

# President's UPDATE

21 Dec 2020

## KEY TAKEAWAYS

- From COVID to area wildfires, the NPS community rose to meet every challenge in 2020
- Defense management education enables agility and change leaders for the business of defense
- NPS applied research and education can synergistically accelerate our “Advantage at Sea”

Secretary Braithwaite, CNO, CMC, Naval Education Enterprise leaders and NPS stakeholders...

What a year! Ending 2020 on a high note, it was my honor to confer Master’s and PhD’s upon our December class. 340 high performing leaders graduated December 18<sup>th</sup> in the Fall Quarter [virtual ceremony](#). A special thank you to General Berger who provided the commencement video opening remarks. To receive their Master’s, graduates completed rigorous curriculums most requiring twice the credit hours of comparable institutions, and all were required to deliver relevant research solutions via theses and capstone projects. Many students also earned their diploma from the Naval War College completing their [JPME requirements at NPS](#).



Recent highlights include:

- **By the Numbers:** Graduates this quarter 111 Navy; 22 Marine Corps; 71 Army; 41 Air Force; 65 DOD civilian; 2 Coast Guard, 1 Marine Corps reservist; and, 27 international graduates representing 13 allied countries.
- **Provost Announced:** After a nation-wide search for candidates with both high-level academic qualifications and strong leadership experience, [Dr. Scott Gartner was selected](#) from Penn State to help lead NPS towards our 21st Century potential as the 16th Provost and Academic Dean.
- **Great Power Competition:** We hosted Ambassador Harry Harris, ADM USN (ret) for our most recent SECNAV Guest Lecture, [who spoke to the importance of the U.S./ROK alliance](#). Next month we will go deeper and discuss [“GPC in the Cognitive Age” with Cecil Haney](#), ADM USN (ret) on 26 Jan (1500pst).

Additionally, we gratefully hosted two important visits: [first from the Assistant Commandant of the Marine Corps, General Thomas](#) December 9<sup>th</sup> with his team including LtGen Reynolds, MajGen Iiams, BGen Barger, BGen Borgschulte, and BGen Pasagian to discuss expanding USMC graduate education and applied research programs at NPS; then our [Chief of Naval Operations Admiral Gilday visited](#) December 17<sup>th</sup> to explore how NPS’ education/research capabilities can help close gaps in solving key operational problems.

Your NPS Team rose to meet every challenge in 2020. We stand mission-ready to support the new U.S. Maritime Strategy in 2021, honored to be entrusted to develop the future leaders of our all-domain, integrated Naval force.

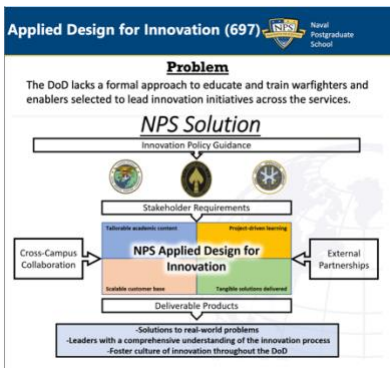
With great respect and abiding service,  
Merry Christmas and a Happy New Year!



# MISSION EXECUTION HIGHLIGHTS:



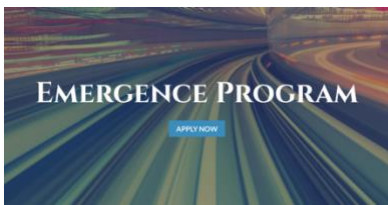
## DEFENSE-FOCUSED EDUCATION



○ **Innovation Curriculum:** “[Applied Design for Innovation](#)” curriculum was designed to meet the evolving needs of SOF, but is open to all. This 18 month Master’s centers on identifying a specific innovation challenge relevant to Key Operational Problems. Student’s utilize their operational experience to wed innovation with the strategic dimensions that often constitute the thorniest barriers to disruptive change. The near-term results are innovative solutions to today’s challenges; long-term is a cadre of future leaders who will enable and lead the future force.

○ **USMC:** Captain Walker D. Mills, USMC, an exchange officer in Cartagena, Columbia is enrolled in the Center for Homeland Defense curriculum, and published “The U.S. Marine Corps and Advanced Base Operations: Past, Present, and Future” the final chapter in the book, “[On Contested Shores](#)” published recently by the Marine Corps University Press.

○ **Defense FM Certificate:** The [Graduate School of Defense Management](#) and the OUSD(Comptroller) created the Defense Financial Management Graduate Certificate program to meet the educational needs of emerging leaders of the defense FM workforce. This is the first graduate education program centrally funded by OUSD(C). Applicants applied this Fall and the final group of 30 was approved in December. Coursework begins in March.



○ **DHS:** The [Center for Homeland Security and Defense](#) incorporated COVID-19, election, civil unrest, natural disasters and other 2020 challenges into its six-month [Emergence program](#). The sessions assist students with real-time responses to events providing an educational forum and innovation lab.

- 76% of Emergence change initiatives were implemented by agencies
- 14% of projects led to other initiatives in agencies
- One initiative won an innovation award from the Mayor of New Orleans

○ **Diversity:** 42 international students from 18 countries will arrive next quarter for Master’s programs from: Algeria, Brazil, Cameroon, Croatia, Ecuador, Georgia, Greece, Indonesia, Japan, Korea, South, Maldives, Mexico, Mongolia, Nepal, Pakistan, Philippines, Saudi Arabia, Ukraine

○ **Leadership:** The [Center for Executive Education](#) piloted a new Effective Leadership Seminar Series, for NPS graduate students. Collaborating with the [National Naval Officers Association, NPS chapter](#) and the Graduate School of Defense Management, the series focused on adaptive leadership competencies.

○ **Great Power Competition:** In support of the [NPS’ new GPC certificate](#) program, the November SECNAV Virtual Guest Lecture featured Ambassador Harry Harris, ADM (ret) speaking live from the front lines of GPC in the Republic of Korea. [Watch the recording](#).





## RESEARCH AND DEVELOPMENT



- **Body Armor:** Light, more flexible, and stronger, NPS-developed [body armor uses hundreds of small ceramic spears](#) instead of the solid, monolithic plates coupled with Kevlar vests, is proving to be a breakthrough. Successful tests have led to NPS Tech Transfer making the research and the accompanying intellectual property rights available to qualified companies for commercialization.
- **Aviation:** A self-sealing fuel hose capable of instantaneous repair from projectiles up to ½ inch diameter is showing great promise. Research led by Associate Professor Ray Gamache, NPS Physics Department, has shown the material to be resistant to exposure with most fossil fuels. Sikorsky and the Army are partnering with NPS to develop this technology and integrate the self-sealing hose into the new CH-60.
- **Defense Logistics:** Three students and two NPS professors co-published research in the peer reviewed [Journal of Defense Analytics and Logistics](#) on “A [Framework for Optimizing Sustainment Logistics](#)”
- **FM Thesis:** [Conrad Scholar](#) students briefed their theses to the SECNAV, DON FM leadership including Ms. Tompa PDASN(FMC), RDML Gumbleton (Deputy Budget/Director, N82), Mr. Hogg (Assistant Deputy, N8), Col Rotsch, (Director of Budget, USMC Programs & Requirements). Students involved:
  - LCDR John Orr, USN: *“Increasing NAVFAC Agility and Speed of Response for Execution of Category III & IV Facilities Requirement”*
  - Maj Peter Misyak, USMC & Capt William LaPonza, USMC: *“Marine Corps Operations – Defense Logistics Agency’s Procedures for Ground Reissues/Secondary Sales of Aviation Fuel”*
  - LCDR Sarah Cosgrove, MSC, USN & LT Eric Beaudoin, USN: *“The Effects of Military Thrift Savings Plan Policy Changes on Military Participation Rates, Contribution Rates, and Contribution Allocations”*
- **Manpower Optimization:** [USMEPCOM](#) is funding three research to: optimize utilization across MEPS stations; identify the determinants of variation in MEPS disqualification rates; apply predictive analytics to assess the health conditions of applicants and develop mitigations to improve success rates.
- **Autonomy:** NPS [Consortium for Robotics and Unmanned Systems Education and Research](#) (CRUSER) program supports student capstone projects, and one by MAJ Romulo Dimayuga of the Philippine Marine Corps focuses on a drone that can be built and maintained with inexpensive, readily available parts in the Philippines. His work could provide much needed ISR capabilities to tactical SOF units as a viable alternative to high-end ISR they cannot afford and sustain.
- **Cyber Security:** Page 25 of the new DON Business Operations Plan includes NPS’ promising research project with [Rebellion Defense](#) to: “Deploy an Autonomous Network Defense Program Pilot at Naval Postgraduate School to support the DoD CIO Digital Modernization Strategy (Drive Active Monitoring).”



## ENGAGEMENTS AND PARTNERSHIPS



- **SOCSOUTH:** The [Common Operational Research Environment](#) (CORE) Lab, virtual courses for SOCSOUTH provided partners the basic principles of trust and influence within social networks and how they apply them unconventional warfare, network-centric warfare, civil and military affairs, and counter-terrorism. Dr. Everton and the NPS team worked with Peruvian leadership at the Escuela Superior de Guerra del Ejército to deliver these course lectures and practical exercises in Spanish to officers and senior enlisted personnel from multiple countries to include Argentina, Colombia, Panama, and Peru.
- **Meteorology:** White House Office of S&T Policy recognized Distinguished Professor Wei Kang (NPS Applied Mathematics) in a letter congratulating the successes of the members of America’s Federal weather enterprise. Professor Giraldo has been a member of National Earth System Prediction Capability (ESPC) since its inception ten years ago and their support for the first major restructuring of the Nation’s meteorological services administrative framework.
- **Royal Australian Navy:** Head of RAN Capability, Rear Admiral Peter Quinn and Chief Defence Scientist, Professor Tanya Munro hosted their [3rd Navy Warfare Innovation Workshop](#), based on NPS’ Warfare Innovation Continuum. With guidance from NPS the RAN has expanded their “Centres for Innovation” to become shopfronts and incubators for industry engagement, and have won two national awards for the grass roots approach. Initiated under the Directorate of Navy Continuous Innovation (DNCI), the effort was renamed as Warfare Innovation Navy Branch and moved under the Head of Navy Capability.
- **Xerox:** [Naresh Shanker, Xerox Chief Technology Officer](#), visited NPS December 9<sup>th</sup> to see their liquid metal printer demonstrated. The first of its kind, the printer rapidly produced a turbo (pictured) which NPS will structurally test and explore applications in different materials (e.g. Titanium 64, Stainless Steel, Regular Steel, Zinc, etc). In addition to 3D printing, Xerox expressed interest in partnering with NPS on their [“Ocean of Things” DARPA-funded effort](#).
- **Upcoming Events:**
  - *26 January, 15-1600(pst):* [SECAV Guest Lecture](#) with **Admiral Cecil Haney** who will discuss [“Great Power Competition in the Cognitive Age”](#)



## BUSINESS OF NPS (and COVID Updates)



- **Contracting:** After a year-long study, NPS will restructure its Acquisition Department and move to a blended of on/off-campus function. The contracting work will be outsourced to [FLC San Diego](#) which has the oversight, personnel, and warrant authority to provide better service more efficiently. NPS will retain the local Government Purchase Card program. This balance approach will be more customer focused, efficient and effective for all stakeholders.
- **Financial Dashboard:** A pilot initiative developed in partnership with DON Chief Data Office in [Jupiter](#) provides NPS leaders with an interactive and visual dashboard of budget execution data essential for better informed decisions and improving financial accountability.





- **Recapitalization:** NPS received/executed \$3.4M in funds to update and replace outdated lab equipment, while adding research and teaching capabilities focused on the 21st century warfighter’s needs in areas aligned to strategic needs in Additive Manufacturing, Cyber and Electronic Warfare Operations, Environment Sensing and Forecasting, Space Systems, Autonomous Vehicles and Systems Experimentation, Modeling, Simulation and Visualization, Hypersonic and EM weapons, Data Science and Analytics, Electronic Warfare, Artificial Intelligence, and Littoral Operations.



## ALUMNI IN ACTION



- “[Arizona’s Mark Kelly is sworn into U.S. Senate](#)” by PBS News Hour... NPS Alumnus, astronaut and now Senator Mark Kelly was sworn in as Arizona’s next Senator ... “*Kelly, 56, defeated GOP Sen. Martha McSally in last month’s election.*”
- LCDR Matt Carroll, graduated from the NPS [Graduate School of Defense Management \(acquisition and contracting\)](#) and is spearheading the Navy's Integrated Operational Contract Support Plan (OCS) with the OPNAV OCS IPT developing a top to bottom holistic doctrine for the Navy to conduct/train/employ OCS.
- December graduate from Georgia, Tornike Chikovani, is the son of Lela Chikovani (a 2010 graduate from Special Ops) who is now the current First Deputy Defence Minister of Georgia ([Lela Chikovani - MOD.GOV.GE](#)).
- Marines Capt Caleb Wu and Major Ryan Ackland (Computer Science graduates 2108/19) at Marine Corps Tactical Support Activity [developed a virtual shipboard network](#) for testing C4I systems in a realistic afloat environment w/o the cost of procuring and maintaining a physical system.
- Trond Gimmingsrud, a 2009 graduate, was [promoted to the rank of Admiral](#) in the Norwegian Defense Forces. He will be assigned as commander for the tactical “forces of the navy” a subordinate to the Norwegian Chief of the Navy.



## NPS IN THE NEWS ( [Twitter](#) | [Facebook](#) | [LinkedIn](#) | [YouTube](#) | [Instagram](#) )



- “[Monterey’s Naval Postgraduate School Names New Provost](#)” Monterey Herald ... “*Dr. Scott Gartner will begin his new post on March 1 after wrapping up his position as director of Penn State University’s School of International Affairs. NPS announced the naming Monday morning following Gartner’s acceptance of the official offer from Secretary of the Navy Kenneth Braithwaite.*”
- [Three NPS graduates named in NASA’s Artemis program](#) to return astronauts to the moon: CDR Vic Glover, LCDR Matt Dominick and Major Jasmin Moghbeli (USMC) – NASA Press Release

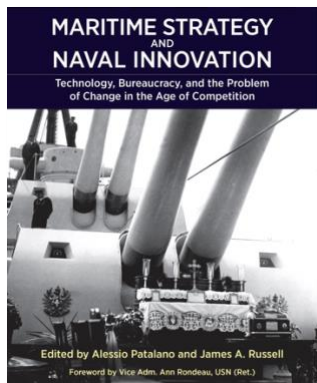
**U.S. Navy Prepares for Defense Against Swarming Drones**



- [“NPS Researchers Developing the Defensive Playbook Against Large-Scale Drone Swarms”](#) published Maritime Executive ... *“Through funding provided by the DoD to the NPS, Professors Isaac Kaminer and Abe Clark will lead the development of a counter-swarming analysis toolbox.”*
- [“Monterey’s Naval Postgraduate School Commissions New War Institute”](#) by Dennis Taylor, The Herald ... *“The Hughes Naval Warfare Studies Institute’s mission is to ‘coordinate NPS interdisciplinary research and education to accelerate and enhance warfare concepts and capability development while preparing students for future conflict.’”*
- [“Program Takes Warfare Tactics Instructors to Next Level at Naval Postgraduate School”](#). – Navy.mil ... *“NPS is giving fleet warfare tactics instructors, officers whose specialized training, operational experience and deep understanding of fleet tactics makes them tactical subject-matter experts, the academic theory behind those tactics to make them better warfighters.”*
- [“INFORMS Awards Decision Analysis Publication Award”](#) for Management Science to Dr. Eva Regnier, NPS Graduate School of Defense Management for [“Probability Forecasts Made at Multiple Lead Times”](#) beating out finalists from the University of Chicago, and The Wharton School U-Penn.



- [“Joint Artificial Intelligence Center Keeps Branching Out”](#) National Defense ... *“The organization, in partnership with the Defense Acquisition University and NPS, was slated to launch an intensive six-week pilot course in October to train over 80 defense acquisition professionals of all ranks and grades.”*
- 9<sup>th</sup> on [New York Times best books for 2020](#) ... *“The Art of Doing Science and Engineering: Learning to Learn,” by Richard Hamming (NPS Distinguished Professor). “He was one of the last geniuses who believed in innovation as a shared public project, and, when he imagined the future for which he was preparing students, he looked to the year 2020. He’d be pleased to find his lessons are still urgent here today. —Nathan Heller, NYT*
- [“Connecting Worlds: Developing Cross-Cultural Effectiveness in the Security Cooperation Workforce”](#) Describing support to the Defense Security Cooperation University... by Colonel Mark Karas, U.S. Army-Retired; Colonel John Zavage, U.S. Army; Dr. Deborah Gibbons, Ph.D; Dr. Gail Fann Thomas, Ed.D; Dr. Mohammed Hafez, Ph.D; and Lieutenant Colonel Remo Payson.



- [“Manning Still Matters: A Fleet Perspective”](#) by Master Chief Paul Kingsbury, U.S. Navy (Retired) mentions three NPS research studies to support correlations between manning and performance.
- [“Maritime Strategy and Naval Innovation”](#) USNI Press ... by Dr. James Russell, NPS Associate Professor Department of National Security Affairs with Foreword by Vice Adm. Ann Rondeau, USN (Ret.), President NPS