

February 2022

Naval Postgraduate School Foundation Provides \$625,000 to Defense Research Projects and Facility Enhancements

The Naval Postgraduate School Foundation recently selected four new defense research projects led by Naval Postgraduate School faculty to receive a total of \$405,000 in research funding and additionally provided \$220,000 to enhance research facilities for hypersonics and marine acoustics at NPS.

"The funding for the 2022 research projects targets NPS priorities and accelerates the adoption of new capabilities into the Naval Services and the broader Department of Defense. More importantly, these projects will be a catalyst for engaging industry partners and DOD sponsors to scale solutions that matter at the speed of relevance," said Karen Hargrove, NPS Foundation trustee and chair of the Foundation's Funding Committee. "Research areas that are most critical today, such as hypersonics, integration of autonomous systems, cyber and space communications, have impacts across our entire military. The solutions to operational challenges need to be available across the joint force for us to achieve a competitive advantage."

By funding early-stage projects, ideas from some of our nation's brightest are transformed into scalable and world-changing solutions for defense, technology, energy, climate and more. Supporters can <u>donate</u> to the <u>Defense Innovation Fund</u> and make a major impact on America's global advantage. <u>Read more</u> about the funded projects.





Driving Innovation at the Naval Postgraduate School

The future of warfare is changing. Tomorrow's conflicts will be more integrated, autonomous, and agile than any in our history. Already, our Nation's adversaries exploit the seams between domains to disrupt and preempt effective action. This myriad of threats requires the U.S. military to be able to deter and defeat enemies in multiple domains: sea, sub-sea, air, land, space and cyber. Victory in multi-domain battle, across the range of military operations, requires naval forces manned, trained and equipped to achieve competitive overmatch against our foes. The divisions that may have once served to professionalize the force now hinder the ability of the Department of Defense to integrate complex systems to dominate a distributed battlespace.

The U.S. will win future wars by outthinking our enemies. The Naval Postgraduate School is the only graduate institution in the Nation that serves, develops, and educates students with operational experience. It is one of the few places where warfighters work alongside expert faculty on interdisciplinary new technologies to solve the toughest challenges facing the military. To build on its long legacy in graduating future leaders of the Navy and the joint forces, NPS is undergoing a transformation to produce students who adapt to a highly uncertain future and who can accomplish complex, multi-domain missions.

NPS Foundation Advisory Council Member Bill Warner recently sat down with <a href="Principal Bolder of Superior Seriod Schools of Sch





COLLABORATION | EXPERIMENTATION | VIRTUALIZATION | EXPLORATION | INNOVATION | CREATION ACTION

Behind-the-Scenes with Jeopardy Champion, NPS' Own Dr. Sam Buttrey



The NPS Foundation recently had the opportunity to sit down with NPS' Dr. Sam Buttrey, recent champion of Jeopardy's first-ever Professors Tournament. Watch for highlights of our conversation. Follow along on our social media and YouTube channels for more of Buttrey's Jeopardy tips, NPS research, and the future of Operations Research as it relates to DOD priorities such as Artificial Intelligence and Machine Learning. Watch here.

Watch on YouTube







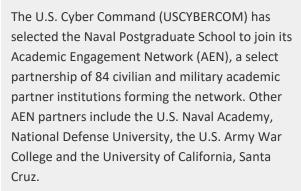




NPS Joins USCYBERCOM Academic Engagement Network

"HAI 2.0" - Updated Artificial **Intelligence Course, Video Series**





"Selection of the Naval Postgraduate School to be an inaugural member of the USCYBERCOM Academic Engagement Network is a great honor," said Dr. Cynthia Irvine, NPS Distinguished Professor of Computer Science and director of the Center for Cybersecurity and Cyber Operations. "It serves as a wonderful acknowledgment of the high quality and ability of the people and programs at NPS to contribute materially to the cyber workforce through education and research. **Read more.**

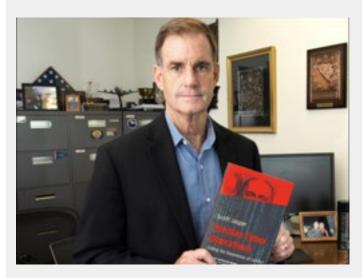


Al technologies have powerful impacts on Naval operations and warfighting as well. Al has the potential to revolutionize military technology, capability and operations. The possibilities have raised many speculations about what Al is capable of and whether it can be trusted.

The video series, upgraded for 2022, was developed by NPS Distinguished Professor Peter Denning, a leading name in the computing field. It features 22 lectures by 18 different NPS faculty experts on AI topics including automation, machine types, primary applications, strategy, ethics and futures.

"We designed this course to give a clear picture of what AI machines can actually do and the applications in which they have been successful," Denning said. "We also discussed the role of AI in geopolitical power competition and the ethical principles our country and others are using when applying AI. We concluded with a look at the future of warfare when AI technologies are an integral part. Learn more.

NPS Professor Takes on Russian Cyber Operations



On the morning of January 14, 2022, in the midst of a vast massing of Russian military forces on the borders of Ukraine and the global community scrambling to avert invasion, a two-pronged cyberattack suddenly crippled scores of Ukrainian websites, injecting malware and leaving a taunting message to "be afraid and wait for the worst."

Russia denied involvement and the sites were restored within hours, but the attack had accomplished its psychological

objectives, according to retired U.S. Navy Capt. <u>Scott Jasper</u>, a Senior Lecturer in the <u>Department of National Security Affairs</u> at the Naval Postgraduate School.

His most recent book, "Russian Cyber Operations: Coding the Boundaries of Conflict" (Georgetown University Press), will be published in paperback with a new preface this Spring. In it, Jasper provides a foundational analytic framework with which to effectively meet and deter these challenges. Through examining Russian cyber operations in the context of asymmetric conflict and competition, he proposes a new international strategic policy geared toward negating Russian efforts.

Alumni Spotlight

Nancy Dragani, MS in Homeland Security '10, was appointed by FEMA as Regional Administrator, Region 8 serving Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. Dragani has more than 26 years of experience in the emergency management field at state and federal levels. She began her career with the Ohio Emergency Management Agency in 1994; in 2005 she was appointed the executive director, a role she filled until 2014. Dragani also served on FEMA's National Advisory Council and the Memorial Institute for the Prevention of Terrorism Advisory Board. She held the position of President of the National Emergency Management Association (NEMA) from 2008-2009 and was the 2014 recipient of NEMA's Lacy E. Suiter Distinguished Service Award, an annual award to an individual for outstanding contributions to emergency management.





Cmdr. Jeffrey Webb, MS in Systems Engineering '15, relieved Cmdr. Ian Lilyquist as commander of the U.S. Naval Research Laboratory's Scientific Development Squadron (VXS) 1, the Warlocks, Jan. 14 during a change of command ceremony held at Naval Air Station Patuxent River. Webb, a native of Boise, Idaho, graduated from the U.S. Naval Academy in 2003 with a Bachelor of Science degree in Engineering.

VXS-1's aircraft operate worldwide on extended detachments and annually log more than 400 flight hours. These aircraft are the sole airborne platforms for numerous projects such as bathymetry, electronic countermeasures, gravity mapping, and radar development research. The squadron has a flawless safety record, having amassed more than 78,000 hours of accident-free flying since 1963.

Today and every day, we celebrate the contributions of the people of the Naval Postgraduate School. Diversity of thought and experience is critical to progress and our ability to advance defense and technology in America. Black Americans have made and continue to make significant contributions to America's advancement. Follow along on our social media where we are sharing the impactful stories of our NPS community.





Join the NPS Foundation & Alumni Association for hosted refreshments, on Feb. 16 in San Diego. Network and socialize with your NPS community and get the latest updates from NPS President Vice Adm. Ann Rondeau, USN (Ret) and special guests Brig. Gen. Arthur Pasagian, Commander Marine Corps Systems Command, and Lt. Gen. Mike Dana, USMC (Ret), Former Deputy Commandant for Installations and Logistics.



Annual USNI-NPS Essay Contest Open Now

NPS Foundation & U.S. Naval Institute ANNUAL ESSAY CONTEST

PURPOSE: The NPS Foundation/U.S. Naval Institute Annual Essay Contest is jointly sponsored b the NPS Foundation and the U.S. Naval Institute to encourage writing for publication and critical thinking among students, faculty, and staff at the U.S. Naval Postgraduate School. Essays should b based on thesis, research, or operational experience that best advances the military profession.

ELIGIBILITY:

FOR NPS STUDENTS The essays can be directly related to a thesis or recent operational experience.

FOR NPS FACULTY OR STAFF MEMBERS The essays could name(s) on title page or within essay. address an issue of particular relevance to the military

• Submit essay as a Word document online at www.usni.org/npsessay profession.

SUBMISSION GUIDELINES:

- Open to NPS students, faculty, and staff.
- . Essays must be no more than 3,000 words (excluding footnotes endnotes, and sources).
- . Include word count on title page of essay but do not include author
- · Essays must be original and not published (online or in print) or being considered for publication elsewhere.

DEADLINE: 31 March 2022

The winner will be published in Proceedings

PRIZE: \$5,000



DEADLINE: 31 March 2022

The winner will be published in Proceedings and recognized by the Naval Postgraduate School.

For more details, visit www.usni.org/npsessay.



Open to NPS students, faculty and staff members: Essays should be based on thesis, research or operational experience that best advances the military profession. Due March 31.

<u>Learn More</u>

In Case You Missed It:

Trident Room Podcast: Episode 21 - Vice Adm. Peter Daly, Episode 22 - Dr. James Wirtz

DOD Launches Technology Vision, Lists 14 Critical Tech Areas

Defense Innovation Unit highlights 2021 technology transition efforts

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