Commencement Ceremony Celebrates Spring Quarter’s Graduates

By MC1 Lewis Hunsaker

The Naval Postgraduate School bid farewell to 265 graduates, including 29 international students from 17 nations, earning 268 advanced degrees during the Spring Quarter Graduation ceremony in King Auditorium, June 16.

Vice Adm. Frank C. Pandolfe, Assistant to the Chairman of the Joint Chiefs of Staff, gave the quarter’s commencement speech, describing the journey ahead, new pressures, and career milestones.

“You are the product of extensive shared knowledge by gifted and dedicated faculty, with the combined accomplishments of each immediate and extended family member that is here today, because no one does this alone. Appreciate this day, this hour ... It is yours, you have earned it,” Pandolfe said.

“Today marks a milestone in the lives of each graduate through the receipt of their academic degrees,” Pandolfe added. He then spent a portion of his time with the class discussing global change, and how an expanding population and its desire for opportunity will continue to challenge social order and international stability.

“The traditional model of industrial development that took billions of people off the land and put them to work in factories, as the first step towards modernization and urbanization, likely may not be the path that the next generation of men and women take to achieve progress,” he said.

“Rather, they will leverage sustainable energy sources, cyber connectivity, dynamic networking, wireless banking, and e-commerce to create wealth and jobs,” he continued. “Working together, they will forge a new very different route towards a better future.

“At the center of all this activity will be, as always, a struggle between contending schools of thought and political philosophies regarding how we will organize ourselves in the future and what values will guide our societies,” he added.

Pandolfe grew up in New England, graduated with distinction from the U.S. Naval Academy in 1980, and was awarded a doctorate in international relations from the Fletcher School of Law and Diplomacy at Tufts University in 1987.
**NPS Meteorologist Seeks to Advance Prediction Methods for High Energy Laser Deployment**

*By Javier Chagoya*

Recently, NPS Professor of Meteorology Dr. Qing Wang was selected as a co-recipient of a $3 million research project to improve analysis tools and prediction methods to quantify atmospheric effects on High Energy Lasers (HEL).

Wang will act as the lead principal investigator (PI) overseeing the project that is spread over a five-year period collaborating with two other universities, the Naval Research Laboratory and Space and Naval Warfare Systems Command (SPAWAR).

Dr. Qing Wang was selected as a co-recipient of a $3 million research project to improve analysis tools and prediction methods to quantify atmospheric effects on High Energy Lasers (HEL). The High Energy Laser-Joint Technology Office (HEL-JTO) is the sponsor for Wang's project titled Quantifying and Understanding Environmental Turbulence Affecting Lasers (QueTal). Wang will be collaborating with PIs from the University of Minnesota and the University of Central Florida.

Wang will have the support of a small team of NPS meteorology master and doctoral students along with research associates to study the effects of atmospheric turbulence on optical propagation.

"My project was one of two selected for funding by HEL-JTO on the topic of atmospheric effects, which is very exciting. There are many aspects to the overall HEL program, but it ultimately has to do with effectively advancing the development and operations of future HEL weapons," said Wang.

"While we cannot control the atmospheric effects, it’s very important to be able to characterize and predict them to assist HEL weapon system design and operation," said Wang.

The technical goal for Wang and her collaborators is to understand and predict the effects of turbulence along the HEL propagation path through extensive in situ measurements and fine-scale modeling of atmospheric turbulence, thermodynamics, and optical propagation over both marine and land environments.

Wang uses an example of observing heat waves rising up from pavement that distort the appearance of a distant object to explain the optical turbulence phenomenon. Termed scintillation, the effect leads to beam spread and distortion as the laser beam propagates through the lower atmosphere before reaching the ultimate target.

"We not only need to know what’s occurring at the near-surface over the ocean, we must also consider the scintillation effects over land surfaces as the HEL weapons systems are deployed over land as well," added Wang.

Wang is also the lead PI for Coupled Air-Sea Processes and Electromagnetic ducting Research (CASPER), a five-year Office of Naval Research (ONR) Multidisciplinary University Research Initiative (MURI) project funded in 2014. This collaborative effort involves dozens of researchers and students investigating the atmospheric ducting effects on radar and communication signals, a high-priority Navy topic under its Electromagnetic Maneuver Warfare (EMW) Strategy.

Wang will conduct a second phase field campaign of CASPER this fall using multiple platforms, including research aircraft, research vessel, and Floating Instrument Platform (FLIP), all deployed off the coast of Southern California. An optical component will be piggybacking on this project to enable collection of optical attenuation in the undisturbed marine environment through turbulence and aerosol absorption and scattering. Analyses of this rich dataset will follow the month-long field measurement campaign.

"We also will be able to validate numerical simulations by the University of Minnesota’s Large Eddy Simulation (LES) model and to ensure that the model is representing the right physics,” said Wang.

Ultimately, the research will evolve environment prediction to effectively deploy a ship-based laser weapon against its target, providing a real-time operational advantage in the battlespace.
The 75th Anniversary of the Battle of Midway, Dining Out was held in the Barbara McNitt Ballroom, June 3. The event was lead by Capt. Rich Wiley, commanding officer, Naval Support Activity Monterey, who acted as President of the Mess for the ceremony that included toasts, trivia, singing of traditional hymns and remarks from guest speaker NPS Professor of Practice retired Capt. Jeff Kline.

Kline honored the memory of the Battle of Midway, a decisive naval battle often considered a turning point in the Pacific theatre, with praise for the Sailors who answered the call to serve.

“The Battle of Midway showed us many examples of relatively junior officers that were put in unfamiliar crisis situations which demanded action on their part,” said Kline. “Using their technical knowledge, innovative approaches, and courage, they found sound bold courses of action. This is the tie to the Naval Postgraduate School today.

“As an institution, we keep that spirit alive by providing technical know-how, in context of operational and tactical situations, and challenge our students to produce innovative solutions to real world problems,” Kline continued. “From exploring concepts of swarming unmanned aerial vehicles to smart warheads on torpedoes, we advance graduate and professional education synergistically.

That is our niche, that is our uniqueness, and that is our contribution to the nation's future security.”

The theme of the dinner was titled, “From Midway to Monterey: Leveraging Initiative and Technology,” and focused heavily on the importance of continuing to educate Sailors in preparation for future conflicts and situations that have not been encountered before. The ceremony was attended by both officers and enlisted, past and present, including two veterans of the Word War II Pacific Theatre.

“I think what makes events like this dining out so significant is that they give our guests an opportunity to be entertained and learn about important naval traditions and core values,” said Lt. Ryan Clifford, the Vice President of the Mess for the event, whose role was to help move the ceremony along and reiterate the history of the Battle of Midway and traditions involved in the ceremony. “This is my first time that I have served as Vice and it was a huge honor to help carry on the memory and traditions of such an important time in our history.”

Taking place from June 4-7, 1942, the Battle of Midway saw the sinking of four Japanese carriers causing devastating damage to the Japanese fleet that proved irreparable and paved the way for further U.S. victories throughout the war.

“Speakers discussed current issues in DOD and U.S. Coast Guard financial management operations. Most importantly, our own presentation of mini-courses provided participants with the opportunity to obtain continuing education credit toward meeting certain DOD FM certification requirements at Level 3 of the program,” said Hansen.

Of the 4,100 financial managers from around the DOD that were in attendance, the Navy’s cohort totaled 12 active duty officers and 420 civilians, Hansen says, a stark contrast from his attendance in 2016 when he, conspicuously, the only active duty Navy person there. In either case, Hansen says, he was happy to support the development of his colleagues.

“It was an honor getting to represent the Navy and DRMI as an instructor in front of the DOD FM workforce, particularly since at last year’s [event], I was the only naval officer in attendance,” said Hansen.

Have a story to share? Public Affairs is constantly seeking interesting news and stories for Update NPS. Send your tips to pao@nps.edu.
NPS Experts Talk Taliban Narrative, Cyber Deterrence

By MC1 Lewis Hunsaker

Vice Adm. Frank Pandolfe, Assistant to the Chairman of the Joint Chiefs of Staff, attended a roundtable discussion with NPS faculty in Herrmann Hall, June 15, a day before he served as commencement speaker for the institution’s Spring Quarter Graduation ceremony.

NPS faculty from the university’s School of International Graduate Studies briefed Pandolfe on current capabilities and research initiatives. Of particular interest was an overview of NPS’ Center for Civil-Military Relations (CCMR) and the Department of National Security Affairs (NSA).

Dr. Thomas Johnson, an Associate Research Professor and Director of the Program for Culture and Conflict Studies, has been studying Afghanistan for nearly 30 years.

"I first went to Afghanistan in 1986 and one of the things that truly impressed me was their narratives, their stories," said Johnson. "From my perspective, these wars are at least 80 percent informational and maybe 20 percent kinetic."

"One of the great things about being at NPS is we have robust programs that are going to allow us to do better [information operations] ... My work not only focuses on how the Taliban did this, but also how it compares it to ours," he added.

Johnson says these narratives will continue to dictate future conflict, and he is developing a new course to offer students a more in depth analysis of them.

NPS Operations Research Department Conducts Wargaming Exercises

By MC2 Michael Ehrlich

Under the sponsorship of NPS’ Energy Academic Group (EAG), students in the Operations Research (OR) curriculum executed the Operational Energy Wargame, which studied the challenges of insurgents creating a breakaway nation in a fictitious country, while focusing on energy shortages and incorporating energy resources during this crisis situation.

Concurrently, the OR department is conducting four other wargaming exercises; Defining Australia’s Future Battlefield Aviation Requirements; Distributed Lethality in the South China Sea; USMC Extreme Cold Weather System Wargame; and, Operation Pressure Cooker 2020: Deterring Tension in the South China Sea.

Senior Lecturer Dr. Jeff Applegate has coordinated with outside sponsors to identify real-world scenarios that NPS has the resources and manpower to tackle. Since 2009, the students have conducted 46 wargames for 27 different sponsors to include all United States services, Canada, Norway, and for the first time, Australia.

OR student Lt. Cmdr. Matthew Schaefer, along with several colleagues and international students from Germany, developed the Operational Energy Wargame (OE). In addition, representatives from the NATO Energy Security Centre of Excellence in Lithuania, U.S. Navy Energy Coordination Office, and USMC Expeditionary Energy Office joined the wargaming team, their recommendations and expertise were instrumental throughout the exercise.

"Right now at the operational energy wargame we have two cells, a red and a blue, and for the last hour they have been learning the game, understanding their moves and implications, while developing strategies of how they want to go about it. Right now we are finishing up making their first round moves," explained Schaefer.

"The base scenario is that there is a host nation that is influenced by an outside nation and insurgencies that have taken over a portion of the country and created a break away country. The host country has their military forces combating the insurgents in the break away region but they have also asked for a combined joint task force from the international community."

Developing the OE Wargame equipped the students with a unique opportunity to work on the real-world issues, where diverse constraints associated with delivering operational energy to locations where it’s needed is at increasing risks, ultimately resulting in a success or failure of military operations. Given the importance of the work done, the wargame will be incorporated into the curricula of a one-week course on Energy Efficiency in Military Operations, to be conducted by EAG at the end of June in Vilnius, Lithuania in close collaboration with the NATO Energy Security Centre of Excellence.
NPS Bids Farewell to COS, DOS

By MC2 Michael Ehrlich

NPS bid farewell to two of its senior military staff members, Chief of Staff Capt. Anthony “The Godfather” Parisi and Dean of Students Capt. Matthew “Dutch” Vandersluis, with a reception in the La Novia Room of Herrmann Hall, June 2.

“You can look around the room and see a lot of history and we are here to recognize some history,” said NPS President retired Vice Adm. Ronald A. Route. “If you look back over the past few years, I want to thank you all in our accomplishments, especially our Chief of Staff and Dean of Students.”

Vandersluis commented on how the student services staff was as deserving of his award for their efforts to create positive change at NPS.

“Some of the things that were mentioned in the award I take great pride in,” said Vandersluis. “The team of people we have in student services do such a great job. A lot of the things we have done in that office with check-ins, SharePoint, calendars, formalizing processes to better take care of students, these were things that weren’t even there when I first got here. Through all the members and the Lieutenants in student services, they have become the driving force of innovation in the office. It has been my pleasure to be a part of this organization.”

Parisi agreed with Vandersluis on the strength that the NPS team wields when it works together.

“I came from a crazy country and embassy with all kinds of inter-agencies that were feuding and we calmed the waters and made it work,” said Parisi. “When I got to NPS I said that culture is a lot like NPS. This has been a great team, we do a fantastic job, and all I tried to do was do my job, which was protect the President when he needed and exceed his expectations and then make the staff and faculty collaborate.

“When we work together, nobody can top you, and I think that is where we are now,” he added.

DFAS Top Officer Drops in for NPS/DRMI-101

By Javier Chagoya

Director of Defense Finance and Accounting Service (DFAS) for the Department of Defense Teresa McKay was introduced to students attending a cost estimation short course taught in NPS’ Defense Resources Management Institute (DRMI) auditorium, June 2. McKay met with DRMI and NPS officials during her brief visit and tour of the facilities.

“It appears that DRMI is providing good guidance and instruction for both U.S. and international fiscal management professionals, based on my short visit,” said McKay.

McKay is very keen on professional development as she was in California to attend the 2017 American Society of Military Comptrollers Conference in San Diego.

She took the opportunity of NPS’ proximity to the event to include it on her itinerary. The conference itself provides symposia and workshops that focus on defense fiscal management training.

McKay met with DRMI Associate Professor Diana Angelis to discuss the unique teaching methods developed by the institute’s faculty.

“Ms. McKay and I discussed how DRMI delivers executive education courses using a team teaching concept,” said Angelis.

“I explained how our faculty teaches a variety of domestic and international short courses throughout the year.”

Angelis also talked to McKay about the benefits of using small discussion groups between lectures to emphasize and practice concepts.

“Ms. McKay inquired about the content of each course and was interested in how the courses are delivered. We noted that our four-week Defense Resources Management Course can be used to obtain credits for fiscal management certification,” added Angelis.

“I was very impressed with the faculty, staff and thoroughly appreciated both the DRMI brief and NPS’ mission brief provided by President Route,” added McKay.

Send your campus news and notes to pao@nps.edu
Marine Corps Brothers Graduate NPS With High Honors

By MC2 Brian H. Abel

Marine Corps Capts. Ezra and Micah Akin have accomplished quite a bit during their time together at the Naval Postgraduate School (NPS), culminating with the Spring Quarter graduation ceremony, June 16. Not only did both brothers complete their studies in technically-demanding fields – Ezra Akin in the operations research program, and Micah Akin in computer science – both were also honored with top student awards for their efforts in the classroom.

“What an incredible blessing to be able to cross the stage with my older brother,” said Ezra Akin. “Brothers are rarely stationed near each other, and for our careers to cross in this way is even more rare.”

“I am still amazed that the Marine Corps allowed Ezra and I to attend NPS at the same time,” said Micah Akin. “Our families have loved the opportunity to spend time together.”

Like many siblings, these two Marines had their rivalry growing up, and joining the military hasn’t stopped it.

“Yes and I were always close. Whether in a brotherly row or in friendship, we have always competed and enjoyed the game of it,” said Micah Akin. “Our time in the Marine Corps has proved an excellent continuation of the rivalry, from comparing PFT scores to academic grades, we continue the friendly competition.”

That competition has served both brothers well, driving them to high academic success in their respective fields. Ezra Akin earned the Spring Quarter’s top award, the Navy League Award for Highest Academic Achievement, while Micah Akin earned the Computer Science Department award and the Rear Admiral Grace Murray Hopper Computer Science Award in recognition of his academic achievement and thesis research.

“I am incredibly honored and humbled to receive this award,” said Ezra Akin. “The student body is incredibly talented and driven, so I am primarily thankful for my fellow students who have completed the journey with me!”

“I am consistently amazed by the caliber and professionalism of NPS computer science professors and students,” added Micah Akin. “I am thankful to my instructors and fellow students for their help, and my wife Robin for her patience.”

With graduation behind them, the brothers will continue on in their careers on separate paths. While Micah Akin returns to an operational setting, Ezra Akin will actually remain on campus, selected as the first participant in a Marine Corps pilot program that keeps a student on campus for a doctoral degree.

“We are sad to part for now as the Marine Corps has wisely chosen to continue Ezra’s education in operations research here at NPS,” said Micah Akin. “I will be heading to the Pentagon to work for the Marine Corps Deputy Commandant for Information.”

Akin says he is honored for the opportunity, and is ready for the challenge.

“I am very grateful and honored to have been allowed to pursue this degree as it will be invaluable both in my follow-on service within the Corps, as well as in the civilian world once I depart the Corps,” said Ezra Akin.

Focus On … Service and Attention to Detail

A Monthly Look at Names and Faces on Campus

NPS Administrative Officer, and Executive Officer for the Enlisted Staff, Chief Warrant Officer 5 George Williams is always motivated to take care of the NPS enlisted troops. He learned early that if he worked hard, kept a good attitude, and stood by his faith his career would flourish.

“I learned so much early on during my career to be honest, and I think that fear was the best teacher for me,” said Williams. “I feared my Chief, I feared not being good enough, going back to Mayberry, N.C., and being a failure to my family. I knew and prayed that if I just worked harder than everyone else, obeyed those that had authority over me, and continued to read the bible and recite my general orders I learned in boot camp, that everything would work out.”

Over the years this mindset worked out as Williams rose through the enlisted ranks and became a Warrant Officer. Williams also survived the terrorist attacks on the Pentagon during 9/11, but he also learned a valuable lesson from the adversity.

“I was a casualty assistance calls officer to a Chief that had asked me to speak at his retirement ceremony that morning before the attacks. I did end up speaking, but it was at his funeral,” said Williams. “I met his mother and she spoke for everyone to read about her son. She spoke about how proud she was, and that it has a special place on the mantel for everyone to read about her son. I read the award and was embarrassed of all the grammar errors and typos. I made a promise to myself that nothing will ever cross my desk without my own personal touch and attention no matter what it is.”

Chief Warrant Officer 5 George Williams

Williams is always motivated to take care of the NPS enlisted troops. He learned early that if he worked hard, kept a good attitude, and stood by his faith his career would flourish.
Any Day at NPS ...

NPS Research Professor Peter Guest flies an unmanned aerial vehicle over the Ross Sea, south of the Antarctic Circle, during a recent research expedition. Guest is using unmanned systems to better understand Antarctica’s environment for CRUSER. (Photo provided by Lettie Roach, New Zealand National Institute of Water and Atmospheric Research)

Kenya Army Maj. Carolyne Mutisya is the recipient of the NPS Department of National Security Affairs Outstanding Thesis Award for the 2017 Spring Quarter for her analysis of the securitization of the border between her native Kenya and neighboring Somalia. (U.S. Navy photo by Javier Chagoya)

The 71st graduating class of the Naval War College Monterey partnership with NPS for Joint Professional Military Education, stands for a group portrait on the steps of Herrmann Hall, June 8. (U.S. Navy photo by MC2 Michael Ehrlich)

Lt. Cmdr. Matthew Dominick, left, and Marine Corps Maj. Jasmin Moghbeli, right, have two things in common ... they were selected for NASA’s latest class of astronaut candidates, and a master’s degree from the Naval Postgraduate School. (NASA courtesy photos)

NPS student Lt. Elizabeth Bochner recently placed 3rd at the All Navy Triathlete competition held at Naval Base Ventura in Pt. Magu, Calif. The victory qualifies her, along with two other naval officers, to compete in the Military World Games in Warendorf, Germany. (U.S. Navy photo by Javier Chagoya)

This summer’s cohort of 78 science, technology, engineering and mathematics (STEM) interns were welcomed to campus by NPS senior leadership, President retired Vice Adm. Ronald A. Route, Provost Dr. Steven R. Lerman, and Acting Chief of Staff U.S. Marine Corps Col. Todd W. Lyons, June 22. (U.S. Navy photo by MC1 Lewis Hunsaker)

Marine Corps Capt. Dan Salazar, Chairman of the President’s Student Council

Fellow Students,

I have the privilege to serve as the new Chair for the President’s Student Council. Alongside Capt. Margarita Balish as the vice-chair and a group of the most dedicated students serving as school leads, the PSC is looking to build upon the successful foundation laid by our predecessors. Whether it was implementing the muster warning email to save all parties much headache, or working with the MBAC, library, and food services, the outgoing PSC worked diligently to help students get the most of their time here.

As the new PSC continues to engage with university leadership, we heavily rely on the input from our fellow students to set the priorities of our efforts. Below is the contact info for the current PSC members who are all open to ideas and concerns about any facet of student life. On top this channel for communicating your ideas, we will be publishing a student experience survey in August to better gauge where to put our main effort. I encourage all students to participate to help shape the future of both your experience, and those to follow in your footsteps.

The PSC is here to serve you and be your advocates. Ideas? Concerns? Don’t hesitate to contact us:

Chair: Capt. Dan Salazar
Vice-Chair: Capt. Margarita Balish
SIGS School Lead: Capt. Dan Justice
GSOIS School Lead: Maj. Jake Jacobs
GSOIS Rep: Maj. Paul Webber
GSBPP School Lead: Capt. Beau Pillot
GSEAS School Lead: vacant

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

HAPPY INDEPENDENCE DAY

July 4
Independence Day

July 5
First day of class

July 6
Leisure Fair
11:00 a.m. - 1:00 p.m. Dudley Knox Library Quad

July 11
SGL with Capt. Jeff Bacon (Ret.)
3:00 p.m. King Auditorium

July 14
Introduction to the Power Grid
1:00 p.m. ME Lecture Hall

July 25
SGL with Adm. Philip Davidson
Commander, U.S. Fleet Forces Command
3:00 p.m. King Auditorium

Historical Highlights

New on campus? It’s 1963, and this is your first view of NPS: the Del Monte Entrance. Lucky for you, you have a copy of the “Unofficial Introductory Brochure” for new students, so you’re in the know!

From study advice, recreation and where to get the right technology, nothing has changed, since 1963 -- and yet, like the Del Monte gate, everything has.

Technology? A 10-inch slide rule can be had at the Navy Exchange. Only NAF aviators wear uniforms, but civilian dress for other male students means jacket and tie. You can fish in the lake. The most popular after-hours activity on base? The automotive shop.

Packed with fascinating detail about early life at NPS and its sister command, the Naval Air Facility, you can read the “Unofficial” 1963 guide in Calhoun, the NPS Archive.

Historical Highlights are provided by the Dudley Knox Library.

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www.youtube.com/NPSvideo