



NAVAL POSTGRADUATE SCHOOL

UPDATE
NPS

Research in review – A legacy under the ice

By Dr. Jessica Neasbitt

(U.S. Navy digital illustration by Andre Adams)

For more than 20 years, the Naval Postgraduate School's home-grown, innovative Autonomous Ocean Flux Buoy has braved some of the Earth's harshest environments in support of student research and scientific discovery.

In September of 2019, NPS Emeritus Research Professor of Oceanography Dr. Tim Stanton will travel to the Arctic as part of the largest expedition in human history to study drastic changes in sea ice throughout the region. While there, Stanton and his NPS colleague Bill Shaw will deploy four autonomous ocean flux buoys (AOFBs), joining more than 600 participants from 17 countries in the Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC) in “the first year-round expedition into the central Arctic exploring the Arctic climate system.”

“*It's very gratifying that most of our students do go and use these problem-solving experiences. They go to [work in] the forecasting centers, including the National Ice Center, out in the fleet, and a good percentage of them go on up the ladder and [end up] at senior levels.*”
—Emeritus Research Professor of Oceanography Dr. Tim Stanton

While a mission like MOSAiC would be considered a once in a lifetime opportunity for any scientist or researcher, the journey is not the first of its kind for Stanton, who has been conducting scientific expeditions and research in the region for over three decades. In fact, the trip will bring his work back to the Arctic ice he dangled a prototype instrument pack through 22 years prior — a prototype that would evolve, over the next two decades, into the current design of the AOFBs that will be deployed as part of MOSAiC.

At its heart, Stanton's AOFBs are the quintessential NPS story — a story of innovation, research and development occurring in answer to real-world necessity. It is a story of the continuous improvement and evolution of specially-designed tools, and the experimentation and knowledge those tools enabled, the student fieldwork and research they created and contributed to, the data they provided, and the myriad scientific and academic projects they supported. To track the AOFB through its many incarnations and uses is to see science in the making, and NPS functioning in accordance with its highest purposes and directives.

Read the full story at <https://my.nps.edu/-/research-in-review-a-legacy-under-the-ice>

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Women's Equality Day
August 26

August 2019

Student-led wargaming offers insight into future conflict

By Matthew Schehl

The U.S. stands at the brink of war with a peer adversary, and Navy and Marine Corps leaders need to figure out how to best position our forces and interoperate with our allies in the Australian Defense Force (ADF) to answer the call.

Nearby, another team of military officers examines a future conventional conflict scenario with a focus on better understanding how the skills and capabilities of Marine Raiders can best be applied to the objective.

These are just two of several future scenarios, and to be sure, each comes with a host of questions to be answered. But that's exactly the point of the Naval Postgraduate School's (NPS) 'Wargaming Week,' and these are the sorts of critical issues NPS students work through in rigorous detail during the annual activity organized by the NPS Wargaming Activity Hub.

Held twice a year in June and December, Wargaming Week is the culmination of an 11-week course in wargaming applications. Drawing on extensive research, sponsor interaction, and their own considerable military experience, the students designed, developed and executed eight different wargames in this latest iteration – classified and unclassified – to dive deep into a range of technical and conceptual aspects of these scenarios.

"That's fundamentally the most important thing we're doing. We're teaching students their business, and their business is warfare," noted legendary naval strategist Dean Emeritus Wayne Hughes, a retired Navy captain who literally wrote the book on naval tactics and operations - his seminal work "Fleet Tactics" is widely considered the go-to resource for Navy officers on battle planning and tactical thinking.

"NPS is unique in its ability to teach the technology, the tactics, the operations, the logistics, the policy and the strategy of Navy and Marine Corps operations," Hughes added.

Although the eight wargame scenarios differed, they all took place in the INDO-PACOM AOR. In the Navy's Small Combatant Flotilla wargame, Hughes himself took the helm as the blue forces commander tasked with delivering supplies from Guam to the area of operations.



A diverse team of NPS students executes a sponsored wargame on a multi-domain task force at the request of U.S. Army Pacific during Wargaming Week. The effort represents the culmination of their studies in the operations research department's wargaming applications course. (U.S. Navy photo by Javier Chagoya)

"The scenario represented our response to a near-peer threat to prevent us from logistically sustaining the forces and Marine advanced bases that were in the first island chain," he recalled. "[Marine Corps] Maj. Josh Faucett, who led the wargame's organization and referee team, was superb in everything he did; it was a very useful exercise."

The takeaway? The adversary's commander performed with an effectiveness that was "a significant

concern" to Hughes. But that's the point: unlike automated computer simulations which might describe optimal performance, analytic wargames like these force participants to engage in a very human activity – decision-making – in the context of a complex and structured environment. Moreover, they allow players to make critical mistakes and learn from them.

Marine Corps Cpt. Thomas McKavitt, an operations research student, said the experience better prepared him to work with Australian forces down the road.

"Never having worked with Australians before, the most interesting thing I learned during this wargame is how similar the ADF and Marine Corps are," he noted. "Working with our Australian counterparts was extremely similar to working with Marines. We have a very similar culture; we're both small services and take pride in our ability to face any problem and overcome it.

"Additionally, we were able to find common ground to work towards sustainable solutions," McKavitt added. "If we ever are required to conduct operations together, we're well-prepared and ready to execute."

"Update NPS" is a monthly publication for students, faculty and staff of the Naval Postgraduate School produced by the Public Affairs Office. For additional copies, comments, or to suggest story ideas, contact the editorial staff at pao@nps.edu.

NPS launches campus-wide course in Great Power Competition

By Javier Chagoya

The Naval Postgraduate School's (NPS) Department of National Security Affairs (NSA) has launched an initiative to help students from every curriculum better understand the history and nuances behind Great Power Competition (GPC).

NS4000 held its first open lecture on the first day of the Summer quarter, July 8, to a packed auditorium on hand for the seminar-style, one unit course intended to provide a broader understanding of the challenges facing the U.S. in the 21st century by peer adversaries.

NSA Department Chair Clay Moltz took lead on developing the course, providing leadership with a proposal outlining the essential elements. It was reviewed by NPS' academic council and given the green light to be organized as a one-credit course.

NSA Professor Daniel Moran opened the inaugural lecture with his brief overview of the underlying dynamics of GPC historically, its Cold War manifestations in the bipolar arms race, and what has changed in the new century. Moran's expertise includes modern international and military history, strategic theory and he's an authority on the works of Carl von Clausewitz.

Moran is one of 14 NSA expert lecturers who will examine the political, economic and military drivers that have contributed to this current security environment. Over the next three months, lectures will discuss

Chinese and Russian efforts to extend their influence into critical regions of the world, as well as the challenges this behavior poses to U.S. interests. The course will later focus on GPC dynamics in several key functional areas, such as economics, cyber, space and energy. Finally, the course concludes with a discussion of possible future outcomes in the context of varied U.S. and allied responses.

On hand to introduce the new course, Moltz explained the importance of understanding American adversaries' race for influence and superiority around the globe.

"Just within the last five years, Chinese revisionism and Russian revanchism have posed a series of threats to the U.S. and to our allies," said Moltz.

He pointed to the recent decision in China to remove its constitutional two-term limit for the presidency, clearing the way for Xi Jinping to rule beyond 2023, a move which came as a surprise to the world, Moltz noted. He also discussed similar aggressive actions and policy changes in Russia that could provide Vladimir Putin with an opportunity to serve a fourth term, setting the stage for the discussions to follow.

The new course will meet from 12 noon to 1:00 p.m. on Mondays and Wednesdays throughout the Summer quarter. For more information, contact the NS4000 course coordinator, Angela Archambault.



NPS Professor Daniel Moran holds the first of 20 lectures, July 8, for an all-new course seeking to advance the NPS student community's understanding of the history and nuance of Great Power Competition (GPC). Responding to a direct leadership request to integrate more GPC studies into its curriculum, the university launched the course, which is open to all interested students, faculty and staff. (U.S. Navy Photo by Javier Chagoya)

FACULTY news & notes

Naval Postgraduate School (NPS) alumnus Dr. Martin Mandelberg honored NPS Distinguished Professor Dr. Richard Wesley Hamming, a highly esteemed computer scientist and mentor, with a special presentation highlighting his legacy in Reed Hall, July 18.

With the help of the Dudley Knox library facility and staff, Mandelberg introduced an on-line archive of Hamming materials featuring digitally remastered videos of NPS classes taught by Hamming, and a preview of significant previously unavailable research findings, soon-to-be-available through the NPS Archive, Calhoun.

"[Hamming] is a great role model to set the standard," said Lt. Ashton Miller, an electrical engineering NPS student, who is looking forward to the great resource that will be available to him and the rest of the student body in the near future.

"Hamming was a good and valued friend," said Dr. Herschel Loomis, an NPS Distinguished Professor and colleague of Hamming. "One of the great privileges of my career was to be able to work with this intellectual giant on a daily basis."

Hamming was one of the world's most distinguished computer scientists, best known for his work in coding and information theory developing innovations known as the Hamming code and the Hamming spectral window. He was director of the Manhattan Project Computing Facility, and later at Bell Labs, he introduced error-correcting codes and performed pioneering work in operating systems and programming languages.

Have a story to share?
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Argh, mateys! NPS interns to use pirate eyepatches in watchstander alertness study

By Camille Hitchcock

Two Naval Postgraduate School (NPS) interns are about to embark on a research study to find out why pirates wore eyepatches.

Imani Murph, finishing her master's degree at Embry Riddle Aeronautical University in Florida, and Katie Mortimore, an undergraduate in neuroscience at the University of Washington, set out to answer this question this summer as interns in the NPS' Human Systems Integration (HSI) lab.

"These interns bring so much to the table, not the least of which is an advanced technological capability," said HSI director Dr. Nita Shattuck, who's seminal research on sleep deprivation is dramatically changing the way Sailors stand watch throughout the Navy.

Under Shattuck's guidance, Murph and Mortimore will conduct research to determine if different lighting levels can be used to improve alertness. Volunteers for the study will wear an eyepatch for a duration of time and the interns will take saliva samples at different periods of their day to measure melatonin levels.



NPS interns Katie Mortimore, left, and Imani Murph display a 3D shift scheduler created as part of their work with the Human Systems Integration Lab, July 25. (U.S. Navy Photo by Javier Chagoya)

As seen in the movies, most pirates wear an eyepatch. But what really was the motive behind wearing this iconic accessory?

The true answer lies within a chemical inside the human body – melatonin – the hormone that regulates sleep and causes tiredness, which can either be a vital sign of rejuvenation or a cause of lethality.

"When you go from a bright area to a dark area, it takes about 30 minutes for your eyes to fully adapt to being in the dark," Murph explained. "It is theorized that back in the day, pirates wore eyepatches

so they could go below deck after being out in the sun and still be able to see."

The eyepatches make it easier to adjust to the darker lighting, a phenomenon that many a U.S. Navy crew member can relate to.

With curtains insufficiently blocking light and sleeping quarters not dark enough, crew members working night shifts do not receive the melatonin levels they need for proper sleep.

Sleep deprivation acts as a continuously active stressor on the body which can lead to accidents and mishaps, with potentially deadly results. Just like pirates, crew members may also pass throughout multiple parts of the ship that have different levels of lighting, also leading to decreased melatonin levels.

With melatonin the primary cause of the feeling of "tiredness," Murph and Mortimore are using the pirate theory to conduct an experiment that tests melatonin levels in eye-patch wearing volunteers.

"Specifically, polychromatic white light helps reduce your melatonin," Mortimore emphasized. "So, we're looking at a different intensity levels of light exposure for six hours."

This experiment will hopefully help determine different lighting levels that can be used to improve alertness, and also determine whether dark adaptation is facilitated by wearing an eyepatch.

For more information on becoming a participant, contact Dr. Nita Shattuck (x2281), Dr. Fran Greene (x3040) or Dr. Heather Clifton (x2277).

Summer quarter welcomes one of NPS' largest classes yet

By Javier Chagoya

Like nearly 500 other new Naval Postgraduate School (NPS) students, Lt. j.g. Jamie Francona of Brookline, Mass., is wrapping up her first week of graduate school at the university.

Francona, a 2013 graduate of the Naval Academy in economics, is enrolled in the challenging cyber systems and operations program, starting out with required courses in logic and discrete math, mathematical proofs and single variable calculus.

"It's really the big change of pace that I'm getting used to in the short time I've been at NPS," said Francona. "We all had our jobs in the squadron, filled with routine, including the operational tempo during deployments. I've found that I have a lot of autonomy here, in spite of the loads of math to learn."

Francona comes to NPS following two tours as an Information Warfare officer with Helicopter Sea Combat Squadron Four

(HSC-4) at Naval Air Station North Island in San Diego, Calif. She spent two years as the intelligence officer, completed two deployments with HSC-4 aboard USS Carl Vinson (CVN-70).

Rapidly getting used to life on the Monterey Peninsula, Francona says she has already ran into old friends, shipmates and Academy classmates, and has explored some of the region's most notable sights.



Lt. j.g. Jamie Francona is one of 486 new students to arrive at NPS' campus this week to begin the summer quarter, making this newest class one of the university's largest student intakes ever, according to the NPS Dean of Students Office. (U.S. Navy photo by Javier Chagoya)

Faces of NPS – Lt. Eddie Macias

By Matthew Schehl and Khaboshi Imbukwa

The drone went down on a blustery June afternoon. The satellite link Naval Postgraduate School (NPS) students and faculty were using for their research had been disrupted for the briefest of moments, but it was enough for a gust of wind to send the autonomous aerial vehicle (AAV) plummeting onto a rooftop in “Impossible City,” a mock urban training and research facility in the desolate reaches of Fort Ord.

The group struggled to reach their downed research craft, but to no avail. As a last measure, they reached out to the one man they knew could help: Lt. Edward “Eddie” Macias with the Naval Support Activity Monterey (NSAM) Police Department, who they’ve all heard is an avid drone operator and enthusiast.

“I received a call from NPS asking if I could rescue a drone that was stuck on a really high roof; I said yes, I’d be honored,” he recalled. “When I showed up, I knew exactly what to do.”

Macias swiftly MacGyver’ed some string together into a hook, affixed it to a drone of his own and sent it zipping up into the winds. Leveling it out, he guided his drone via video feed towards the stricken bird and in one fell swoop caught it up and carefully lowered it down to the grateful group without damaging either drone.

Saving a downed research AAV may seem like the exceptional event, but it really is quite the norm for Macias. Most people know Eddie as the kind, affable gate guard who has a friendly word while he’s ensuring the safety and security of the base, but his decades of serving and protecting the NPS community is replete with similar stories.

Like that one time he prevented a woman from plummeting off the Mark Thomas bridge. Or the time he used his drone to successfully search for a boy gone missing at

Lake Del Monte while fishing. Or the time he saved a woman from an untimely death by cinnamon breath mint.

Anecdotes such as these serve as acute reminders of the invaluable role Macias and the entirety of the staff at NPS play in ensuring the well-being, continuity and strength of the U.S. military’s finest academic institution. Even routine daily duties—such as Macias’ role as Watchbill Commander—provide the bedrock that keeps NPS running.

“I know all the staff members—what they do, where they work, what kind of car they drive—and they always ask me how I remember their names,” he said. “Well, I’ve gotten to know the people I’ve worked with for 13 years. It’s really important for me to build good rapport with the people that are here, and I get compliments on that all the time.”



The next installment of the online series “Faces of NPS,” features Lt. Eddie Macias with the Naval Support Activity Monterey Police Department. As Watch Commander, Macias is in charge of daily operations at NSAM PD, but he has also developed a reputation as a seasoned drone pilot, and has even helped students with their research into these unmanned systems. (U.S. Navy photo by Javier Chagoya)

and immediately enlisted in the Navy Reserves. Then 9/11 happened. As the nation struggled to react to the attacks, Macias heeded the call to Active Duty and for the next three years stood watch over NPS as a Master-At-Arms.

Afterwards, he undertook several follow-on deployments, including personal security details for Presidents George W. Bush and Barack Obama, as well as security work in Operation Enduring Freedom, but knew he had found his calling. Macias returned to California to enroll in the police academy at Fresno City College and, in 2008, returned to NPS as a federal police officer.

“I’ve been here ever since,” he mused. “NPS is probably the best place in Navy Region Southwest, if not the world. It’s the dream job for Navy police officers to work: world-class people attending a world-class school, everybody’s always in a good mood and the weather’s great all year round.”

CAMPUS news & notes

With more than 480 new students beginning their first educational quarter at the Naval Postgraduate School, Naval Support Activity Monterey (NSAM) Morale, Welfare and Recreation (MWR) held its 8th annual Leisure Fair outside the Dudley Knox Library, July 9, to introduce these students, and their colleagues, to the variety of community programs available to them.

“The MWR Leisure Fair is for helping active duty members, their families, NPS faculty and staff access the different business and community opportunities available in the Monterey area,” said Brandy Ortega, community recreation programmer. “With all the hard work that they do while in school, it’s important for them to know that there are recreational outlets for themselves and their families.”

The MWR Leisure Fair presented recreational exhibits and information regarding children’s after school programs, tours, local restaurants, and MWR services and activities.

“The fair looks like a good way to know what’s happening and see what Monterey has to offer,” said U.S. Air Force 1st Lt. Robert Ocampo, a first quarter student. “I’m just looking for some things to do with my family when I’m not studying ... find a balance between work and life.”

The fair also highlighted available NPS resources and student-run clubs such as the Robodojo, the NPS Toastmasters Club and the Military & Family Life Counseling Program.

“NPS is education focused, but we also want to promote good morale for our students,” said Ortega. “We want them to be able to go out there and enjoy their time here.”

Send your campus news and notes to update@nps.edu.

Enterprise chairman attributes Navy values to industry innovation

By MC2 Patrick Dionne

Executive Chairman of Enterprise Holdings, Inc. Andy Taylor, along with Enterprise board member retired Adm. James A. “Sandy” Winnefeld, former Vice Chairman of the Joint Chiefs of Staff, talked about how innovation, leadership and Navy values impacted the company as part of the latest Secretary of the Navy Guest Lecture (SGL) in King Auditorium, July 9.

Taylor’s father, Jack Taylor, founded Enterprise Rent-A-Car company in 1957 after serving as a Naval Aviator in World War II, and named the company after the aircraft carrier USS Enterprise (CV-6). Andy Taylor began working for Enterprise at the age of 16, slowly working his way up in the company until he became President in 1980. During that time the company’s revenue was \$78 million, and since then Enterprise has expanded across the country and internationally with a revenue of \$25 billion today while continuing to be a privately-owned company.

According to Taylor, the lessons his father learned in the Navy during the war helped guide the decisions he made in the creation of his company.

“When I got old enough to have a dialogue with my father about the military, he said, ‘You know Andy, I was really kind of lost and the Navy transformed me,’” recalled Taylor. “‘It gave me Navy values of honor, mission, teamwork and fun.’ And he said it transformed him into a better person, husband and a better business man.”

In a departure from the traditional single speaker format, the SGL

consisted of a panel discussion with Taylor and Winnefeld as speakers moderated by NPS Distinguished Professor Uday Apte. The panel focused on the importance of innovation in business growth.

“The first job as a leader is to face reality,” Winnefeld said. “There was a time at Enterprise when Andy and his dad realized that things were not well from a customer service perspective, so they decided to turn that negative into a positive by innovating and inventing something called the Enterprise Service Quality Index. Now you

can’t get promoted in that company unless your branch is in the top 50 percent, and that really changed the behavior of the people behind the desk.”

Taylor stressed one of the biggest threats a company can have is to be satisfied with “good” when things can be “great” through innovation.

“Today we encourage innovation, for my father would say early on if you got that idea you go out and try it,” said Taylor. “It gets harder as the company gets bigger, but we encourage people to try new things, and if they fail, and they tried really hard, we still applaud them.”

As the conversation closed, Winnefeld offered advice to the

audience that would serve them well throughout their future careers, no matter where those might take them.

“Prepare yourself, because even though you have an interest in lifelong learning, which is why you’re here, try to spend at least a little bit of time reading about how business thinks and how business works,” said Winnefeld. “It’s going to help you while you’re in the service because you’re going to be a more efficient user of taxpayer resources, and you’ll carry that knowledge over after you retire.”



Executive Chairman of Enterprise Holdings, Inc. Andy Taylor, left, retired Adm. James A. “Sandy” Winnefeld, former Vice Chairman of the Joint Chiefs of Staff, center, and Dr. Uday Apte, NPS Distinguished Professor, take part in a forum on business innovation and Navy values during the latest Secretary of the Navy Guest Lecture in King Auditorium, July 9. (U.S. Navy photo by MC2 Patrick Dionne)

Focus On... Regional Unmanned Systems Symposium

The growing industry of drones and automation has taken to California’s Central Coast. To help drive regional research, development and collaboration, a consortium known as Monterey Bay Drone, Automation and Robotics Technology (DART) held its first symposium this summer, with researchers from NPS participating in the new effort.

According to Josh Metz, the Economic Development Manager at the Ford Ord Reuse Authority and co-creator of Monterey Bay

DART, the goal of the symposium was to take advantage of the area’s proximity to educational institutions, Silicon Valley and environmental organizations to drive collaboration on the interrelated technologies involved with drones.

The DART initiative is intended to align industry, academia and government in the Monterey area toward establishing and operating a world-class drone, automation, robotics technology testing and development cluster, said Metz.

With decades of research and experimentation in unmanned systems already, NPS brought a network of regional relationships to the discussion.

“NPS has always valued the research ecosystem formed when industry, academia, and the military services unite to innovate novel socio-technical solutions for today’s warfighters,” said NPS’ Robotics and Unmanned Systems Education and Research (CRUSER) Associate Director Dr. Carl Oros, one of NPS’ symposium speakers. “NPS



researchers have more than 200 professionally published papers and theses on autonomous vehicles. The relationships NPS has created through this work uniquely positions us to be at the center of all types of autonomous systems activity as Monterey’s DART initiative emerges.”

Any Day at NPS



U.S. Army Maj. Robert Coombs, left, provides information about the Central Coast Rugby Football Club, the "Beachdogs," to U.S. Navy Lt. Damen Weeks during the 8th annual Morale, Welfare and Recreation (MWR) Leisure Fair held outside Dudley Knox Library, July 9. (U.S. Navy photo by MC2 Tom Tonthat)



NPS paid tribute to one of its most renowned scientists, the late Dr. Richard Wesley Hamming, with university alumnus Dr. Martin Mandelberg presenting the Hamming Legacy Project showcasing his achievements in computer science and teaching. (U.S. Navy photo by MC2 Taylor Vencill)



NPS student U.S. Army Maj. Alex Pombar, left, talks with Defense Energy Seminar guest speaker and author Peter Zeihan, following his conversation on oil trade and resources to an audience of NPS students, faculty and staff during a Defense Energy Seminar held at ME Auditorium, July 23. (U.S. Navy photo by Javier Chagoya)



Naval War College students graduating with distinction pose for a group photo, July 23. Through the NPS-NWC partnership, a total of 5,369 officers have earned their JPME Phase I certification since the program's inception in September 1999. (U.S. Navy photo by MC2 Nathan K Serpico)



Gen. Steve Lyons, Commander, United States Transportation Command, and an NPS alumnus, shared his insights on the global logistics behind U.S. power projection during the latest NPS Secretary of the Navy Guest Lecture in King Hall, July 23.. (U.S. Navy photo by MC2 Tom Tonthat)



Rich Patterson (right), Chief Executive Officer of the NPS Alumni Association & Foundation, prepares food during the Foundation's Summer Quarter Social outside the NPSF Cottage, July 11. The NPS Alumni Association & Foundation is dedicated to supporting NPS and its faculty, staff and students. (U.S. Navy photo by Javier Chagoya)

STUDENT voice

Tech. Sgt. Gerald McLaughlin, USAF

Hopefully the current quarter is going well for each of you. This month, the President's Board for Student Affairs (PBSA) would like to outline some of the great things our members have been working on for our NPS community.

Our first major project is the NPS Student Survey. Last year we had approximately 300-350 responses to the student survey, each providing an excellent amount of feedback for the various programs and activities on campus. This year we have restructured the survey and are pushing for more students to give their feedback. The 2019 student survey will feature a "dynamic" method of presenting questions. A student in the Weather program won't see exactly the same questions as a student in the Business program. Additionally, international students and students from other services will have questions tailored specifically to their organizations. Expect to see more information for the survey within the next couple of weeks.

Our team has also been working to identify any areas for improvement within the initial orientation process for new students arriving at NPS. Currently, we are gathering feedback on the information presented via email, the NPS website, or the in-person briefings for incoming students. This feedback is designed to identify the information most valuable to new arrivals. Additionally, we want to find any areas that students need additional support or clarification. This information will then be provided to the respective agencies on campus and be used to improve the process as a whole.

The President's Board for Student Affairs will continue striving for excellence, and our hope is to always leave things better than the way we found them.

With Warm Regards,

Gerald P. McLaughlin

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

Chair:	Tech. Sgt. Gerald McLaughlin, USAF
Vice-Chair:	Lt. Christina Gatti, USN
GSBPP Lead:	Maj. Kevin Landreth, USAF
GSEAS Lead:	Lt Adam Waymouth, USN
GSOIS Lead:	Master Sgt. Joe Scobey, USAF
SIGS Lead:	Capt. Jessica Sunkamaneevongse, USAF

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On campus this month

August 5-9

JIFX 19-4
Camp Roberts, CA

JIFX

Joint Interagency Field Experimentation

August 6

Connections Between the Military and Energy
12:00 p.m., ME Auditorium



August 13

Future of Natural Gas
12:00 p.m., ME Auditorium



August 20

Special Guest Lecture Series
With Mr. James Geurts,
Assistant Secretary of the Navy (RD&A)
3:00 p.m., King Hall



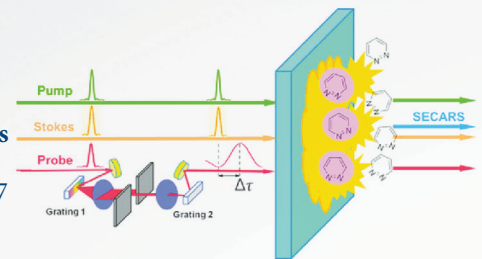
August 6-8

CEE Strategic Communication Workshop



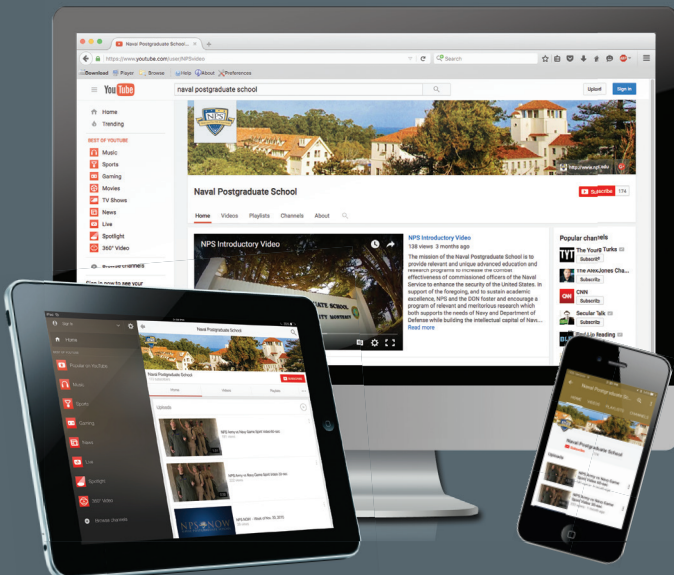
August 29

Quantum-Enhanced
Coherent Anti-Stokes
Raman Scattering
3:00 p.m., Spanagel 117



BREAKING NEWS HAPPENS

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Historical Highlights

The "Eagle" had successfully landed, Neil Armstrong had taken his "one small step for man," and the Apollo 11 crew was speeding back towards Earth to a hero's welcome. But that "giant leap for mankind" would have ended in disaster had it not been for two fast-thinking weathermen.



CAPT Houston, a former meteorology student and instructor at the Naval Postgraduate School, was in just the right place

at the right time, with just the right classified knowledge -- he'd worked with the top-secret Corona Air Force spy satellite -- to prove the astronauts were in serious danger at splashdown. "It was a crazy situation," Brandli, the Air Force meteorology special projects officer remembered. "I had all these classified photos of a deadly 'Screaming Eagle' thunderstorm forming over exactly where I knew the Apollo 11 astronauts were going to come down", but he couldn't warn NASA. Houston could, and did. The landing site, and history, was changed, as a result.

-- from "Saving Apollo 11", an article in the NPS Archive: Calhoun.
Read more at <https://calhoun.nps.edu/handle/10945/62608>

Historical Highlights are provided by the Dudley Knox Library.