Exercising its strong partnerships with military, academia and the private sector, the Naval Postgraduate School (NPS) hosted more than 230 leading technology experts to test and evaluate solutions to 21st century challenges during its Joint Interagency Field Experimentation 19-4 (JIFX) event, Aug. 5-9.

Experts from private industry, government agencies and top universities converged at the NPS Field Laboratory, located at the California National Guard’s Camp Roberts, to explore new ways to adapt rapidly changing technologies to a host of DOD-relevant domains, including autonomy/machine learning, autonomous systems, intelligence, surveillance and reconnaissance (ISR), and command and control systems.

Over the week-long event, the participants conducted various field experiments to research ways both emerging and existing technologies might be adapted to meet military requirements. For example, teams using unmanned aerial systems (UAS) were able to experiment with those systems completing 67 total sorties unencumbered by FAA regulatory frameworks.

According to Dr. Ray Buettner, JIFX director and NPS associate professor of Information Sciences, JIFX is a unique partnership event in the sense that it is not about immediate acquisition. Instead, it’s about learning fast, he says, helping to identify commercial and laboratory capabilities that may be transitioned to military applications.

“JIFX creates a multi-institutional, semi-structured learning environment for collaboration across the different communities; academic, military and commercial. The hope is that we help industry connect to a better starting point into the acquisition process, while at the same time we build up our understanding of where the cutting-edge capabilities edge are so we can rapidly respond to the technology requirement of the force.”

—Dr. Ray Buettner, JIFX director

The important benefits of JIFX manifest in multitudes of ways, Buettner says, such as opening doors for new technologies that have a direct impact on the warfighter. In Nov. 2015 at JIFX 16-1, for example, a private sector company introduced a small personal reconnaissance system that sparked interest among DOD stakeholders. Less than four years later, the system is in operation providing enhanced situational awareness for warfighters.
Defense industry execs talk innovation with future program managers
By Javier Chagoya

The Naval Postgraduate School’s (NPS) Graduate School of Business and Public Policy brought together two captains of industry for a panel discussion titled “Challenges of Innovation in Defense Acquisition” in Ingersoll Hall, Aug. 13. It was an opportunity for students in the university’s acquisition and management programs to hear from two acquisition experts.

Jerry DeMuro, CEO of BAE Systems Inc., and Mitchell Waldman, Executive Vice President of Huntington Ingalls Industry brought years of experience to the discussion, with NPS’ own Director of Cybersecurity, Robert Sweeney joining the panel and GSBPP Professor of the Practice Ray Jones serving as moderator. The panel jumped right into a challenging question on how to meet the rapidly evolving needs of the warfighter.

“We’re going to focus on innovation effectiveness and shaping the force for today’s challenges in great power competition,” stated Jones. “We often hear that the defense acquisition process needs to move faster and adapt to the speed of relevance. From your perspective, what are some of the key enablers and detractors that formed this view and where should the DOD focus its resources to optimize return on investment (ROI) in the context of defense?”

“We all know what the end objective is ... Superiority, dominance and to be strong enough to where no one will threaten us,” said DeMuro. “And if we do compete in any spectrum, we’re going to be successful and overwhelming. We all understand that, but it’s the how do we get there is the question. That’s where the competing interests comes in.”

The DOD is spending money on discovering new and innovative ideas to increase speed of product to the warfighter, says DeMuro, but is quick to point out the immense regulations governing the industry.

“When we talk about regulation, we’re not talking about what Google develops software. Do we regulate how Google develops software?” DeMuro asked. “Do we regulate what interfaces they have to have? And what documentation they have to provide, and who is going to provide spare parts?”

“We have to get a line on what the objective is, and what’s best way to get there,” he continued. “And we need to do that in a transparent and fair way, as these are public funds, with competing interests.” Waldman offered an example of effective partnering between the DOD, industry and others in the undersea warfare domain.

“I offer to you that we actually have examples of doing things with the speed of relevance as the CNO says. The SSGN program is one such as example,” said Waldman.

Sweeney was able to share a different perspective, saying that many times program managers bite off too much of the apple all at once.

“Our acquisition system is built around large programs and large weapons systems,” said Sweeney. “I think if we were to plan out how we acquire our systems ... and breakdown the requirements into smaller functions that address particular capabilities instead of trying to field an entire system all at once, it would help speed up innovation and get things out to the field quicker.

“However, there is a trade-off,” he continued. “It wouldn’t be as beneficial for our industry because it would take multiple contracts and there is necessarily no guarantee the same company would win follow-on awards for the next capability.”

Each of the panelists agreed that relationships and integrity play critical roles in success. The community of defense acquisitions is large, but as managers and leaders, you will see familiar faces throughout your careers.

“This is the key message I want to leave you with ... You are who you are, and your calling card is your integrity,” said Waldman. “It doesn’t mean you don’t do hard business. We’ve all been on different sides of the table, and negotiations should all be transparent and you should do your best. But in the end it’s done with respect and integrity as relationships persevere.”
**FACULTY**

news & notes

Dr. Rob Dell, professor and past chair of the Naval Postgraduate School (NPS) Department of Operations Research is the new dean of the university’s Graduate School of Operational and Information Sciences, officially stepping into the position, Aug. 18. Dell takes over following more than six years of leadership by Dr. Gordon McCormick, who will return to teaching in the Defense Analysis department.

“This is an opportunity for myself, and GSOIS in general, to be able to step in and serve my colleagues and help advance our school,” said Dell. “The school was well served during [McCormick’s] time as Dean and we should be very appreciative for everything that he’s done.”

Dell has been teaching NPS students for nearly 30 years, joining the OR department as an assistant professor in 1990, and served as its department chair from 2009 to 2015.

“Having all these people under one roof really helps push the overall field forward.”

The event was open to all NPS students and faculty with the appropriate clearance, working in fields related to the topics discussed. Students wishing to participate submitted papers which were ranked prior to the event, with the selected students presenting their most promising papers during the event.

“The event was structured over a three-day period, with the approximately 300 participants engaging with speakers on topics that covered mechanics, warhead technology, explosives and propellants.”

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NPS Dept. of Physics Associate Professor Joe Hooper, left, speaks to Vice-Chairmen of the NAC Executive Committee James Miller during the 68th annual Ordnance and Ballistics Technology Working Group Meeting at Glasgow Hall, July 29-Aug. 1 (U.S. Navy photo by MC2 Patrick Dionne)

**ENERGY**

NPS campus hosts ordnance and ballistics group for industry, academia collaboration

By MC2 Patrick Dionne

NPS, in partnership with the National Armaments Consortium (NAC), hosted the 68th annual Ordnance and Ballistics Technology Working Group allowing researchers and developers from government, academia and industry to exchange information on the latest weapons technology, July 29-Aug. 1.

The working group serves as a unique role for partners to discuss ideas at the classified level, and is limited only to personnel from Department of Defense, the Federal Bureau of Investigation, Central Intelligence Agency, Department of Homeland Security, and Department of Energy.

NPS President retired Vice Adm. Ann Rondeau opened the working group linking the group’s value directly to how NPS students will apply their education in the fleet.

“Our students are here working on cutting-edge solutions, not just in the technical areas of this field, such as physics, mathematics, engineering and material sciences, but they also do it with the notion of lethality and effect,” said Rondeau. “Having conferences like this, that brings industry and government together with our student practitioners, is very important so they can return to the fleet and the field to apply this knowledge with lethal force.”

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“That particular conference is unique because it allows us to collaborate at the classified level,” said NPS Dept. of Physics Associate Professor Joe Hooper. “This is one of the few places in the ordnance and ballistics community where you have people from all the various disciplines come and give scientific talks on what they’re working on.

“You’re getting input from both DOD sponsors and the people who are executing the work, as well as input from the people providing oversight, such as government scientists and policy makers,” he continued. “Having all these people under one roof really helps push the overall field forward.”

The event was open to all NPS students and faculty with the appropriate clearance, working in fields related to the topics discussed. Students wishing to participate submitted papers which were ranked prior to the event, with the selected students presenting their most promising papers during the event.

“This is the only classified technical exchange for this community to stay current on trends in development and share ideas,” said Vice-Chairmen of the NAC Executive Committee James Miller. “The information you get is all technical information on things not only in our organization, but across the field. This is a great time to network and make connections across all military branches and government so we can help develop future ideas and support the warfighter.”

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“This is an opportunity for myself, and GSOIS in general, to be able to step in and serve my colleagues and help advance our school,” said Dell. “The school was well served during [McCormick’s] time as Dean and we should be very appreciative for everything that he’s done.”

Dell has been teaching NPS students for nearly 30 years, joining the OR department as an assistant professor in 1990, and served as its department chair from 2009 to 2015. He says one of his top priorities is to continue GSOIS’ role in executing the university’s strategic plan, in the focal areas where the school’s expertise can best contribute.

Professor Dell earned his Ph.D. from the State University of New York at Buffalo in 1990 and he has done research for every uniformed service.

Have a story to share? Public Affairs is constantly seeking interesting news and stories for Update NPS. Send your tips to pao@nps.edu.
More than 200 experts and operators representing organizations across the Department of Defense (DOD), academia, industry and NATO gathered at Stanford Research Institute’s (SRI) International Headquarters in Menlo Park, Calif. to tackle issues surrounding Russian aggression in the cyber domain, June 18-20.

Originating in 2011, the annual conference sponsored by the DOD Information Operation Center for Research (IOCR), located at the Naval Postgraduate School (NPS) and the U.S. Army Reserve’s 335th Signal Command, seeks to provide an interactive, working level event to discuss the most critical challenges in the information environment facing our nation and to identify potential solutions.

“The idea is to bring experts, practitioners and policy people together so at the end of the conference they have a better idea of the threats posed by Russia and what we can do about it,” said IOCR Director Dr. Hy Rothstein. “There are a lot of conferences on cyber, but most of them are actually too large. We keep it small because we want to have an exchange of ideas, if thousands of people are in an auditorium, or if you’re in a separate room piped in by a screen, people can’t stand up and say something when it’s Q-and-A time after a panel.”

Throughout the conference, participants had the opportunity to engage with a plethora of influential speakers, experts in the information warfare domain including The Honorable Chris Inglis, former deputy director of the National Security Agency; retired Army Col. Bryan Sparling of Army Cyber Command; Dartmouth College Department of Government Chairman, Dr. Russell Muirhead; and, Timothy Thomas of the MITRE Corporation.

In addition, military commanders from the cyber domain also served as presenters during the conference, including Army Brig. Gen. Tina Boyd of the 335th Signal Command; and, Army Maj. Gen. Stephen Hager, deputy commander operations, U.S. Cyber Command. Senior international leaders were also represented, including National Mission Force and Assistant to the Minister of Defense of Ukraine Col. Viktoria Kushnir.

“On a daily basis we try to protect Ukrainian society from Russian disinformation ... In such a conference we have the ability to share our thoughts, to speak with practitioners, to speak with people with great personal experience in the field of information operations,” said Armed Forces of Ukraine Col. Andri Dyda, Ukraine Chief of Defense, STRATCOM Assistant. “Informational security plays a very important role in Ukraine’s efforts against Russian aggression as the non-kinetic part of the war is more significant.”

A cornerstone of the event included a series of moderated panels between key figures representing all facets of cyber. Each panel facilitated dialogue between the panelists and the audience on important issues ranging from Russian attempts to undermine NATO, advancing U.S. interests, ensuring the integrity of democratic elections and overcoming barriers on the way ahead.

“This year’s topic is so critical because it is right in our face, we’re seeing it happen every single day. It’s in our news, it pervades every aspect of our lives right now, so it’s critical that we all come together to identify potential solutions in a collaborative way,” said panel moderator Austin Branch. As president of the Information Professionals Association, and executive director for information strategies and programs for the COLSA Corporation, Branch has a compelling perspective.

This year’s Cyber Endeavour offered a new fresh perspective with the inclusion of U.S. international partners including representatives from NATO, the United Kingdom and the Armed Forces of the Ukraine.

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The Naval Postgraduate School (NPS) hosted a delegation from India that consisted of senior leadership from India’s Navy and Defense Research and Development Organization (DRDO), Aug. 5.

The visit opened doors for the possibility of more NPS international students, as well as building relations by showing what NPS has to offer.

Indian Navy Vice Adm. Gurtej Pabby, Chief of Material; Indian Navy Rear Adm. Rajaram Swaminathan, Assistant Chief of Material; Dr. Siddalingappa Guruprasad, Director General of DRDO; and several members of DRDO comprised the delegation that toured several NPS research labs and facilities, as well as spoke with NPS leadership.

“The timing of their visit was great,” said Dr. Jeff Paduan, NPS Dean of Research. “A group from the Navy International Programs Office (NIPO) was here recently and they are really reaching out to NPS and working with us to facilitate international collaboration.”

Working with foreign countries is nothing new for NPS. The school has working relationships with over 40 countries with approximately 150 international students every year.
NPS alumna to use education, Career Intermission for higher calling

By MC2 Patrick Dionne

Tragedy struck Haiti on the morning of Oct. 4, 2016, when the 150-mph winds of Hurricane Matthew, a category five hurricane, struck the island nation. In its aftermath, 546 people had lost their lives and more than 1.4 million people were left in need of humanitarian aid.

The United States Navy responded, sending three vessels to offer immediate assistance after the storm. The aircraft carrier USS George Washington (CVN 73), the amphibious transport dock ship USS Mesa Verde (LPD 19), and the hospital ship USS Comfort (T AH 20), which together delivered nearly 480 tons of supplies.

Lt. Sephora Fortune served as a Nuclear Officer aboard the George Washington at the time, but she shared a much more personal connection to the tragedy than the majority of her shipmates.

“Both my parents are from Haiti,” said Fortune. “My mom ran a ministry in the area where she grew up that includes a school and an orphanage.”

Due to her mother’s struggles, Fortune recalled her time on the George Washington where she first learned of the Career Intermission Program (CIP). The program allows active duty service members the ability to take up to a three-year sabbatical and transfer into the Individual Ready Reserve to address personal challenges or opportunities Sailors may experience in work and life.

“While at NPS, I applied for the program and was approved,” said Fortune, who graduated from the university’s Graduate School of Business and Public Policy in early 2019. “I can now devote full time to my mother’s ministry work in Haiti.”

During her sabbatical, Fortune will begin fundraising, and oversee the design and construction of a new development center in Mt. Charette, Haiti that will include a school, an orphanage, and a medical center where her mother’s former ministry once stood.

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“Both my parents are from Haiti,” said Fortune. “My mom ran a ministry in the area where she grew up that includes a school and an orphanage.”

Fortune feared the widespread damage likely impacted the school and orphanage her mother led ... Indeed, her fears were realized. Her mother was able to rebuild a simple structure that would at least keep the children out of the elements, but Fortune was compelled to do more, and found herself in a struggle pulled between her call to serve in the Navy, and a desire to help her family’s native Haiti.

“All that had happened in Haiti rejuvenated my passion to help,” she said. “Originally, my initial goal was to do my first term in the Navy and then get out and return to Haiti to serve. Over time, though, I recognized my calling was to continue to serve in the military ... I decided to stay in and save enough money up to send it back to help rebuild.”

A year after the hurricane, Fortune’s mother suffered a stroke, making it difficult for her to manage the rebuilding effort.

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“This is a multimillion-dollar project that is more of a sustainable grade, and it is much bigger than I could have ever imagined,” said Fortune. “With my newfound business and financial knowledge and skills I acquired here at NPS, I can help shape my understanding of this project into not just a goal, but reality.”

Fortune has already used her NPS skills to file the proper licensing needed to convert the ministry to a registered non-profit organization with the state of Georgia, as well as fine-tuning some financial details reducing the cost of building a quality facility in a remote location.

“Now I am going to go to Haiti to validate the project proposal and coordinate with the engineers to finalize the design,” said Fortune. “This is a huge endeavor, and I would not be able to do it without the time CIP granted me, or the empowerment and know-how instilled in me at NPS.”

Send your campus news and notes to update@nps.edu.
Focus On... Women's Equality Day

A diverse group of students, faculty and staff from across the Naval Postgraduate School (NPS) campus gathered at the front steps of Herrmann Hall to celebrate Women's Equality Day, Aug. 26.

Marilyn Owens, an NPS Administrative Support Assistant in Academic Administration, organized the rally, as she has for the past few years to show support for the struggles that women have faced to gain equality.

"To me, Women's Equality Day is about recognizing women's equality as well as those who have come together to fight for our rights," said Owens. "We've made some progress, and it means a lot to me today seeing our event triple in size because that means awareness. Awareness means getting more educated about the issue and that helps us in winning the vote. Winning the vote means standing up for those rights that we have."

NPS President retired Vice Adm. Ann Rondeau served as keynote speaker who conveyed that the 19th Amendment, passed 99 years ago on August 26, 1920, was a sign that the United States was evolving.

"We needed that legislation in order to be able to truly mature as a country," said Rondeau. "Voting rights for women have always been a sign of ourselves as citizens of this democracy. The opportunity to vote and the Voting Rights Act that followed were the kinds of ways that this country developed and matured to recognize the individual. In 1920, it was a furtherance of what we are as a great democracy."

The 19th Amendment, which granted women the right to vote, was added to the U.S. Constitution on August 26, 1920. In 1971, Congress designated that date as Women's Equality Day to honor women and their continuing efforts towards equality.
Tech. Sgt. Gerald McLaughlin, USAF

NPS Colleagues,

I hope that everyone has been able to enjoy the final weeks of summer here on the Monterey Peninsula. This month we had the annual Monterey Car Week and Concours events, which brought tourists and collectible/sports cars to the area. Fall is right around the corner, and with it comes a variety of activities for singles or families: pumpkin patches, wineries, festivals, and more.

The new monitors in the library printer bay are nearly operational! These will soon be a great resource for organizations like the President’s Board for Student Affairs and others to showcase what events they have planned in the near future. Additionally, our next Townhall meeting is Sept. 5 in DKL-138. We’ve moved our monthly meetings from Wednesday to Thursday in order to accommodate for schedule changes and added electives. Hope to see some new faces in September.

We hope everyone enjoyed Mr. James F. Geurts’ visit for the SGL on Aug. 20. He was a great addition to our SGL program’s theme of “Great Power Competition,” and we hope to bring in more speakers with varying fields of expertise to expand on this topic. Additionally, we’d like to thank all of the students that submitted questions for Mr. Geurts’ SGL. Without your participation, the revamp to the SGL program would not be possible.

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. Best of luck to all in the current quarter!

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
GSEA Lead: Lt Adam Waymouth, USAF
GSOIS Lead: Master Sgt. Joe Scobey, USAF
SIGS Lead: Capt. Jessica Sunkamanaveong, USAF

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STUDENT voice

Any Day at NPS

U.S. Marine Corps Col. Todd Lyons, left, receives his certificate of retirement from NPS President retired Vice Adm. Ann Rondeau during his retirement ceremony in Herrmann Hall, Aug. 2. Lyons served as the Senior Marine Corps Representative for NPS from 2016-2019 before retiring after 30 years of service. (U.S. Navy photo by Javier Chagoya)

Former U.S. Vice President Dan Quayle, right, tours NPS’ Center for Autonomous Vehicle Research, Aug. 5, with Mechanical and Aerospace Engineering faculty Dr. Sean Kragelund, left, and Dr. Vladimir Dobrokhodov, providing an introduction to the lab’s varied centers’ providing an introduction to the lab’s varied systems and platforms supporting student/ faculty research. (U.S. Navy photo by Javier Chagoya)


Associate Administrator and Deputy Under Secretary for Counterterrorism and Counter Proliferation, National Nuclear Security Administration (NNSA) Jay Tilden delivers a guest lecture to Naval Postgraduate School (NPS) students at the campus’ Ingersoll Hall, Aug. 15. (U.S. Navy photo by MC2 Patrick Dionne)

Students enrolled in the Advanced Robotics 533 Course prepare their autonomous ground vehicles for a mid-September competition, where teams will deploy their tractor-treaded machines through an obstacle course, fire at a target four feet from their stopping point, using GPS coordinates, and data fusion of Sonar, Lidar and optical components on their robots. From left: Lt. Aaron Demers, Lt. Brian Gureck and Lt. Erin Haacke. (U.S. Navy photo by Javier Chagoya)

NPS leadership, faculty and staff commemorate Women’s Equality Day outside Herrmann Hall, Aug. 26 to help raise awareness and to show support for the struggles that women face to gain equality. Held annually on Aug. 26, Women’s Equality Day honors women and their continuing efforts towards equality. (U.S. Navy photo by MC2 Tom Tonthat)

Former U.S. Vice President Dan Quayle, right, tours NPS’ Center for Autonomous Vehicle Research, Aug. 5, with Mechanical and Aerospace Engineering faculty Dr. Sean Kragelund, left, and Dr. Vladimir Dobrokhodov, providing an introduction to the lab’s varied centers’ providing an introduction to the lab’s varied systems and platforms supporting student/ faculty research. (U.S. Navy photo by Javier Chagoya)
Historical Highlights

We in the library have been honored recently by the opportunity to take part in an unusual event honoring NPS Professor Richard W. Hamming, an eminent and charismatic computer scientist who taught here at NPS from 1976 to 1998.

Dr. Martin Mandelburg, a 1982 NPS graduate and Hamming’s only doctoral advisee, spoke about his research into Hamming’s life, achievements and philosophy, and offered his own memories of Professor Hamming’s mentorship. Dr. Mandelburg’s research findings for the Richard Wesley Hamming Legacy Project, including previously-unavailable material, will soon become part of the Hamming collection at Dudley Knox Library’s Special Collections & Archives.

For this month’s Historical Highlight, we were inspired to visit the NPS Archive, Calhoun, to share this fine photograph of Professor Hamming in his office in Spanagel Hall.

Read more: https://library.nps.edu/richard-w-hamming

Historical Highlights are provided by the Dudley Knox Library.