NPS Celebrates International Day

By MC2 Patrick Dionne

The Naval Postgraduate School’s (NPS) International Executive Committee (IEC) held its annual International Day celebration on the university’s Academic Quad, April 28. The event displayed the diversity and culture of NPS international students and their families, offering food, entertainment and cultural information from 31 different nations from around the world.

“International Day is important because, if you just look around, you will see that this isn’t just a fundraiser, it’s a way for people all over the world to come together and enjoy food, family, friends and fellowship,” said IEC Chair Lt. Cmdr. Jason Hooper. “This gives us a venue to show solidarity between countries that we wouldn’t necessarily have in a normal school environment.”

An estimated 3,000+ visitors from across the Monterey Peninsula came for the celebration, enjoying authentic food prepared by the students and their families, while watching demonstrations of culture through dancing, singing, crafts and more.

“We had very good stuff including bratwurst, sauerkraut and apple strudel, and it all sold out very quickly,” said Lt. Cmdr. Christian Wuerger, a German student in NPS’ Department of National Security Affairs. “What makes International Day so great is the variety. It is like traveling all around the world in one day! You get to try their food and get a bit of their culture as well.”

“This has been a great experience to discover cultures and interact with people from all around the world,” NPS student from Mali, Nouhoum Sidibe added. “It is really inspiring to be able to interact and learn so many new things from people, and it is always a pleasure to participate in the community. IEC helps us do that.”

International Day represents one of the IEC’s few fundraising opportunities of the year. The IEC provides support to NPS’ international students and their families as they adapt to American life and culture, as well as promoting good relations and cultural understanding.

“The IEC has given them support for emergency situations, social events for their families and children, along with furniture and amenities for the houses they live in when they come to NPS,” said Hooper. “It is a difficult transition, and this really helps their integration and life as a student at NPS.”
Annual NRWG Connects Navy’s Issues to NPS Researchers

By MC2 Patrick Dionne

The Naval Postgraduate School (NPS) held its latest annual Naval Research Working Group (NRWG), April 10-12, 2018, on the university’s campus in Monterey. The NRWG serves as a forum for Navy and Marine Corps organizations to communicate, review, validate and recommend topics for NPS research over the coming fiscal year.

Now in its fifth year, the annual NRWG hopes to bring NPS faculty and students in contact with respective Department of Defense (DOD) organizations to meet current and future operational warfighter challenges through research.

“This is one more opportunity to tie our faculty and students back to our operating forces,” said Program Manager for NRWG 18, U.S. Marine Corps Lt. Col. Louis Camardo. “They are already doing world-class research in support of the DOD, and this helps not only bring problems from the fleet back to NPS but also gives our sponsors the chance to see what is going to be important for the future.”

The multifaceted forum included a variety of events, such as poster and revolving panel sessions held on site at NPS’ Barbara McNitt ballroom, as well as lab tours around the NPS campus that highlighted the capabilities of 18 of its research labs.

“The poster sessions serve as a chance for our research sponsors to see the breadth and depth of research that is going on at NPS currently, and that starts a conversation regarding what is the art of the possible regarding research,” said Camardo. “The panel sessions then offer faculty and students a chance to come over at their leisure to talk about future research projects from whatever sponsors they want, and follow up on previous conversations.”

The event also included the latest of NPS’ Secretary of the Navy Guest Lecture (SGL) series, given by NRWG 18’s keynote speaker Deputy Commandant of Installation and Logistics U.S. Marine Corps Lt. Gen. Michael Dana, who spoke to over 1,500 students, faculty and staff in King Auditorium.

Dana spoke about innovation and technology and the impact it has made on the way military operations are conducted throughout history, from the Gatling gun to canning food.

“In your mind’s eye imagine that you are a World War I veteran, and you look up in the sky and you see a biplane ... You know it has great potential, you just don’t know how yet,” said Dana. “Think about today, and where we will be 20 years from now with things like artificial intelligence and unmanned systems.

“The biggest thing we can do is start to frame the problem in different ways, because a lot of the times in problem framing there are things sitting right in front of you and you don’t realize it,” he continued. “That’s why you need people who have different outlooks, different experiences, different perspectives to look at a problem and help turn it on its head.”

The first iteration of NRWG originally kicked off in 2014, this year’s forum include sponsors in attendance representing 40 different DOD and government agencies.

“We have been doing this program since the beginning and we are here to help build a stronger bond between us and NPS to do the research that answers our hardest problems,” said Deputy and Technical Director at OPNAV N1 (Manpower, Personnel, Training and Education)’s Modeling and Assessment Office Ilia Christman, who attended as a topic resource sponsor and representative for OPNAV N1.

“We are looking at a broad spectrum to help us develop system support systems and metrics as well as systems for talent management with both the School of Business and Public Policy and the Operations Research Department, and as a former NPS alumni myself it is always nice to be back,” Christman said.

Funding for research in fiscal year 2019 is proposed to be about $12 million. To date over 2,000 topics have been submitted through the Navy Research Program Topic Portal, and over 600 research projects have been completed or are in progress.
Monterey Chiefs Celebrate 125th Birthday

By MC2 Michael Ehrlich

Information Warfare Training Command (IWTC) Senior Enlisted Leader Master Chief John D. Cawthorne, left, and IWTC staff member Chief Michael F. Haggerty cut a ceremonial birthday cake honoring the 125th birthday of the Chief Petty Officer during a celebration in Herrmann Hall’s Tower Room, April 3.

“As we celebrate our heritage with good grace, we reflect on and honor the expertise, grit and devotion of those who wore anchors before us,” said NPS Flag Administration Senior Enlisted Advisor Senior Chief Richard Hill. “They shaped the Chief Petty Officer rate into the time honored respected and revered fellowship simply known today as ‘The Mess,’ recognized worldwide for its distinct leadership in accomplishing the Navy’s mission.”

The rank of chief as it is recognized today was officially established April 1, 1893, and with the exception of schoolmasters, ships’ writers and carpenters’ mates, all petty officers of the first class were automatically shifted to the new rank.

This originally encompassed nine ratings: chief master-at-arms, chief boatswain’s mate, chief quartermaster, chief gunner’s mate, chief machinist, chief carpenter’s mate, chief yeoman, apothecary and band master.

“Since the days of antiquity, highly-skilled seamen have been prized for their knowledge and skill,” said NPS Electrical and Computer Engineering Leading Chief Petty Officer Veronica Mikulewicz. “As vessels grew more complex, duties began to split into different responsibilities, which evolved into a rating system that was first formally organized by the British Royal Navy and later adopted by the U.S. Navy.”

Giordano continued his message, citing these inspirational words from Fleet Admiral Frederick “Bull” Halsey. “Always remember that, as Admiral Halsey was once quoted as saying, ‘You think those ships float on water? You are wrong, they are carried to sea on the backs of Chief Petty Officers.”’ Happy Birthday Chiefs!”
Professor’s Patent Could Impact Treatment of Cancer

By Matthew Schehl

A NPS applied physics associate professor has just been awarded a patent that could potentially revolutionize the treatment of cancer.

Dr. Emil Kartalov received the patent, March 20, for work he did at the University of Southern California (USC) to use a biochemical method – microfluidics – to mark the DNA of mutated cancer cells.

“In other words, it’s like taking a tiny little pencil to write down the coordinates on the exact piece of DNA so that it can later be analyzed,” Kartalov explained. “We can tell how many of them there are and where they came from by these coordinates, and suddenly we have an enormous amount of information to work with.”

Currently, targeted therapies are quite effective at decimating cancerous cell populations. The problem, however, is that nature always finds a way ... 99 percent might be eradicated, but that remaining one percent can lead to a resurgence which overwhelms the patient.

“The few mutants that are resistant have found a way around [the targeted therapy], they’ve short-circuited it somehow,” Kartalov said. “Suddenly those guys are going to repopulate and they potentially can kill the patient.

Studying DNA sequences is the easy part ... Since the 1980s, a process known as Polymerase Chain Reaction (PCR) has been available to efficiently make copies, like a Xerox machine, of focused segments of DNA. The difficulty comes in when incorrect DNA gets amplified through the PCR process.

“Essentially, you are trying to see only a particular page of a book, but the Xerox machine can fail and instead start copying the rest of the book,” Kartalov explained. “Then you miss the critical page.”

Kartalov’s patent circumvents this. Instead of replicating an entire sample, it compartmentalizes it into little volumes, allowing reactions to be done for each. Using microfluidics, coordinates are assigned to each tiny chunk so that they can be isolated and studied in turn.

“Now, when you amplify the sample, you only compete with another hundred cells rather than a hundred thousand cells,” he explained. “You’re tilting the playing field in your favor so that you can identify the particular mutation much more easily.”

Being able to identify how many mutations exist, and where they are, opens the door to a wealth of information on how the disease changes and adapts in the individual patient.

Interesting questions on this morphology can now be addressed. What is the concurrence of different mutations and where do they happen? Do they happen only in the cancer or in normal tissue?

The answers to these questions and others means more efficiently tailored treatment.

“So instead of the patient being a guinea pig, you already know which drugs are going to work and which ones are not going to work,” Kartalov said. “That way, as they’re running out of time, you can actually address it in a much more intelligent and well-designed manner.”

Kartalov filed the patent a number of years ago while an assistant professor at USC. In 2016, he came to NPS and became a civil servant, thus precluding any involvement in commercial development of the technology due to potential conflict of interest.

NPS IT Leaders Re-energize Local CIO Consortium

By MC2 Patrick Dionne

NPS Chief Information Officer (CIO) Joe LoPiccolo welcomed fellow information technology leadership from regional DOD, academic and civilian organizations throughout the Monterey Peninsula to the NPS campus, April 4, for the Monterey Peninsula CIO Council.

“It has been a little over a year since we have all last met,” said LoPiccolo. “These symposia are a great way to ensure that the Monterey Peninsula is rich with partnerships in the realm of information technology, and going forward, I would like to be able to have these forums every quarter.”

Included in the forum were senior IT leaders from the Defense Language Institute Foreign Language Center (DLIFLC), Defense Manpower Data Center (DMDC), Fleet Numerical Meteorology and Oceanography Center (FNMOC), Fort Hunter Liggett, U.S. Coast Guard Station Monterey and U.S. Naval Research Laboratory (NRL). Also in attendance were representatives from civilian partners including the City of Monterey, Montage Health and Monterey County.

Presentations included an update from each member institution, as well as topical discussions on dark fiber, the latest in security operations and more.

“There are a lot of changes going on in IT and it is important that we are able to bounce ideas off our partners on topics such as industry involvement and cloud computing,” added LoPiccolo. “The more we can know about what our colleagues are doing, and how they are doing it, the more we can seek out opportunities to work together.”
NPS Reappoints Executive Education Program Director McAnally

By MC2 Patrick Dionne

Ms. Winli McAnally, director of the university’s Center for Executive Education (CEE), was reappointed by Provost Steve Lerman as director of CEE, a position she has held since March of 2015.

“I manage 20 CEE faculty as well as our small team of exceptional staff members. With them, and other key NPS faculty, we support up to 800 Navy senior leaders every year,” said McAnally. “What is truly rewarding for all of us is, when we see the very challenging jobs that our students will be going into, and we can provide them more tools, insights and skills to help them be more effective in leading their organizations.”

The Center for Executive Education (CEE) designs and delivers both standing and customized executive education programs that address the strategic needs of Navy and joint organizations. CEE offers these programs both on campus at NPS or at off-site locations near major Navy concentration areas. All programs are designed to enable Navy leaders to manage and lead more effectively by engaging participants in case studies, team exercises, practical applications and focused lectures.

“As part of the Navy’s Leader Development continuum, we want to continue assisting and supporting the development of the overarching Navy leadership strategy,” said McAnally. “We are also seeing increasing demand at the flag level to provide programs and resources to strengthen their own organizational leadership and executive teams. In order to be able to respond to all these requests, we are continuing to develop Navy talent by growing subject matter experts and faculty that can help us develop these programs.”

CEE has practical experience working with Navy commands with a multi-disciplinary approach, McAnally said, making it a critical resource for developing the organizational and executive skills that Navy leadership needs.

Prior to joining CEE, McAnally served as deputy director and operations manager for the Executive Master of Business Administration program in NPS’ Graduate School of Business and Public Policy.

TechCon Spotlights Campus Research in Robotics, Unmanned Systems

By MC2 Patrick Dionne

Deputy Director of the Consortium for Robotics and Unmanned Systems Education and Research (CRUSER) Dr. Brian Bingham speaks during the organization’s annual Technical Continuum (TechCon) at NPS’ Mechanical and Aerospace Engineering Auditorium, April 18.

TechCon provides members of the NPS and CRUSER communities an opportunity to share ongoing CRUSER-related research and concepts of interest.

“This is part of our innovation thread to allow researchers, students, faculty and staff here at NPS an opportunity to report on their work and propose new work on unmanned systems,” said Bingham. “The benefit is we get folks on campus from research centers and industry to talk about what is going on outside of NPS and try to generate on new ideas going forward.”

The two-day event covered a wide range to topics focusing on unmanned systems including swarming, networking and communications, operations development, sensing technology including acoustic directional finders and digital image synthesis, automation, and the applications and education available to bring these topics to fruition.

“This collaboration is critical to CRUSER’s mission... Twenty years ago, the military led the way on robotics but today so much is being adopted and pushed by the private sector and we need to keep up with their innovations,” said Bingham.

CRUSER Deputy Director Dr. Brian Bingham speaks during the organization’s annual Technical Continuum (TechCon) at NPS’ Mechanical and Aerospace Engineering Auditorium, April 18. (U.S. Navy photo by MC2 Patrick Dionne)

Graduates earning “with Highest Distinction” honors by completing the JPME program in the top five percent of their class are Army Cpt. Anthony Akrami, Army Majs. Benjamin Brinhurst and Michael Oliveira; and, Navy Lt. Cmd. Bradley Schoultz.

Graduates earning “with Distinction” honors by completing the JPME program in the top 15 percent of their class are Army Lts. Robert Birch, Daniel Blue, David Rose and John Tanalega; Navy Cmdr. Ryan Carmichael; Navy Lt. Cmdr. Sean Teter; Army Majs. Stephen Deterding, Robby Otwell and Thang Tran; Army Cpt. Erik Kiser; and, Marine Corps Maj. Aaron Glover.

Through the NPS-NWC partnership, a total of 4,847 officers have earned their Joint Professional Military Education (JPME) Phase I certification since the program’s inception in September 1999.

Send your campus news and notes to update@nps.edu.
Naval Support Activity Monterey (NSAM) Sexual Assault Response Coordinator (SARC) Jennifer Schoen is passionate about her role with the NPS campus and the greater NSAM community. With three years of experience at Naval Air Weapons Station China Lake, Calif., and years of past experience in the mental health field and child protective services, her drive is simply to help others.

Since joining NSAM in September of 2017, Schoen has been spreading her message to build awareness of the issue, and ultimately to prevent sexual assault in the service and beyond.

“Protecting Our People, Protects Our Mission: Raise Your Voice for Prevention,” is a reminder for all of us to take care of each other. I can’t say it enough... See something, say something,” said Schoen.

Joining Schoen is a team of 12 uniformed, trained Victim Advocates, who volunteer and respond to those who have been sexually assaulted.

“Prevention is key when combating sexual assault,” said Schoen. “As the SARC, I am here to advocate, and ensure survivors are supported and provided with service referrals to start on the road to recovery, but I am also an advocate for safety and intervention.”

Schoen’s message to the campus has been loud and clear, support sexual assault prevention and raise your voice. You can also show your support by picking up a teal colored pinwheel at the Dudley Knox Library or Fleet and Family Service Center at La Mesa Housing.

Graduate students at the Naval Postgraduate School (NPS) had the opportunity, April 2, to talk directly with the Socialist Republic of Vietnam’s ambassador to the United States.

Ambassador Extraordinary and Plenipotentiary of the Socialist Republic of Vietnam to the United States of America Pham Quang Vinh set aside time during a visit to West Coast to meet with NPS students and discuss a wide range of issues related to their field of study, national security studies with a specialization in the Far East, Southeast Asia and the Pacific.

Over the last 23 years, trade between the nations soared over a hundred fold, from $450 million a year to well over $50 billion. Vietnam sends more students to study in the U.S. than any other Southeast Asian country, and the Fulbright Program recently opened the first private, independent university in Vietnam.

Political and diplomatic relations have flourished, as has security cooperation. Four U.S. presidents have visited the country, including President Donald J. Trump last November, who emphasized the necessity of building strong partners in the region.

“Vietnam and the U.S. normalized our relations in 1995. We had a war before that, a very fierce war,” Vinh said. “But our nations have travelled so very far together since then.”

Korean pop music – “K-Pop” – also played a salient role in the conversation.

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Vietnamese Ambassador to the U.S. Pham Quang Vinh, center right, holds an open, candid discussion on current and future U.S.-Vietnamese relations with NPS Department of National Security Affairs students and faculty during a visit to the university campus, April 2. (U.S. Navy photo by Javier Chagoya)
Any Day at NPS...

STUDENT

USN Lt. j.g. Tanya L. Herfi, Chairman of the President’s Student Council

The President’s Student Council is here to serve you and to be your advocates within NPS and NSAM. We are students ourselves and can relate with many of the challenges faced on a daily basis. This organization allows us to communicate those challenges and provide feedback to the various supporting units throughout the NPS campus in order to help make improvements that benefit the students.

If at some point you find yourself in a position where you’re not quite sure who to address with a particular concern, feel free to contact us at PSC@NPS.EDU or reach out to your school’s PSC representative and we can hopefully find you the answer you need. The names of our representatives are listed below and can be easily found in the Global Address List in Outlook.

The PSC is always welcoming new members and would encourage you to attend our monthly meetings held the first Wednesday of each month at 1200 in the library room Kn-263A. Next meeting is Wednesday, May 2nd.

Thank you for your hard work and good luck with your studies!

Chair: Lt j.g. Tanya Herfi
Vice-Chair: Capt. Ben Collier
SIGS Lead: Capt. Alejandro Bihar
SIGS Rep: Capt. Dan Grant, Capt. Matt Grill, Capt. Joe Messmer, Maj. Peter Cox, Lt.j.g. Anton Balsirow, Lt.j.g. Tim Cole
GSOIS Lead: Master Sgt Alex Eudy
GSOIS Rep: Lt. Cmdr. Shivashankar
GSEAS Lead: Lt. Josh Malia
GSEAS Rep: Lt. Cmdr. Pete Harley, Lt.j.g. Aaron Demers
GSBPP Lead: 1st Lt. Helene Caniac
GSBPP Rep: Capt. Tyler Flansburg

Have a story to share? Public Affairs is constantly seeking interesting news and stories for Update NPS. Send your tips to pao@nps.edu.
On Campus this Month

May 3
Cinco De Mayo Kickoff Party
4:30 p.m. - 7:00 p.m. Trident Room

May 4
Modeling and Simulation of Army Operational Energy
1:00 Mechanical Engineering Lecture Hall

May 13
Mother’s Day Brunch
Barbara McNitt Ballroom. Reservations Required
lmwrcatering@nps.edu or 831-656-7512

May 18
Energy Seminar: A New Energy System Design Approach
1:00 p.m. Ingersoll Hall room 122

May 28
Memorial Day

Breaking News Happens

Sexual assault awareness and prevention Month

NPS Defense Energy Program Presents:
NPS Defense Energy Seminar

Historical Highlights
NPS didn’t get its first purpose-built academic library until 1971, nearly twenty years after the move to Monterey. Initially set up in Herrmann Hall, the research collection moved to Root Hall in 1954, “temporarily”. Joking comments about bureaucratic slowness aside, when it was done, the beautiful new building would be worth the wait, with “fully luminous ceilings”, modern study spaces featuring “audiovisual circuits” and a large, convenient parking lot.

But where were the windows? “[O]ur design concept provides for a semi-monumental structure which utilizes natural concrete exterior walls,” architect Nick Primiani explained to a local reporter. DKL’s thick walls were said to be “virtually soundproof”. Libraries are expected to be more or less quiet... but why “soundproof”?

Well, most libraries didn’t have a full-scale airfield as a next-door neighbor, as NPS did in 1971, and it wasn’t a sure thing then that the expected cloistered atmosphere of serious study would survive the noise of low-flying military planes overhead.

Dudley Knox Library is busier, bigger, and more popular than ever today. It’s far from “soundproof”, but we’d like to think it’s the heart of the NPS campus. Come by and hear yourself think! Historical Highlights are provided by the Dudley Knox Library.

Historical Highlights are provided by the Dudley Knox Library.