# 2020 YEAR IN REVIEW



### **JAN**

Two NPS graduates join the latest cohort of NASA's newest astronauts, the first under the Artemis program to return humans to the moon by 2024.

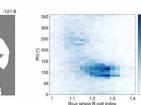
NPS hosts the first-ever Virtual RobotX or VRX competition, an international, university-level challenge designed to broaden students' exposure to autonomy and maritime robotic technologies.



The NPS CORE Lab develops an innovative application of social network analysis to ship tracking data, capturing the attention of NATO officials seeking regional maritime awareness.

### **FEB**

NPS researchers use next-generation technology in their studies, such as cutting-edge underwater acoustic vector sensors able to deliver accurate directionality for tracking vessels, hostile submarines and marine mammals.



The university's Crew Endurance Team adds to more fleetwide changes in watchbill rotations by studying sleep quality via onboard research on the guided-missile destroyer USS Paul Hamilton.

To advance DOD research, NPS hosts a workshop to understand the dynamics of large, adversarial xSwarms, especially as their size, autonomy and capability rapidly increase over time.

### MAR

NPS programs are once again highly ranked in "U.S. News and World Reports" annual rankings of graduate programs across the nation, including a #1 overall ranking in a specialized category of programs in Homeland Security and Emergency Management. Programs in public affairs and engineering also performed favorably in the highly-respected rankings.



While performing critical research on turbulence in the atmosphere-ocean boundary, NPS faculty discover a discrepancy in the distribution of energy of the air movement above the ocean surface that demonstrates a potential contradiction to Kolmogorov's widely known and accepted -5/3 power law.

**APR** 

Dr. Jenni Heissel is awarded a prestigious grant from the Robert Wood Johnson Foundation's Evidence for Action program to pursue research into DOD parental support policies, hoping to shape the health and well-being of military families and the American public for generations.



NPS students take third place in the 2020 NASPAA-Batten Student Simulation Global Competition for their efforts in managing a city's sustainable public transit system.

Army Maj. Trisha Wyman's thesis on a Russian campaign to shape U.S. perceptions on nuclear capabilities garners significant attention, and is part of further research in Wyman's follow-up assignment as a Visiting Scientist at Lawrence Livermore National Lab.



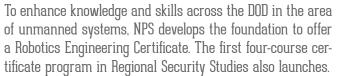
As part of the expansion of the Navy's innovative approach to rapid acquisition processes and expanding networks, NPS becomes a central component and member of the **NavalX Tech Bridge** community with the addition of the Central Coast location.

NPS Distinguished Professor files for a patent proposing a system for automated detection, classification and possible removal of foreign object debris [FOD] on a runway using multiple, small unmanned aerial systems flying in formation.

Students and faculty at NPS work together to create and donate thousands of 3D-printed face shields to help flatten the curve of COVID-19.



NPS takes its annual **Secretary of the Navy Guest Lecture** program virtual, launching a monthly series of online lectures with leading defense experts and leaders, such as retired **Adms. Mike Mullen and William McRaven**.





NPS virtually hosts its annual Big Ideas Exchange to explore new and potentially game-changing thinking developed by NPS faculty and students that address grand challenges in American national security.

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#### JUL

Chief of Naval Operations Adm. Michael Gilday holds his first-ever Virtual Town Hall for the campus, stressing the importance of maintaining advantage in the maritime, space and cyber environments and the Task Force One Navy effort to improve inclusion within the sea services.



NPS' new Naval Warfare Studies Institute [NWSI] launches the Emerging Technology Series, connecting senior military lead-

ers, NPS faculty and students, and seasoned industry executives together to explore the implications of emerging technologies on warfighting and key operational problems.

Already the largest single contributor to the Defense Technical Information Center library, which supports all of the DOD, NPS receives its largest Unmanned & Robotics Systems Research Contract award.

### AUG

The Library of Congress Federal Library and Information Network announces that Greta Marlatt, NPS Academic Support Manager at the Dudley Knox Library, is the 2019 recipient of the Federal Librarian of the Year Award.



Former NASA astronaut, aquanaut and NOAA Administrator, Dr. Kathy Sullivan shares her leadership journey as the first American woman to walk in space and dive the

**deepest ocean** during a live-streamed Secretary of the Navy Guest Lecture.

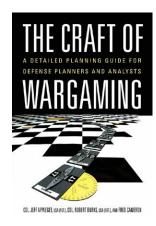
Associate Professor Gail Thomas continues NPS' support of the DON SAPRO team with an innovative approach to decreasing sexual assault through a series of judgement tests targeting 'Gray-Zone' behaviors.

### **SEP**

Secretary of the Navy Kenneth J. Braithwaite congratulates the 295 graduates, including 24 international students from 13 countries, in a keynote speech during the virtual commencement ceremony.

Operations Research professors publish their new book, "The Craft of Wargaming," which aggregates the nearly 100-year combined expertise of the three longtime leaders in the development and execution of wargaming.

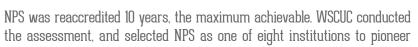
NPS continues the development of education programs supporting broader awareness of Great Power Competition [GPC] with the development of a GPC certificate for both resident and distance learning students.



OCT

The U.S. Marine Corps' honors its first NPS technical graduate from a landmark PhD program designed to develop a cadre of strategic thinkers, technically-astute uniformed leaders necessary to create warfighter advantage in the modern, cognitive age.

NPS leads a project to streamline space technology among Five Eye [FVEY] countries by sending into orbit by 2022 two CubeSats containing experimental technology created by NPS students and New Zealand researchers.



the Thematic Pathway for Reaffirmation, reflecting the university's high-quality education/research programs, talented faculty and students.

<u>NOV</u>

Dr. Peter Denning leads the development of the Consortium for Intelligent Systems Education and Research [CISER] to advance the university's support to the Navy and Marine Corps in the critical areas of artificial intelligence, data science and machine learning.



NPS selects lauded scholar Dr. Scott Gartner to become its 16th Provost and Academic Dean in March 2021, following

several years at Penn State University as the Director of its School of International Affairs and Affiliate Professorships in both the Department of Political Science and Penn State Law.

NPS researchers conduct 15 flights to collect various smoke samples from local wildfires to help the Navy better understand how smoke can affect optical and infrared sensor performance.



A new partnership between NPS and Woods Hole Oceanographic Institution is set to create a virtual undersea environment to advance future unmanned underwater vehicle development, leading to new and critical naval missions for these emerging systems.



Building upon previous research exploring strategies to counter **nefarious drone swarms, NPS researchers receive funding** for a new project to develop a comprehensive defensive playbook on how to defeat these broadly-utilized autonomous systems.

During his keynote speech, the 38th Commandant of the Marine Corps Gen. David H. Berger congratulates the 340 graduates, including 27 international students from 13 countries, and praises the intellectual power, critical thinking skills and adaptability of NPS alumni.