By The Numbers:
- 337 graduates in the Fall Quarter class
  - 142 from U.S. naval services
  - 91 from U.S. joint services
  - 64 from DOD civilian/federal agencies
  - 40 internationals from 24 countries

Research:
- 7 new industry Cooperative Research & Development Agreements (CRADAs) supporting research in AI, autonomy, M&S, sensors, space, and networks.

New Partnerships:
- NPS was accepted into the University Consortium for Applied Hypersonics, a network of academia, industry and government laboratories.
- Education Partnership Agreement (EPA) with the Stanford Doerr School of Sustainability (fact sheet).

NPS Strategic Framework:
The new NPS Strategic Framework defines four enduring strategic priorities in Education, Research, Innovation and Institution with supporting objectives and initial actions.

SPOTLIGHT: A new Education Partnership Agreement signed 15 December with Stanford Doerr School of Sustainability provides the foundation for future education and research to address increasing challenges of global climate change, energy security and sustainability in support of the DON’s Climate Action 2030. The ceremony included the Secretary of the Navy, NPS President, the Dean of the Doerr School and former Secretary of Defense Leon Panetta (read more | watch video).

CNO NAVPLAN: Classified research analyzed smart technology advancements and trends in East Asia, identifying impacts to the DOD’s ability to plan and conduct operational activities in the region. In a technology-driven operational environment, this thesis research by Lt. Julian Salmon assessed DOD’s ability to maintain the adaptability necessary to meet future operational requirements. Lt. Salmon is an Information Warfare officer who graduated in December 2022 from NPS’ Regional Security Studies program focused on the East Asia and Indo-Pacific region. He was awarded the Naval Intelligence Foundation’s Admiral Bobby Ray Inman Award for Excellence in Intelligence research (watch video).

Commandant’s Planning Guidance: Computer science research on autonomous, predictive maintenance became the basis for a new program of record at Headquarters Marine Corps (Installations & Logistics). Conducted by Maj. Michael Whitaker, who upon graduation went to the Conditions-Based Maintenance Plus (CBM+) and Data Analytics team at HQMC (I&L), implemented his thesis, which provided a roadmap to the successful implementation of predictive maintenance, and how to capitalize on autonomous sensors, data science, and artificial intelligence capabilities that he learned about as a computer science student at NPS (read more).
**EDUCATION, RESEARCH & INNOVATION**

- **AI Summit:** More than 150 participants from the eight Navy AI Task Forces, Warfare and Warfighting Development Centers, the fleet and FMF and DOD engaged at the **fourth AI Summit** co-hosted by NPS with the Navy’s Chief AI Officer/NIF AI Lead. **IMPACT:** The event included unclassified, CUI and secret presentations in four workshops that addressed: 1) workforce development strategy, 2) AI/ML pipeline for solution development and implementation, 3) a concept for dynamically balanced centralized and edge AI, and 4) a blueprint for a Naval AI organization and governance structure.

- **CSG-3:** Carrier Strike Group (CSG) Three provided NPS students and faculty a classified post-deployment brief following their recent return from a seven-month deployment across the Pacific. Chief of Staff U.S. Navy Capt. Przemyslaw “Kaz” Kaczynski provided the brief as part of the Naval Warfare Studies Institute’s fleet engagement program. **IMPACT:** The session with CSG-3 highlighted real-world operating consideration and injected fleet needs into student/faculty coursework and research considerations.

- **Space:** The “Cloud-Enhanced Network and Intelligent Edge” project under the **NPS-Microsoft CRADA** established a successful connection between the Azure Stack Edge and the NPS Mobile CubeSat Communications and Control (MC3) ground station network run by the Space Systems Academic Group. Data and telemetry from the Mola spacecraft, scheduled to launch no earlier than June 2023, will be downlinked into the Cloud environment. **IMPACT:** This capability enhances edge computing solutions and AI/ML research for space applications.

- **Undersea:** NPS and **SEATREC Inc.** are developing an autonomous, sustainably-powered and hydrophone-equipped float system to study the impact of human-made noise on the environment and ambient ocean soundscape. **IMPACT:** Sponsored by the Office of Naval Research through the Consortium for Robotics and Unmanned Systems Education and Research (CRUSER) at NPS, the technology will enable persistent acoustic data collection from anywhere in the world’s oceans for an indefinite period of time.

- **Enlisted GRADE-ED:** **MARADMIN 007/23** announced the first CMC Marine Corps Graduate Education Program – Enlisted (MCGEPE) Pilot at NPS. Gunnery Sgt. Brandon Smart, while a student at NPS, briefed a visiting congressional staff delegation about his NPS research in talent management. **IMPACT:** Smart’s work became the foundation for the “Strengthening the Force and Fleet Through Enlisted Education Act,” submitted by the House Armed Services Committee. This act, **referred to as the “Smart Act” in honor of its originator**, was signed into law by President Biden as part of the Fiscal Year 2023 National Defense Authorization Act and expands opportunities for enlisted warrior-scholars at NPS.

- **Innovation:** 159 participants from industry, DOD, and coalition partners joined NPS students to observe and evaluate industry emerging technologies for Intelligent Autonomous Systems. The quarterly Joint Interagency Field Experimentation (JIFX) was held in November and included Raven Works, whose software makes drones invisible to counter-UAS systems. **IMPACT:** NSWC N85 invited Raven Works to attend SOCOM TE 23-2 and provided information on these capabilities to NSWC N87 UxS Office and SOCOM Counter-UxS Program for their review. JIFX 23-2 in February will focus on Human Performance Monitoring and Situational Awareness (read more).

- **Digital Transformation:** PIO Land Combat CHENG, MARCORSYSCOM teamed with Systems Engineering Department faculty and students to construct a **Ontology and Conceptual Data Model for the Land Domain**, which transitions from a document-based to a model-based systems engineering environment. **IMPACT:** The team demonstrated that systems can be defined with a minimal set of overarching entities and mapped to the data of real-world systems based on Force Design 2030.

- **Cyber:** **Cyber Systems and Operations** students participated in the Cyber Redzone 23-1 Capture the Flag (CTF) exercise hosted by the National Cyber Range Complex using the Joint Information Operations Range (JIOR) node at NPS, its first operational use. **IMPACT:** This CTF exercise provided hands-on experimentation to test tactics, techniques, and procedures to gain access to target systems using the JIOR, a classified globally-distributed, closed-loop, live-fire cyber range.