerged from the interviews: siloing.

This is reflected at heart in the very definitions of two different disciplines (e.g, Joint Publication 3-0, Joint Operations) which historically have resulted in separate communities with different practices throughout the military.

“At some point, these [conceptual] models become obstacles and systems don’t talk with each other,” Bollmann said. “At the end of the day, these are distinctions our adversaries are not making.”

Attaining ascendancy across the EMS means not only ensuring secure access for American forces and allies, but also the ability to degrade and deny the technological capabilities of these adversaries. Furthermore, the proliferation of affordable commercial technology has dramatically lowered barriers to entry to hackers who wish us harm.

“The Navy’s traditional views on EW and Cyber relegate them to separate silos and are concerned with their defensive use,” noted Lt. Matt Litton, a Navy Cryptologic Warfare Officer and current Ph.D. student in NPS’ Department of Computer Science. With recent deployment experience as the Cryptologic Resource Coordinator at Naval Special Warfare Development Group (NSWDG), he provided first-hand operational experience to the depth of the study.

“Combatant commanders are looking for increasingly flexible, low-cost and reversible response options to hold near-peer adversaries at risk, and the convergence of EW and Cyber provides a key component of that strategy,” Litton explained. “Making effective use of synchronized non-kinetic effects will require increased research and development, expanded authorities and tighter integration with traditional warfare disciplines. This study’s aim was to aid the Navy’s research enterprise in focusing on



the most critical areas to provide operational commanders with an asymmetric advantage over our near-peer adversaries.”

A key component of this, the study notes, is a concurrent realignment of acquisition processes to fully enable the convergence of EW and Cyber.

Currently, acquisition models are structured around unique programs which produce a capability for a specific user community. Introducing a more modular approach, however, would yield interoperable capabilities that could be integrated to achieve combined effects, according to Howard Pace, Professor of the Practice of Acquisition Management in NPS’ Department of Defense Management.

“Building to common Technical Reference Frameworks (TRFs) to produce highly integrable and interoperable capabilities would be a good beginning,” he said. “TRFs are not new and are widely used in commercial software production. This is a good model to follow since most EW and Cyber capabilities are software-intensive.”

“Following their model and incorporating their common continuous, iterative development and delivery process standard would increase our acquisition speed while allowing for changes and the quick incorporation of feedback by the end-user, the warfighter,” Pace added.

However, enabling such a model may require a sea change in how the Navy thinks about the acquisition process, he said.

“Converging EW and cyber capabilities will require a culture shift away from doing what we have always done in the past, of saying that it is too much risk or that it isn’t specifically for my customer,” he continued. “In an era of Great Power Competition, I do not think we can afford that.”

With NPS’s portion of the study winding down, Bollmann and his team will next brief ONR on their findings.

This will set the stage for investment priorities converging EW and Cyber technologies both in the short term, i.e. over the next three to five years, as well as over the longer-term horizon of seven years and beyond.

“A lot of our recommendations frankly aren’t huge rocket science things, but the hard part will be getting all of these different capabilities to work together,” Bollmann said. “What they do, though, is let us protect our own platforms while holding our adversaries at risk anywhere in the world without necessarily having to put our major platforms or sailors at risk. This is critical.

“That is the ball that has to be moved forward,” he added.

[NPS Conducts Comprehensive Study Bridging Cyber and Electronic Warfare > United States Navy > News-Stories](#)

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## **Innovation Lab Hosts Modeling and Simulation Toolbox Hackathon**

*(Southern Maryland Chronicle 16 Feb 22)*

At the start of a cold Thursday in January, a group of more than 20 scientists and engineers from the Naval Surface Warfare Center Dahlgren Division (NSWCDD) filed into the Innovation Lab, or iLab, for a day of learning and executing new skills. The NSWCDD innovators participated in the iLab’s second Modeling and Simulation Toolbox (MAST) Hackathon on Jan. 27.

Naval Surface Warfare Center Dahlgren Division Engineer Gary Pepper answers questions about the Modeling and Simulation Toolbox (MAST) model during a hackathon event, Jan. 27. The hackathon saw a “friendly competition between departments,” according to Pepper

“MAST is a tool that allows an analyst to create models by piecing together components to create whatever they want to make, whether it is a littoral combat ship, helicopter, sailor, or platoon. They use building pieces to do that,” explained

MAST Senior Software Architect Clinton Winfrey. “After parameterizing a platform, analysts add the weaponry, sensors, missile launchers, etc. that belong with that system. Analysts can create representations of capabilities that exist today or those that have yet to be developed.”



While the Dahlgren-created model supports analysis efforts, current naval warfighters receive exposure to the toolbox, which is currently in use with Valiant Shield exercises out in the Pacific, through wargaming exercises and research was done at **Naval Postgraduate School** in Monterey, California.

“It’s a powerful instrument that can answer a lot of tough questions in a simple way. That’s the goal: to give people a capability that they don’t have already,” said Winfrey. “With a tool like MAST, analysts can answer ‘what if?’ questions and better understand what might occur in a situation that can’t easily be tested live.”

At the beginning of the event, participants engaged in a boot camp to quickly learn the model, followed by implementing their newly-learned skills in three increasingly challenging scenarios.

“These hackathons are beneficial because they expose the workforce to a potential tool that is readily available and provide some hands-on experience,” said NSWCCD Force Analyst Josh Shiben. “We use MAST directly to derive some of the requirements for the future Navy’s needs. MAST is a really flexible tool. You don’t have to be a component programmer to use it – I’m not! It’s definitely useful in that regard.”

Seven teams of three participated in the events with each employee coming from a different program or project background, creating a space for unique perspectives on the scenarios to thrive.

“I like the interconnectivity of it all [the hackathon],” said David Barnes, a scientist from NSWCCD Dam Neck Activity. “If everyone on my home team was here working on these scenarios, we would get different results.”

During each of the three scenarios, members of the Warfare Analysis and Digital Modeling Department walked around

the room to assist teams and review the scenario’s results. For each scenario, teams were scored based on how effective their solution was to the problem, with respect to casualties and cost-effectiveness.

“The three exercises are the same scenario with increasing difficulty. After every round, we score them on how well they did base on how many ships they got across the finish line,” said Shiben. “The better they do and the cheaper they do it for, the higher the score. It’s more like a track meet – they’re not trying to kill each other, they’re trying to run faster.”

Ultimately, the team from the Electromagnetic and Sensor Systems Department outperformed the other teams, winning coveted bragging rights. Despite only one official ‘winner,’ each participant left with another tool in their toolboxes – the MAST model itself.

“All of the participants downloaded MAST. They can take back the lessons they have learned during the hackathon and go into the model and develop their own scenarios or apply them to scenarios for their department,” said iLab Director Tamara Stuart.

Other areas of MAST that were not explored during the hackathon, such as its applications in other weapon realms, are available to the technical departments.

[Innovation Lab Hosts Modeling and Simulation Toolbox Hackathon - The Southern Maryland Chronicle](#)

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## STUDENTS:

### Politics and Pressure are Sabotaging Women in Special Operations

*(Task and Purpose 15 Feb 22)* ... U.S. Army Maj. Meg Tucker

In March 2020, Military.com announced that, for the first time ever, a female had been selected for Special Tactics, an elite Air Force organization that conducts challenging missions in some of the most dangerous parts of the world. However, outrage over women’s integration into elite special operations units has flared up once again.

In early January, Instagram user @bkactual posted a letter written by an anonymous combat controller accusing the Special Tactics schoolhouse — 352nd Special Warfare Training Squadron — of



giving preferential treatment to the female trainee. The author accused the candidate of quitting repeatedly, and receiving an unprecedented number of opportunities to continue. The AFSOC commander responded with a Facebook post, stating that “the standards — which are tied to mission accomplishment — have not changed. However, there is a difference between standards and norms.”

According to a memo written by the student in question that was obtained by Air Force Times, a communication failure led to other students believing that physical fitness standards had been lowered for her.

As a service member, I’m puzzled that the idea of women in special operations remains a source of controversy, despite the 2016 Department of Defense policy that opened all military jobs and schools to women and the fact that women have been in Special Operations units for years. The current fiasco is reminiscent of a previous accusation that the Army had lowered standards for the first female Rangers, levied by then Rep. Steve Russell (R-Okla.) who famously demanded to see the women’s training documents.

As the owner of a small business that provides women with tactical fitness training programs, I can say with confidence that no one who is seriously vying for admission into these notoriously competitive schools, irrespective of gender, wants the standards lowered for them. I have never encountered a woman inbound to an assessment or selection that wanted handouts. Serious candidates want to earn the privilege to serve in those jobs, and to avoid the stigmas associated with special treatment. Reduced standards for females would, in Ranger-tabbed Kristen Griest’s words, “reinforce the belief that women cannot perform the same job as men, therefore making it difficult for women to earn the trust and confidence of their teammates.”

I am also familiar with the two main ideological camps that have emerged as the result of these controversies. One side is outraged by the perceived lowering of military standards — former Navy SEAL and Republican Texas Representative Dan Crenshaw is a sympathizer. In response to the release of the anonymous letter, he posted to his Twitter account that “We cannot sacrifice training standards. Ever. Full stop.” Though he added that “there are lots of females that contribute enormously to Special Operations missions,” his support of the letter only encourages those who oppose the integration of women into special operations. I am skeptical of the opinion of any politician who hasn’t witnessed the changes that have taken place in special operations training environments since they became fully integrated, or frankly, anyone who wasn’t at the Special Tactics schoolhouse to watch events unfold.

The opposing camp decries perceived tab-protecting, or the practice of elite military communities blocking otherwise viable candidates from attending or graduating from these crucible schools. This practice is not publicized for obvious reasons, but it still happens to both women and men attempting to undergo elite training. We all know it can happen. Of course, cadres in these schools are the true arbiters of what passes muster. Nonetheless, the degree to which personal biases impact a decision to keep or scrap a struggling candidate remains a valid concern.

Regardless of these polarized opinions, only those that were witness to the female trainee’s performance know the truth. It’s also reasonable to assume that across the military, some degree of both standard adjustment and tab-protecting might happen, just as there are schools and assessments that maintain long-standing requirements and treat all candidates equally. And we can all agree it’s just as bad to push an unprepared student through a brutally difficult training course as it is to create artificial barriers for those who deserve an opportunity to be there.

### **So what’s the bigger picture?**

The problem is that we may be rushing the process. Assuming the accusations and the airman’s statements are both true as reported, both the student and the unit are probably victims of a politicized, heavy-handed policy that has been applied like a hammer to a task for a scalpel.

### **Rushing to Failure**

It is no secret that Congress exercises enormous influence over the military — and that’s not necessarily a bad thing. The Department of Defense has struggled to eradicate sexual misconduct in the ranks for decades, and Congress recently intervened. The downside is that Congress is quick to tighten the



purse strings when they're unhappy with DoD practices or expenditures. Though no commanders I know ranked O-6 or above could ever openly say it without facing reprimand, special operations leaders are probably under immense congressional pressure to put more women in the most elite military jobs.

Why would this be the case? First of all, it's been policy to allow women in top tier jobs for 6 years. Any shrewd governing body would expect its commanders to fall in line. Secondly, all branches of U.S. government are subject to the National Security Strategy, the interim version of which promises to protect "equal rights of [...] women and girls" and expressly states "we will work to ensure that the Department of Defense is a place of truly equal opportunity." It also mentions gender equality twice. The addition of a proposal to add women to the draft in the National Defense Authorization Act, though it was removed last December, is further evidence that the Biden administration is taking integration and equality seriously. Congress has more reason than ever to ask senior military leaders hard questions around integration. But instead of asking why more women aren't in combat roles and elite Special Operations Forces units, they should be asking, "what can we do to help?"

It was likely this pressure that led to the first female Special Tactics student being publicly sacrificed. But there must be a first, right? Maybe the command felt pressure to push a female through to set the precedent. Perhaps it was willing to adjust norms so that she and subsequent females could snag a win for the unit.

Of course, the training unit has every right to change its practices. The question remains whether these new norms were already in place and well-understood, or if they were first implemented when the female candidate arrived at the school. The latter could easily create the perception that she was given special treatment, and subsequently destroy the instructors' trust if they were ordered to push her through. Norms aside, units also reserve the right to change their standards within their command's procedural requirements, regardless of public outcry. If the standards no longer make sense for how we fight today, they should be revisited to ensure recruitment of the best candidates for the job.

I can understand why the author wrote the anonymous letter; he or she likely felt there were no options left to bring attention to an issue which caused them major concern. While it may be factually correct, it has unfortunately ruined the opportunity for a closed investigation, which would yield the most nuanced and candid findings. Conversely, to maintain credibility in the public eye, the command may have to remain silent or boil findings down to a one-liner that fails to paint the full picture. The public always wants simple answers. It will not accept a nuanced explanation of changing norms, training adaptations, exceptions to policy, communication gaps or pressure from the chain of command or Congress.

Rushing the process of integration has set women and elite units up for failure. It also erodes trust and unit cohesion at all levels. When we rush it, otherwise admirable and capable women are dragged through the mud, and commands are forced to make important decisions under pressure. The fallout ruins the candidate's credibility, causes the training cadre to question their leaders, and violently yanks elite units into the spotlight.

## **The Solution**

Real change takes time. Patience may have yielded a better result in this case. It was only a few short years ago that the first female Rangers received their tabs; now there are nearly a hundred. There are also now females currently serving as Army Green Berets. More women are serving in elite combat roles than ever before. Every few weeks, a story comes out of yet another woman earning entry into an elite unit.

We can't deny that precedent matters; news outlets cover every milestone of women in American elite units because it's exciting, and it shows other women that the door is open. With some patience, perhaps another viable female candidate will present herself in the next six months, or year, who would complete the training without the cloud of vitriolic publicity. (In spite of how events unfolded, and for what it's worth, I deeply admire the anonymous female trainee who went through this whole ordeal for her fortitude and integrity.)

If integration were done right, we'd see an organic, gradual, and enduring increase of women in elite units. And if our lawmakers want lasting and meaningful female representation, they should allocate the necessary resources. Investing into programs that facilitate unit cohesion, team-building and productive



cultural change would help. So would investment in programs such as the Army's Holistic Health and Fitness and the Special Operation Command THOR3 performance program to improve training that is specific to the individual, female or male, accounting for biology, physiology, and previous fitness experience. Female athletic and tactical performance is a woefully under-researched arena even in the civilian world. These efforts would be an investment in the future of American security.

At the unit level, commanders should encourage their fittest and most gritty females to assess and go to elite schools training the Army's Special Forces, the Navy SEALs, or Air Force Special Tactics. Candidates should be connected with those who have completed these pipelines and given opportunities to train and compete. While commanders must prioritize the needs of the unit first, they are also the gatekeepers for their subordinates' professional advancement. Commanders should be sending the signals up to Congress and the Biden administration for gradual and intuitive integration of women in America's deadliest units: otherwise, institutional integrity and unit cohesion are under threat. To find the right people, we must be patient. Perhaps the politicians need to be reminded that "Special Operations Forces cannot be mass-produced."

I look forward to the day when female firsts are no longer making headlines — when the trails have been blazed, gender no longer dictates fitness for service, and the door remains open for the next lethal American to walk through and take up the burden of serving as a special operations warrior.

Maj. Meg Tucker has been in the Army for eleven years, serving as a Kiowa Warrior pilot and Army Special Operations as a Psychological Operations officer. She has deployed to Southern, Central and Indo-Pacific Commands and taught in the PSYOP school. She has been published in Special Warfare Magazine and Small Wars Journal. She owns and operates The Valkyrie Project and is currently pursuing a Master of Science degree in Information and Political Warfare at the **Naval Postgraduate School** in Monterey, California.

[Special Operations women are being sabotaged by politics and pressure \(taskandpurpose.com\)](https://taskandpurpose.com)

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## **NPS Student, Professor Win 2021 USNI Information Warfare Essay Contest**

*(Navy.mil 15 Feb 22) ... Mass Communication Specialist 2<sup>nd</sup> Class Huy Tonthat*

*(NPS.edu 15 Feb 22) ... Mass Communication Specialist 2<sup>nd</sup> Class Huy Tonthat*

U.S. Navy Cmdr. Edgar Jatho, a doctoral student in the Naval Postgraduate School (NPS) Department of Computer Science, and his advisor Assistant Professor Joshua A. Kroll have been named the winners of the U.S. Naval Institute (USNI) 2021 Information Warfare Essay Contest for their piece, "Artificial Intelligence: Too Fragile to Fight?"

Jatho and Kroll will be honored this week at an awards ceremony during WEST 2022, a large naval conference and exposition in San Diego, Feb. 16-18. In addition, their award-winning essay has been published in the February issue of USNI's Proceedings.

The essay cautions on the overreliance of AI and raises awareness of potential issues and exploits that can affect its effectiveness in the field. Jatho got the inspiration to write about the essay for the annual USNI contest while taking Kroll's Trustworthy and Responsible AI course in 2020.

"The course involved reading leading thinkers across disciplines about AI, automation and algorithms," said Jatho. "It brought up the challenges and difficulties in implementing safe and ethical systems that leverage the technology ... Now that we have this big impetus by the DOD to adopt artificial intelligence and machine learning into technology on all kinds of different levels and solutions, it's easy for us to forget some hard-won lessons."

In addition to his NPS coursework, Jatho was inspired by one of the presenters in NPS' longstanding Secretary of the Navy Guest Lecture (SGL) series. During his October 2021 lecture on future of warfare, retired U.S. Navy Adm. James Stavridis cautioned how the military's overreliance on advanced technology can leave it vulnerable to massive disruption.



“Dependence on a new technology like cyberspace, artificial intelligence or nanotechnology will enable you to move forward,” said Stavridis during the SGL. “But does it create an Achilles’ heel? Often it does.”

“Based on all of the research that I’ve been reading of what’s possible, it really got me to think,” continued Jatho. “[AI] can be a very complex and difficult problem because you can find support that says it’s doing a great job. Then suddenly when it gets to the battlefield, you find that it’s extraordinarily brittle and easy to break.”

Jatho credits the many resources at NPS supporting his education and research, and the opportunities to apply his studies, for his winning piece. Leading among them is Kroll, Jatho’s advisor and co-author of the essay.

“I’m quite proud that we in NPS can be in this position of thought leadership for the Navy and we can do the work to really think strategically,” said Kroll. “That’s something that I don’t think comes as naturally from other institutions that aren’t as focused on defense-oriented problems.”

As the winning essay, the USNI presents Jatho and Kroll’s cautions about AI as part of its mission to advance the professional, literary and scientific understanding of sea power and other issues critical to global security.

It is critical for NPS faculty and students to contribute their work to these kinds of leading venues, Kroll says, that collect and distribute these ideas to the naval and defense community.

“They’re a trusted voice in this DOD community,” he says, “and I hope we can have an impact with how people can make our naval capabilities support the execution of the mission in a more robust and trustworthy way.”

Jatho continues the pursuit of a Ph.D. in Computer Science at NPS, and is slated to teach at the Naval Academy following graduation as part of the Permanent Military Professor program.

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## **China Coast Guard: On a Trajectory for Peace or Conflict?**

*(CIMSEC 16 Feb 22)* ... Ahmed Mujuthaba

Coast guard roles are envisaged to lay a bridge between state enforcers on land and those beyond state waters. Understanding the fundamental application of coast guard organizations is important, especially given their varying roles and responsibilities in the maritime domain. Today’s coast guards are engaged in an operational spectrum spanning from an array of combat to civil defense roles, resulting in organizations that are seemingly limitless in their roles, authority, and capabilities.<sup>1</sup> One such ostensibly boundless organization is the China Coast Guard (CCG).

This article will focus on this latest coast guard and its transformation into one of the world’s largest from two aspects. The first aspect is the requirement for the development and rapid expansion of a China Coast Guard. This includes the contested claims in the South China Sea and the East China Sea and an examination of how a maritime law enforcement agency would fit into that context.<sup>2</sup> The second aspect is the China Coast Guard’s application. This examination will unravel the roles and responsibilities of China Coast Guard, its legal authority, and its conduct of operations.<sup>3</sup>

### **China’s Need for a Formidable Coast Guard**

In 2013, four Chinese maritime law enforcement agencies were integrated to form the China Coast Guard Bureau, which was later transferred to the People’s Armed Police Force under the Central Military Commission in 2018.<sup>4</sup> This process was an outcome of the 18th National Party Congress in 2012, which called to implement the “Maritime Great Power” strategy.<sup>5</sup> The integrated agencies included the China



Marine Surveillance, China Fisheries Law Enforcement, Maritime Police and Border Control, and Maritime Anti-smuggling police.<sup>6</sup>

In less than a decade, the China Coast Guard has transformed into the world's largest 'blue water' coast guard.<sup>7</sup> Generally, the term "coast guard" is attributed to enforcement agencies mainly tasked with maritime search and rescue, maritime law enforcement, and the regulation of maritime activities in domestic waters.<sup>8</sup> Aligned well within these general requirements, the China Coast Guard is responsible for enforcing China's sovereign maritime claims, surveillance, fishery resource protection, counter-smuggling operations, and general law enforcement operations.<sup>9</sup>

One of the urgent priorities for the Chinese to develop a coast guard was the weak Chinese maritime agencies, relative to their regional competitors. In 2010, in the 'Five Dragons Stirring Up the Sea', Goldstein states that the regional coast guards of the Pacific region, namely the Japan Coast Guard and the U.S Coast Guard, were comparatively large and more effective compared to Chinese capabilities.<sup>10</sup> Expanding on this point, Goldstein also refers to Chinese experts raising the concern of rivalry among the maritime enforcement agencies within China that contributed to a weaker and less collaborative maritime enforcement construct.<sup>11</sup>

The other priority may have been the future development prospect of the Peoples' Liberation Army (PLA) Navy as a blue water navy. Most strategists indicate that the requirement for Chinese naval expansion was the result of its humiliation during the 1995-96 Taiwan Strait crisis.<sup>12</sup> This triggered a rapid development of the PLA Navy. A U.S Department of Defense report in 2020 claims that China has, by number of platforms, the largest navy in the world with approximately 350 platforms.<sup>13</sup> In addition, the establishment of the first Chinese PLA Support Base in Djibouti, operated by the PLA Navy, puts its global power projection ambitions in check.<sup>14</sup> Furthermore, the role of regional law enforcement previously utilized by PLA Navy platforms was projected as disproportionate aggression.

The most important priority for developing and strengthening a coast guard may have been the hotly contested maritime claims by China in the South and East China Seas. Chinese scholars claim that while Chinese sovereignty over the South China Sea territories was never contested before the 1930s, after that time China's vulnerable status was exploited by global powers such as France and Japan.<sup>15</sup> Since then, China has struggled to exercise complete authority over the territories, competing, and sometimes clashing with regional states such as Taiwan, Vietnam, Malaysia, Brunei, and the Philippines, all of whom also claim sovereignty over the island chains.<sup>16</sup> In addition, the U.S Navy has continuously challenged the Chinese claims by conducting Freedom of Navigation Operations (FONOPs) in those waters, mostly policed by the China Coast Guard. Interestingly, Robert Kaplan has described this region as the battleground for the next global conflict.<sup>17</sup>

The other contested territory is in the East China Sea. Since claiming its disputed control over the Senkaku/Diaoyu Islands in the East China Sea by the end of the Sino-Japanese War in 1895, China has been continuously demanding its sovereign rights over the islands against Japan.<sup>18</sup> As with the historical claims made over the South China Sea territories, China links its claims over the East China Sea territories as far back as 1372, when they discovered the islands and then named them in 1403.<sup>19</sup> Meanwhile, the Japanese claim that the Senkaku/Diaoyu Islands were annexed by Japan into its Okinawa Prefecture on January 14, 1895, before signing the end of the Sino-Japanese War.<sup>20</sup> Regardless of these claims, the two countries have been in frequent clashes with each other. These clashes include a 2010 incident in which a Chinese fishing boat collided with two Japan Coast Guard vessels; the 2012 Japanese nationalization of the islands resulting in the Chinese claiming territorial sea baselines; and the 2013 establishment of an Air Defense Identification Zone by China in the area.<sup>21</sup>

### **Application of the China Coast Guard**

Considering the growing clashes in these contested maritime zones, the China Coast Guard's role as a national tool of escalation or de-escalation is distinguished by its application of force. The most interesting aspect of this application is the "grey zone" tactics of the China Coast Guard. A RAND project defined gray-zone as "...an operational space between peace and war, involving coercive actions to change the status quo below a threshold that, in most cases, would prompt a conventional military



response, often blurring the line between military and nonmilitary actions and the attribution of events.”<sup>22</sup> Generally gray-zone tactics are activities or operations that fall between war and peace.<sup>23</sup>

The RAND definition of gray-zone can be broken down as one that: (1) operates between peace and war; (2) engages below the threshold of conventional warfare; and (3) creates ambiguity between civil-military action. The China Coast Guard is known to employ these activities in the Yellow, East, and South China Seas with the People’s Armed Forces Maritime Militia (PAFMM).<sup>24</sup> The China Coast Guard has adopted tactics such as ramming into other states’ coast guard and fishing vessels, and actively promoting and accompanying Chinese armed fishing vessels taking up these tactics in disputed waters.<sup>25</sup> These tactics go beyond the ‘white-hull’ law enforcement approach, although they do not cross a ‘grey-hull’ warfare response.<sup>26</sup>

The recent introduction to the China Coast Guard law in January 2021 was also of concern to most regional states as an added potency to its gray-zone activities.<sup>27</sup> Article 21 of this law states that the China Coast Guard has authority to use force against foreign warships and foreign ships operated for non-commercial purposes.<sup>28</sup> Okada, in his article, rightly claims that this is in violation of the United Nations Convention on Law of the Sea (UNCLOS) articles 32, 95, and 96, all of which grant immunity to the named category of vessels.<sup>29</sup> UNCLOS also ensures freedom of navigation in the High Seas and the Exclusive Economic Zones under articles 58 and 87.<sup>30</sup> In addition, countries with disputes in the region have protested against this law, which signals a more aggressive stance against future challengers to Chinese claims.<sup>31</sup>

This change in law could contribute to the escalation of incidents beyond the threshold of law enforcement or peaceful actions. An international conflict is not only limited to armed confrontation between military personnel, but it also includes confrontation between state, civil, or paramilitary forces, such as coast guards.<sup>32</sup> Since not all nations interpret the Chinese version of UNCLOS and accept their claims, peaceful legal challenges or mere undertakings of innocent passage may be met with lethal force by the China Coast Guard. The new law has given the China Coast Guard the flexibility to operate within three spectrums: constabulary, gray-zone, and combat zones.

## Conclusion

The China Coast Guard has grown from a feeble organization to one of the region’s most efficient and resourceful agencies. This article focused its examination on two main aspects of the China Coast Guard. The first was the requirement to develop a coast guard by the Chinese. Examining this need revealed three major priorities for the urgent development of a competent coast guard for China: 1.) the nation’s existing weak maritime enforcement capability compared to regional capabilities; 2.) the expansion of the PLA Navy’s responsibility beyond the region and the projection of a pacified regional posture; and, most important, 3.) the need to protect the Chinese claims over the territories in the South and East China Seas. The second part of this article focused on the China Coast Guard’s current application, such as its traditional roles as a coast guard, and its adoption of gray-zone activities with other state entities. It is anticipated that the current trajectory of the China Coast Guard’s development entwined with new conflicting legal authorities rendered to it, will further deteriorate the existing maritime security dynamics of an already fragile region.

LTC Ahmed Mujuthaba was the Principal Director of the Maldives National Defense Force Coast Guard, and is currently pursuing an MSc in Information Strategy and Political Warfare at the U.S. **Naval Postgraduate School**. He is trained in salvage diving from the PLA Navy Submarine Academy and also holds an MSc in Defense and Strategic Studies upon completion of the Indian Defense Services Staff College. You can follow him on Twitter: @mujuthaba. The views and opinions expressed are his own and do not reflect those of the U.S. Naval Postgraduate School, Maldives National Defense Force, or the Government of Maldives.

[China Coast Guard: On a Trajectory for Peace or Conflict? | Center for International Maritime Security \(cimsec.org\)](#)

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## AWARDS:

### NPS ITACS Department Honored for Achievement with DON IT Excellence Award

*(NPS.edu 18 Feb 22) ... U.S. Navy Lt. Cmdr. Ed Early*

*(Navy.mil 18 Feb 22) ... U.S. Navy Lt. Cmdr. Ed Early*

The Information Technology and Communications System (ITACS) department at the Naval Postgraduate School (NPS) received the prestigious Department of the Navy (DON) IT Excellence “Defend” Award on Feb. 16 at the West Coast DON IT Conference in San Diego.

The award recognized NPS’ evaluation of a cyber readiness tool, “Nova,” conducted under a Cooperative Research and Development Agreement (CRADA) with Rebellion Defense. The Nova tool is designed to continuously test the defenses of a computer network, simulating a variety of cyber threats – a process also known as “red teaming” – in order to ensure operational readiness of the network at all times.

DON Chief of Information (DON CIO) Aaron Weis presented the award to NPS Command Information Officer Scott Bischoff and Deputy CIO Robert Sweeney, representing the NPS ITACS team.

“Defending the network is a key tenet of the Information Superiority Vision and will continue to be a team effort across the Department of the Navy, so I’m honored to recognize the work done by the team at NPS for their work with Rebellion,” said Weis. “Future Sailors will no doubt benefit from the lessons we learn from this important pilot.”

NPS was one of a number of commands competing for the DON IT Excellence Award, recognizing excellence in Information Management (IM) and Information Technology (IT) within the DON.

Bischoff, a retired Navy captain and naval aviator, compared the approach of the software demonstrated during the “Nova” pilot program to milestones known in the aviation community – adversary training and pre-deployment workups.

“In my experience in the ship-air wing team, we’re used to training for months prior to deployment – plan, brief, fly, then debrief to hammer home the lessons,” said Bischoff. “We do workups with your ship before deployment and each CO gets readiness measures along the way. Cyber readiness software such as the tool we tested similarly point out our readiness gaps. They make it possible to view the network from a readiness and currency perspective – the team and the equipment.

“We can let the software run autonomously, or plan complex scenarios, run them with or without notice, debrief, address your shortcomings, and repeat the process. Our cybersecurity cycle is constant – we are always ‘on deployment.’ Tools like this allow us to keep pace,” Bischoff continued.

Going forward, Bischoff said that ITACS and NPS will continue to provide a unique terrain for DON, the Department of Defense and industry leaders to evaluate cutting-edge software and technology.

“Working collaboratively with industry partners such as Rebellion has improved the NPS cybersecurity team,” said Bischoff.

The Naval Postgraduate School provides defense-focused graduate education, including classified studies and interdisciplinary research, to advance the operational effectiveness, technological leadership and warfighting advantage of the naval service.

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## WEST 22:

### Panelists Challenge U.S. Navy's Strategic Thinking

(AFCEA 18 Feb 22) ... George I. Seffers

A WEST conference and exhibition panel discussion designed deliberately to be provocative questioned whether the U.S. Navy's strategy permits the kind of innovation necessary to vie with peer competitors such as China.

Vice Adm. Ann Rondeau, USN (Ret.), president, **Naval Postgraduate School**, moderated the discussion. The panel also included Adm. James Winnefeld Jr., USN (Ret.), former vice chairman, Joint Chiefs of Staff; Bran Ferren, co-founder and chief creative officer, Applied Minds LLC; and Steve Blank, adjunct professor, Stanford University and senior fellow for innovation, Columbia University.

Adm. Winnefeld outlined three innovation horizons. The first would include incremental technical and tactical changes that fit into the current strategic concept. Examples might include building radar systems with greater range or missiles that are a little more accurate.

The second innovation would include a step up in innovation, such as stealth technology, precision-guided weapons or even machine learning coupled with directed energy weapons. But it would still fit within the current strategy.

"Now, we do those first two horizons really, really, really well as a military and as a country. Those are actually very important pacing efforts that help us extend our strategy as our competitor grows closer to overthrowing it. But we can only take extension so far before the strategy still breaks," Adm. Winnefeld asserted.

The third horizon forces a rethinking of the entire strategic concept, which "is culturally very, very difficult," he said.

One way to rethink China is to re-imagine its center of gravity. That center of gravity is what the adversary fears the most. "That center of gravity, as with any totalitarian government, is their leadership and what they wake up in the morning and actually fear, which is namely control of their people. We see this fear every single day in China's behavior. Just look at the Olympics," the admiral said. "And we're actually seeing it today with Russia who's paranoid about having a free and democratic Ukraine sitting on their border."

However, targeting that center of gravity under a new strategy does not necessarily mean jumping into high-end fights with a committed peer adversary in his own backyard. "Rather, it speaks to a whole-of-government solution that holds at risk the economic and social underpinning of the mandate, applying all our national instruments of power in ways that present dilemmas along a rich escalation ladder in which the military takes part."

And that "implies a few different capabilities for our Navy that we either don't have enough of, or that we have allowed to atrophy, or that we don't even have at all," Adm. Winnefeld said.

Furthermore, he suggested working on a long-term, future strategy is necessary "If we're going to serve our nation well" because the country is at a tipping point and "we don't have much time," he warned.

For his part, Ferren criticized the federal acquisition regulation (FAR) and the outdated requirements process for developing new technologies or acquiring new systems. "I firmly believe that if we wanted to vanquish any enemy, we just have to get them to adopt our process, and we would be safe," Ferren joked. "We've come to the stage where we're paralyzing ourselves with regards to innovation for government systems, the military, etc."

The process is too slow and requires officials to have the answer to generate the requirements before they even know the question, he said, adding that common sense has been suspended. "We don't do strategic or long-term thinking anymore. If anything, we may do long-term tactical thinking and call it strategic, but it's really just a spreadsheet exercise. ... That's not a survivable model."

Blank suggested that a more far-reaching strategy might not focus on Carrier Strike Groups. He pointed out that Carrier Strike Groups and submarines have been the preeminent formation for U.S. naval warfare for 80 years, and China has been watching those same formations for decades.



Blank questioned what would happen if the Carrier Strike Groups can no longer win a fight and hinted the United States may be underestimating China's capabilities, intents, imagination and operating concepts. "What if they could disable a destroyer or strike group via cyber, conventional weapons, hypersonics—the whole list of capabilities they've been working very hard?"

The Navy's plans call for a distributed fleet architecture and a mix of manned ships and unmanned ships, he noted. At the same time, however, the Navy's ships are large and complex and take too long to manufacture and are too expensive for the service to afford as many as needed. "What's the plan B?" Blank asked.

One proposal is what he called "the small, the agile and the many," which calls for hundreds or thousands of unmanned vehicles, in the air, as well as on and below the ocean surface. All of them could be communicating and collaborating as autonomous formations. "This requires a different worldview, one that's no longer tied to the 20th century industrial systems we still kind of operate on. It requires us to understand software is the new platform," Blank said. "We should observe that the Navy has world-class engineering and acquisition processes to deal with hardware, but it's quite embarrassing when applied to software and digital systems."

Ferren picked up on that theme. "We have these expensive things called carriers, which are very effective, very impressive when they show up and do a whole bunch of things—until you have an enemy who's really serious and wants to take them out because then they disappear very quickly," he said.

Ferren described "fractionated concepts" of swarms or even super swarms of thousands of autonomous systems. Some might be big enough to carry missiles, others measured in mere inches. Some might "swim up to an electro-optical aperture and squirt tar on it or go into gun barrels and just melt," he said, calling it a scalable concept that actually takes advantage of industry innovation. "Now the problem is China's better at it than we are. If we were going to go build 10,000 entities or 20,000 of them, we'd probably ask China to do it for us, which might not be the best strategy for this."

He also floated the idea of a ship designed to manufacture unmanned systems on demand. The "force generator" ship might be as big as a carrier, but it would provide mines or unmanned aerial vehicles and undersea unmanned vehicles to act as communications relays or intelligence, surveillance and reconnaissance capabilities "on demand when you need them to deal with a problem."

Adm. Winnefeld touted the need for smart offensive mines. "The state of offensive mine warfare in the Navy—I'm sorry folks—is just appalling," he said, noting that the Navy is focused on countering mines placed by others rather than placing its own. "It's a powerful, powerful tool. My goodness, compare what we have today to what the art of the possible would be with machine learning and communications and new materials and power technologies and all kinds of great stuff you could throw in those devices," he said. "You could scare the living daylights out of China and use it to either shut down their economy or help Taiwan defend itself."

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## FACULTY:

### Happiness Drives Performance

*(WFMZ 16 Feb 22)*

According to new research released today in MIT Sloan Management Review, employees with high measures of well-being upon starting a job deliver superior performance at a dramatically higher rate than those with lower measures of happiness.

Which comes first, succeeding and then being happy, or being happy and then succeeding?

Paul Lester, associate professor of management at the **Naval Postgraduate School**, Martin Seligman, director of the University of Pennsylvania's Positive Psychology Center, and Ed Diener, influential American psychologist, followed nearly 1 million U.S. Department of Defense employees (the single



largest employer in the world) for five years, measuring their relative happiness and optimism using 25 questions drawn from PANAS and the Life Orientation Test. The participants spanned across all job functions (infantry soldiers, office workers, pilots, engineers, truck drivers, medical professionals, logistics experts, etc.).

"While we expected that well-being and optimism would matter to performance, we were taken aback by just how much they mattered," said Lester, "In short, not only do happiness and optimism matter to employee performance, but they matter a lot, and both predict how employees will do."

Within the workplace, we know that employees with higher formal measures of well-being are more likely to emerge as leaders, earn higher scores on performance evaluations, and tend to be better teammates. We also know, based on substantial research, that happier employees are healthier, have lower rates of absenteeism, are highly motivated to succeed, are more creative, have better relationships with peers, and are less likely to leave a company.

The results of the research underscore the importance of employee happiness to business results and beg the question: "What can leaders do about employee happiness?"

Following the science and taking a structured approach to hiring for, promoting, and developing employee happiness, the authors urge leaders to commit to three actions:

- Measure happiness in both employees and job candidates. "We advocate using measures of happiness and optimism as discriminators, or 'tiebreakers' in the hiring process as the risks are low and benefits can be very important," noted Lester.
- Develop happiness in the workplace. Training initiatives targeting employee well-being do not require a significant time investment, are cost effective, and carry a high ROI. (Examples are included in the article.)
- Retain employees who are happy. "While organizations should want happy employees because they perform significantly better than those who are unhappy; organizations also need happy employees because happiness is in fact contagious," said Seligman.

This research with the Department of Defense over the last decade consistently uncovered a foundational truth: Employee well-being initiatives work best when confident leaders present the material and when senior leaders place significant emphasis on the overall effort.

Thus, leaders must be willing to invest their efforts into making the initiatives successful by not only advocating for them — for example, by securing resources for a program and promoting positive strategic messaging — but also by participating in the training and incorporating it into their own behaviors.

If leaders want to improve employee happiness, then they must model that which is taught so that it becomes integral to the organization's lexicon and culture.

## The Research

- The researchers followed nearly 1 million U.S. Army service members for five years, measuring their relative happiness and optimism using 25 questions drawn from PANAS and the Life Orientation Test. The questions were included on a larger survey taken by every Army soldier each year.
- This well-being measurement combines individuals' own self-assessments and their reporting on the frequency of positive and negative emotions experienced, to yield the researchers' measure of happiness.
- Even after the researchers controlled for previous performance and a range of demographic factors, soldiers who were the happiest and most optimistic went on to earn significantly more job performance awards across the next five years compared with those who were initially unhappy and pessimistic.

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## ALUMNI:

### HySpecIQ Expands with Two Key Hires

*(SatNews 15 Feb 22)*

This January, HySpecIQ, a satellite-powered hyperspectral analytics company, added two key hires to its Business Development team. Farris ElNasser will serve as the General Manager for the Middle East and Todd J. Woods will serve as the Global Director of Partnerships and Marketing.

John DeBlasio, CEO of HySpecIQ added “We are very excited to welcome Farris and Todd to our growing team. Together, their experience and expertise will not only expand HySpecIQ’s global reach and overall market development for hyperspectral imaging, it will also bring a heightened customer focus to our operations.”

#### About Farris ElNasser, General Manager for the Middle East

Prior to joining HySpecIQ, Farris ElNasser served 20 years in the U.S. Air Force, having held a broad range of leadership positions as a Middle East Foreign Area Officer leading Special Operations aviation advisory missions, diplomatic engagements, and negotiations with foreign military and governmental officials in over 15 countries throughout the Middle East and Central Asia. After his military career, ElNasser founded Lion-Archer LLC, an international consulting practice.

ElNasser is a first-generation American of Jordanian descent, and has traveled extensively throughout the Middle East region. He holds a Bachelor’s Degree from the United States Air Force Academy and a Master’s Degree in Middle East Studies from the United States **Naval Postgraduate School**.

#### About Todd Woods, Global Director of Partnerships and Marketing

Prior to joining HySpecIQ, Todd Woods’ 25+ year career spanned international and domestic U.S. market expansion and business development for Fortune 500 enterprises as well as venture-backed and early-stage startups. His experience in global business development has provided him with a unique and broad perspective in a range of industries and markets, including Asia, the Middle East, Southeast Asia, Russia, and the EU, to name a few.

Most recently, Woods was responsible for the development and acquisition of key category leader accounts for technological advancement in the health and wellness industry. Woods holds a Bachelor’s Degree from Utah State University and a Master’s of Business Administration from the University of Iowa.

As Global Director of Partnerships and Marketing, Woods will oversee the market development for hyperspectral imagery — and expand HySpecIQ’s commercial-sector customers.

[HySpecIQ Expands with Two Key Hires – SatNews](#)

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### Hodgson Assumes Command of AEGIS Technical Representative

*(NavSea 15 Feb 22)*

Capt. Sid Hodgson relieved Capt. Philip Mlynarski as the fifteenth commanding officer of AEGIS Technical Representative (AEGIS TECHREP) during a ceremony at Lockheed Martin Main Plant, Moorestown, New Jersey on 11 Feb.

“The Navy’s mission is unremitting, especially during times of crisis. Not only did Captain Mlynarski have to lead TECHREP through tough technical challenges but he had to do it the midst of COVID-19 crisis,” said Rear Adm. Seiko Okano, Program Executive Officer for Integrated Warfare Systems, and the ceremony’s presiding officer. “He led unprecedented testing during his leadership and he kept things running though a crisis so the fleet could receive capability. This is a tough act to follow, but TECHREP is in good hands with Capt. Sid Hodgson.”



Since Mlynarski took command in 2018, AEGIS TECHREP saw significant expansion introducing new testing capabilities at Combat System Engineering Development Site (CSEDS) including the SPY-6 Radar, Close-In Weapons Support (CIWS) and the United States Coast Guard's Sea Giraffe Radar. AEGIS TECHREP now boasts 15 Combat Information Centers (CIC) supporting 38 baselines. Mlynarski continually shaped the capabilities of AEGIS TECHREP as the facility moved to support future initiatives, including the Navy's software factory prototype "The Forge," Ships Self Defense System (SSDS), and Proposed Unmanned Surface Vessel (PUSV).

Mlynarski reflected on his tour at AEGIS TECHREP and all that has been accomplished during his tenure. He expounded on the Command's Core Tenets and how the command overcame all adversity during a difficult time. He closed in saying, "Thank you to my Crew, for about the next 30 secs, to my family and friends, to my colleagues and partners. Captain Hodgson, you are getting a hard charging, excited organization. Have fun with it. It's a small Navy so, I look forward to working with you soon."

Hodgson previously served as Major Program Manager for Program Executive Office Terminal Defense Systems (PEO IWS 11.0).

"I am truly honored and humbled to continue the rich AEGIS TECHREP heritage and serve as your commanding officer at such an important time in our country's history, said Capt. Sid Hodgson. "We will continue to deliver tremendous lethality that ensures it is never a fair fight, that our sailors fight and win, and that they return home to their loved ones. We get to do this every day and I will serve this team with everything I've got."

Hodgson is from Philadelphia, Penn. Area, was a Presidential Scholar, he graduated cum laude and received his commission in May 1997 from Villanova University as the Distinguished Naval Grad. He earned a Master in Business Administration (MBA) from the George Washington University and a Systems Engineering Master degree (with distinction) from the **Naval Postgraduate School** in Monterey, CA. He is a member of the Acquisition Professionals Corps and is DAWIA Level III certified in Program Management and Level II certified in Systems Planning, Research, Development and Engineering.

AEGIS TECHREP, a Naval Sea Systems Command shore activity, provides on-site, technical oversight and support that validate the total AEGIS Weapon System and AEGIS Combat System designs and contributes to all phases of combat system research, development, production, acceptance, delivery, modernization and in-service support.

[Hodgson Assumes Command of AEGIS Technical Representative > Naval Sea Systems Command > Saved News Module \(navy.mil\)](#)

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## **Veteran NASA Astronauts David Leestma, Sandy Magnus and Chris Ferguson to be Inducted at Kennedy Space Center Visitor Complex, June 2022**

*(SpaceRef 15 Feb 22)*

Veteran astronauts David Leestma, Sandy Magnus and Chris Ferguson, who have all demonstrated outstanding accomplishments in furthering NASA's mission of exploration and discovery, have been selected to receive one of the highest honors in their industry.

In June, they will be inducted into the United States Astronaut Hall of Fame®, joining an elite group of only 101 individuals to have received this esteemed honor. The announcement was made by Curt Brown, board chairman of the Astronaut Scholarship Foundation, which oversees the selection process.

An official ceremony and gala will take place at Kennedy Space Center Visitor Complex on June 11, 2022. Set against the historic and stunning backdrop of the Space Shuttle Atlantis®, the ceremony will be attended by space enthusiasts, community leaders, and a number of astronaut legends. Following the induction, the newest Hall of Fame members will be celebrated at an evening black-tie event hosted by the Astronaut Scholarship Foundation.



“Unfortunately, the global pandemic delayed our 2020 induction process, resulting in a year without new inductees. Our class of 2020 veteran astronauts – Pamela Melroy, Scott Kelly and Michael Lopez-Alegria – were officially inducted at a rescheduled ceremony in November 2021,” said Brown. “As we embark on a new era of space travel and interplanetary exploration, we are pleased to resume this annual program – as scheduled – and welcome these accomplished individuals into the United States Astronaut Hall of Fame. All three have demonstrated the characteristics that define a Hall of Famer: heroism, commitment and bravery.”

Leestma, Magnus and Ferguson all have had distinguished careers, centered around their love of space and science:

### **Capt. David Leestma, STS-41G, STS-28, STS-45**

David Leestma (Capt., USN, ret.) was selected as an astronaut in 1980 and subsequently flew three space shuttle missions – STS-41G, STS-28 and STS-45. He performed a wide variety of mission tasks, gaining invaluable experience in human spaceflight.

Leestma’s three space flights gave him a unique background (extravehicular activity, remote manipulator system operations, Department of Defense flight operations, on-orbit contingency operations, Spacelab operations, international liaison, vehicle/systems operator, on-orbit command) that enabled him to perform in a variety of NASA executive positions after retiring from the Astronaut Office and the Navy.

He was selected as the Director, Flight Crew Operations, responsible for the astronaut office and Johnson Space Center (JSC) aircraft operations. During his tenure 41 space shuttle flights and seven shuttle-MIR flights were successful and safely flown, three new astronaut classes were selected, International Space Station (ISS) assembly operations were begun, and he oversaw the requirements, development and in-house modification of the NASA T-38A fleet to the T-38N.

He was subsequently assigned as the Deputy Director, Engineering, in charge of the JSC Government Furnished Equipment (GFE) projects for the ISS. Leestma then became the JSC Program Manager for the Space Launch Initiative responsible for all JSC work related to the development of a new launch system. He also served as the Assistant Program Manager for the Orbital Space Plane, responsible for the vehicle systems and operation of a new crewed space craft.

He continued his career at NASA serving in a variety of senior executive positions that allowed him to adhere to his vision of human exploration beyond low earth orbit and cultivate the necessary relationships across the Agency and internationally to garner the support for future exploration programs. For his accomplishments he was twice awarded the Presidential Rank of Meritorious Executive.

Leestma retired from NASA in 2014 after 47 years of government service (35 of them with NASA).

A 1971 graduate of the U. S. Naval Academy, Leestma obtained his master's degree in aeronautical engineering from the **Naval Postgraduate School** and attended Navy flight school, where he earned his wings and was assigned to fly the F-14A Tomcat.

He served as an operational flight crew member for three overseas deployments and later as an Operational Test Director for the F-14A.

### **Dr. Sandy Magnus, STS-112, STS-126, STS-135**

Selected to the NASA Astronaut Corps in April 1996, Dr. Sandra H. “Sandy” Magnus flew in space on the STS-112 shuttle mission in 2002, and on the final shuttle flight, STS-135, in 2011. In addition, she flew to the International Space Station on STS-126 in November 2008, served as flight engineer and science officer on Expedition 18, and returned home on STS-119 after four and a half months on board.

Following her assignment on Station, she served at NASA Headquarters in the Exploration Systems Mission Directorate. Her last duty at NASA, after STS-135, was as the deputy chief of the Astronaut Office. While at NASA, Magnus worked extensively with the international community, including the European Space Agency and the Japan Aerospace Exploration Agency on facility-type payloads for the



International Space Station (ISS). She also spent extensive time in Russia developing and integrating operational products and procedures in preparation for the beginning of ISS operations.

After her work in Russia, she served as a capsule communicator or CAPCOM in the ISS mission control center during the initial phases of crewed missions and later worked with the Canadian Space Agency on robotics procedures for the Special Purpose Dexterous Manipulator, or Canada Arm 2. Before joining NASA, Magnus worked for McDonnell Douglas Aircraft Company from 1986 to 1991, as a stealth engineer where she worked on internal research and development and on the Navy's A-12 Attack Aircraft program, studying the effectiveness of radar signature reduction techniques.

Currently, Magnus is the Principal at AstroPlanetview, LLC and a part time Professor of the Practice at the Georgia Institute of Technology. In addition to her work at Georgia Tech, she is a member of several technical advisory boards and is active as an independent consultant in the aerospace industry.

Prior to striking out on her own, she was the Deputy Director of Engineering in the Office of the Secretary of Defense for the Undersecretary of Research and Engineering. In that role she served as the "Chief Engineer" for the DoD establishing engineering policy, propagating best practices and working to connect the engineering community across the department.

In addition, she is the former Executive Director of the American Institute of Aeronautics and Astronautics (AIAA), the world's largest technical society dedicated to the global aerospace profession. Prior to leading AIAA, Magnus was a member of the NASA Astronaut Corps for 16 years.

Born and raised in Belleville, Ill., Magnus attended the Missouri University of Science and Technology, graduating in 1986 with a degree in physics and earning a master's degree in electrical engineering in 1990. She received a Ph.D. from the School of Materials Science and Engineering at Georgia Tech in 1996.

She is a member of the NASA Aerospace Advisory Panel and President of the Board of AstraFemina, a non-profit dedicated to connecting women in STEM role models to girls to inspire them to pursue STEM careers. Magnus has received numerous awards, including the NASA Space Flight Medal, the NASA Distinguished Service Medal, the NASA Exceptional Service Medal, Office of the Secretary of Defense Medal for Exceptional Public Service and the 40 at 40 Award (given to former collegiate women athletes to recognize the impact of Title IX).

### **Capt. Chris Ferguson, STS-115, STS-126, STS-135**

A retired U.S. Navy captain and former NASA astronaut, Christopher J. Ferguson was pilot of STS-115, commander of STS-126 and of the final shuttle mission, STS-135. He has logged more than 40 days in space and 5,700 hours in high-performance aircraft. He also served as deputy chief of the Astronaut Office and was spacecraft communicator (CAPCOM) for the STS-118, -120, -128 and -129 missions.

Ferguson currently is the flight crew representative for Boeing's Commercial Crew Program. In this role, Ferguson ensures the CST-100 Starliner spacecraft and training systems meet the needs of NASA's astronauts. In a previous role he was responsible for making sure teammates on the ground are trained and ready to support crewed missions to the International Space Station, from pre-launch to docking, and undocking to landing and recovery.

Ferguson works with NASA's Human Exploration and Operations Directorate along with Johnson Space Center's Engineering, Flight Crew and Mission Operations organizations and NASA's Commercial Crew Program to ensure Boeing's crew transportation system supports NASA's human rating requirements. He also plays a key leadership role in the development and human-in-the-loop testing of critical system technologies.

He holds a Bachelor of Science degree in mechanical engineering from Drexel University and a Master of Science degree in aeronautical engineering from the **Naval Postgraduate School**. He has been recognized with numerous service awards and citations, including the Legion of Merit, Distinguished Flying Cross, Defense Meritorious Service Medal, Navy Strike/Flight Air Medal, NASA Spaceflight Medal (three), Navy Commendation Medal (three) and the Navy Achievement Medal.



## U.S. Astronaut Hall of Fame

The U.S. Astronaut Hall of Fame was spearheaded more than 30 years ago by the six surviving Mercury 7 astronauts. In November 2016, a new U.S. Astronaut Hall of Fame opened at Kennedy Space Center Visitor Complex, as part of the Heroes & Legends attraction.

## U.S. Astronaut Hall of Fame Induction Process and Eligibility

Each year, inductees are selected by a committee of Hall of Fame astronauts, former NASA officials, flight directors, space historians and journalists; the process is administered by the Astronaut Scholarship Foundation. To be eligible, an astronaut must have made his or her first flight at least 17 years prior to the induction year. Candidates must be a U.S. citizen and a NASA-trained commander, pilot or mission specialist who has orbited the earth at least once

[Veteran NASA Astronauts David Leestma, Sandy Magnus and Chris Ferguson to be Inducted at Kennedy Space Center Visitor Complex, June 2022 \(spaceref.com\)](#)

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## Poor History and Failed Paradigms: Flawed Naval Strategy and Learning the Wrong Lessons from a Century of Conflict

(MWI 15 Feb 22) ... R.B. Watts

In 2006 the United States Navy published a startling photograph. The picture clearly showed a Chinese submarine, periscope raised, with the USS Kitty Hawk in the background. That the photo was taken by an antisubmarine helicopter hovering over the submarine was lost in the initial wave of reactions but the point was clear: a new, modern force had arrived, and it posed a direct threat to our primary naval strike power. US naval power and strategy has a rich history that includes epic battles, catastrophic losses, and stalwart traditions. Around the globe, naval forces have long been the power of empires and used to extend a nation's reach beyond its geographic homeland. At the dawn of the twentieth century, it was not uncommon to hear British and German naval officers toasting with *De Tag!* (To the Day!) and to clink their raised glasses in the acknowledgement that they would one day meet in a decisive battle at sea. For navalists, a battle between the world's greatest navies was a certainty.

For the US Navy and other great navies of the late nineteenth and early twentieth centuries, the Mahanian theory predicting a decisive battle at sea between the world's great powers has dominated strategy discussions. The ruling classes and top theorists became firmly entrenched in an ethos of then-modern conflict that demanded expansion, expected conflict with other great powers, and predicted a great naval battle for command of the sea. According to Alfred Thayer Mahan, eliminating an enemy fleet by capital ships—a navy's most important ships, typically the largest and leading or primary ships in a naval fleet—in a decisive battle would not only win command of the sea, but would also win the war. Ironically, when war finally came the supposedly decisive naval battle of World War I at Jutland was anything but decisive—Mahan's theory of naval warfare was instead shown to be decisively misguided.

Of course, history never really repeats itself, but its echoes tend to carry forward into modern times. Most often, history's echoes ring painfully familiar and today's great power competition—a thinly disguised reference in US strategic parlance to competition specifically with China—is no exception. But another echo is also starting to ring—namely, the presumption that competition will inevitably lead to war. The fact that China is building a modern navy is viewed by Western analysts with alarm, but not panic. Dark quotations from the “Thucydides Trap” and dire warnings of how China's militarization of man-made islands will somehow close the South China Sea are frequently predicted to result in any number of global catastrophes. War, it is said, will hinge upon US naval power being able to engage the Chinese navy successfully, to ensure command of the sea and theoretical victory. Many navalists wonder if *De Tag!* is upon us once again.



## Today's Assumptions

Today our formidable Navy is preparing for battle with gusto, stressing capital ship power—namely, aircraft carriers—to execute Mahanian style battle in an offensive strategy, seeking out and destroying the enemy at sea. But the reason we assume China will engage at sea and play our game is unclear. The foundation upon which modern naval strategy is built is fatally flawed, relying on dubious theory, and selectively listening to the echoes of history. Unlike other naval powers, the United States Navy clings to Mahanian theory as rationale for its force structure and strategy. While going all in on Mahanian theory has enabled an enormously powerful Navy that can travel and strike globally—virtually unopposed—the adherence to Mahanian theory has resulted in a limited record of operational success in the twentieth century. And, crucially, the Mahanian US Navy is particularly unsuited for a projected conflict with China.

Even a neutral observer—a near impossibility in the practical sense—is likely to wonder why the United States continues to rely on outdated theory despite having the ability and capability to update, modernize, and strategize for the modern era. The reason we do so is simple: we want to return to it. We rationalize incorporating dated theory into modern warfare with dubious historical examples and assumptions. The result is a protracted attempt to mold any potential adversary into our desired theoretical vision and the continuation of some bad habits— theorizing war against our ideal enemy instead of the enemy we have, envisioning an enemy that fits a desired vision to match how we want to fight the next war, and developing an understanding of modern conflict that is rooted in a selective instead of wholistic examination of a century of naval conflict.

## Poor History: Mahan Vindicated?

Mahanian theory was a poor predictor of events in World War I, but it could be argued that Mahan's theory was vindicated in World War II. In 1945 the United States Navy stood at the height of its power. Relatively new as a capital ship force—the first modern battleships of the great white fleet had sailed in 1907—the US Navy undertook a massive expansion to prepare for war, both materially and philosophically. Pearl Harbor demonstrated how the battleship had been eclipsed by the aircraft carrier. The Navy immediately adapted—taking what it learned at Pearl Harbor, the Navy grew to thirty fleet carriers by 1945, and added hundreds of smaller ships to fight Japan in a distinctly Mahanian fashion. Ultimately the primary tool of victory in the Pacific was carrier power.

However, as the United States emerged from World War II as a superpower pitted against the now-hostile Soviet Union, Navy admirals took the lessons learned at Pearl Harbor and argued for the continued development of larger “super carriers” to provide the US Navy with a forward-deployed naval strike capability. In its push for bigger and better carriers, the Navy was making a distinctly Mahanian argument supported by the overwhelming victory in the Pacific during World War II. As a military service, the Navy saw its growth as key to its survival as a service—especially as post-war funding became more limited and it was unclear which service would be prioritized for growth in the new bipolar superpower era. Despite hostility from the other services—especially the Air Force, which understood power projection as its singular province—the Navy got what it wanted and aircraft carriers, a capital ship force that could execute Mahanian theory of decisive battle, became the bedrock of the US Navy's intimidating fleet.

But the lessons taken from World War II and the rationale for a battle fleet of capital ships was a selective one that ignored how World War II was a two-ocean war, and how the war in the Pacific had a markedly different character from the war in the Atlantic. The war in the Atlantic was not a carrier war, but rather one in which the primary threat was the German U-boat, a formidable enemy whose potential success threatened the entire Allied war effort. The Atlantic was a small-boy war of destroyers, escorts, and antisubmarine aircraft, with little Mahanian theory influencing the plan. To defeat the undersea U-boat threat, the Navy relied on a unique combination of defensive measures, intelligence, and small-unit actions. As the Navy set a course for modernization and expansion, it failed to encompass the historical lessons from its World War II Atlantic experience. Instead, the core philosophical ethos focused on capital ships and how carriers were needed to fight a peer at sea. The strategy overlooked the lessons



learned from the smaller antisubmarine forces that won in the Atlantic. Ultimately, the problem of future warfare was more complex than the Navy chose to acknowledge.

### **Failed Paradigms: Creating an Enemy**

In the post–World War II era, the United States fell deep into the Cold War, and great power competition was focused on the US relationship with the Soviet Union (and to a lesser extent, China) within the context of containing communism. During this time, the Navy continued to argue that a Mahanian strategy reliant on its capital ships was the best way to accomplish containment and to keep command of the sea. Outside of naval planning circles, few understood the difficulties with, and inherent weaknesses of the Navy’s approach.

Most noticeably, during the Cold War, the US capital ship fleet had no peer opponent. The Soviet Union, although developing as a modern naval power, was not imperial Japan and would never present the same formidable foe at sea. The Soviet surface fleet was small by comparison, and its combat power remained questionable. The poor condition of the Soviet surface ships kept them close to home, and while the Soviets were certainly capable of global deployment, they rarely strayed far in large groups of credible combat power. These facts were ignored by a succession of Navy admirals who were determined to keep the focus on capital ships. The ruse continued into the late 1970s when then-Chief of Naval Operations Elmo Zumwalt went so far as to testify that the Soviets, as a great power, had surpassed US naval strength. In the final years of the Soviet Union, the myth continued as US government printing offices kept producing slick publications outlining the threat posed by the Soviet surface fleet and how US carriers would defeat them in combat.

The irony is that the Soviet navy did pose a threat at sea, but not in the manner pushed by the US Navy. During the Cold War the Soviets developed a substantial force of nuclear submarines—almost twice the size of the US submarine fleet. Instead of a World War II Pacific-like battle, the Soviet Union’s investment in submarines should have signaled to the US Navy that any future war at sea would be far more like the battles fought in the Atlantic and that carrier power was secondary. Incredibly, naval strategists did not shift to focus on building an antisubmarine force composed of smaller ships and attack submarines. Instead, the Navy continued to identify its carrier fleet as the primary means to defeat the undersea threat despite the lessons learned in World War II in the Atlantic. In the 1980s, the Navy introduced a new Maritime Strategy, which was an aggressive forward deployment to the far north intent on bottling the Soviet surface and submarine power in their bases, while simultaneously conducting strikes against enemy bases in the frozen Kola peninsula. Naturally, such actions would—in theory—provoke the Soviets to sail their weaker force out to sea and engage in battle at sea. In short, De Tag! was back.

The fall of the Berlin Wall and the subsequent opening of the former Soviet Union showed how the US Navy got its strategic assumptions and paradigms wrong. The Soviet navy was, as some had suggested, intended to operate in defense of the homeland. Ultimately, the Soviets did not consider the US Navy’s strategy of a forward deployment and command of the sea within striking distance of the Soviet homeland—in this case, the frozen Kola peninsula—a relevant threat. The US Navy’s entire strategy and the force structure built to execute it, was mistaken. Which brings us to the present day and China.

### **Rising from the Ashes: Mahan in the East**

Following the photo of the Chinese submarine near the USS Kitty Hawk, China continued to add to its naval power. In 2011, China launched its first aircraft carrier and subsequently built a series of small naval bases on man-made islands off the mainland coast cementing it as a peer naval power capable of threatening US dominance at sea. The Chinese navy is being built for offensive operations in the spirit of Mahan, and it is possible that De Tag! is here again.

Given our history of producing naval strategies based on flawed assumptions and incorrect core beliefs, we should be wary of making similar mistakes with our naval strategy toward China. Assumptions about how the Chinese will employ military force at sea are echoing historical mistakes, including the notion that China is building its navy to engage in an open-sea battle, or that any strike



warfare against the Chinese mainland will be decisive, and that capital ship dominance is the sole enabler of US command of the sea.

Currently, US naval strategy emphasizes the concept of “freedom of the seas”—a concept that Mahan would have wholeheartedly endorsed—and is focused on access, or the free flow of ocean-born commerce. However, a strictly military approach to protecting shipping-lane access to enable international trade is woefully dated. Freedom of the seas is an established international norm, codified in the United Nations Convention on the Law of the Sea, but the United States has refused to ratify the convention over sovereignty concerns. Therefore, in theory, the United States is using its naval powers to enforce an international treaty it has not even signed. Freedom of the sea is intended to protect merchant ships and trade routes, but the United States is no longer a dominant merchant power. The US strategy is really committing our naval power as a global police force—much as the British Empire did—at significant cost and risk, to protect foreign ships that are already bound by the UN convention. Using our naval power in this manner is becoming increasingly provocative and history shows that wars have started over mishaps and incidents at sea.

If we assume the rhetoric of great power competition is correct and war is inevitable, or at least likely, the Navy is correct to prepare. But blindly continuing its love affair with Mahanian naval theory could be catastrophic. China is not Japan or the Soviets and presents a new, formidable threat. Militarily, the Chinese navy, although modern, is very much a regional force. And despite an aggressive building program, China is not yet an overwhelming threat to US naval power. The presumption that China is seeking Mahanian-style battle despite the given combat power of the US Navy is not credible. To win at sea, the United States must consider the adversary we face, not the adversary we want to face.

Yet we still must consider war with China a possibility and therefore must reinvigorate the debate over how best to employ US naval power and the Navy’s composition. Aircraft carriers, while impressive, are becoming increasingly vulnerable, not less so. The newer threats of hypersonic missiles, targeting from space, and cyber present unique challenges for the US Navy and the loss of a single carrier will have enormous consequences. Additionally, even if the US Navy achieves command of the sea, it may be irrelevant due to modern strike capabilities. History has shown that the ability to strike an adversary’s mainland from sea is not decisive in war—including examples from North Vietnam, Iraq, and Afghanistan.

Additionally, it is important to recognize that in war, an enemy will play its own game, not ours. China understands US naval capabilities, tactics, and theory and to assume otherwise is foolish. However, in open waters, China’s naval power is effectively neutralized by our combat power. China fears isolation and its own lack of access to trade and shipping routes, and with our seaborne allies, it is possible to keep a hostile China in check. Developing a flexible naval force, increasing trade alliances, and signing onto the UN Convention on the Law of the Sea are key to any naval strategy to combat China.

The United States has a mighty history of seapower and maintains longstanding traditions that our US Navy bears with pride. But as times change and power shifts, it is critical for the US Navy to avoid clinging to antiquated naval theory to rationalize a fleet that supports a familiar strategy instead of a strategy that will counter modern threats at sea. The question is not if the US Navy should maintain its capabilities to engage in, and decisively win, a battle at sea—which it absolutely should—but instead, whether the current naval strategy is based on sound assumptions and is focused on modern-day threats and challenges. Whether we will once again see De Tag! is uncertain but clinging to the myth of Mahanian theory and capital ship invincibility is a losing strategy.

Dr. R. B. Watts is a professor of national security strategy at the National War College. He retired from the US Coast guard as a captain after serving twenty-six years on active duty, including six sea tours with both the Navy and the Coast Guard. He holds an advanced degree from the Naval War College in strategic studies, master’s degrees from Old Dominion University in history, American Military University in international naval studies, and the **Naval Postgraduate School** in homeland security, and a PhD from the Royal Military College of Canada in war studies.

[Poor History and Failed Paradigms: Flawed Naval Strategy and Learning the Wrong Lessons from a Century of Conflict - Modern War Institute \(usma.edu\)](#)



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## **Broadcast Microwave Services, LLC Names Navy Veteran and Defense Industry Leader, Jay Kadowaki, to Head the Global Sales & Marketing Team**

*(Bakersfield 16 Feb 22)*

*(Business Wire 16 Feb 22)*

Broadcast Microwave Services (BMS, LLC), a global leader in Aircraft Video Downlink (AVDL) systems, announced today the addition of Jay Kadowaki, former Navy Captain and defense industry leader, as the Vice President of Global Sales and Marketing.

“We are excited to have a leader with deep roots in Department of Defense operations, program management, and federal acquisition join our growing team. Jay will be instrumental in developing our strategic growth initiatives, go-to-market strategies, and global sales targets,” said Harry Davoody, CEO of BMS.

When asked why he joined BMS, Jay said: “BMS is uniquely positioned to serve today’s warfighter on the global stage, work hand in hand with those who defend our borders, and support those who ensure the safety of our communities every day.”

Jay Kadowaki graduated from the United States Naval Academy with a Bachelor of Science degree in Economics. He earned a Master of Science degree in Information Technology Management from the **Naval Postgraduate School** and a Master of Arts degree in National Strategy and Strategic Studies from the Naval War College. Jay has served in the Defense industry in both Sales and Business Development roles, and is an Entrepreneur in Residence at the EPIC SBDC small business accelerator at the University of California, Riverside.

[Broadcast Microwave Services, LLC Names Navy Veteran and Defense Industry Leader, Jay Kadowaki, to Head the Global Sales & Marketing Team | News | bakersfield.com](#)

[Broadcast Microwave Services, LLC Names Navy Veteran and Defense Industry Leader, Jay Kadowaki, to Head the Global Sales & Marketing Team | Business Wire](#)

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