RESEARCH AT THE NAVAL POSTGRADUATE SCHOOL
Reimbursable Programs at NPS

Reimbursable Funding Enables:

- Advanced research from a broad spectrum of sponsors
- A diverse student body composed of Joint service and international partners

Research Thrusts

Research at NPS is intensely focused on critical issues within the Departments of the Navy and Defense. Annually the top 10 local areas of NPS research are directly aligned to key operational problems detailed by Naval leadership in fleet and force strategies.

Space Systems

June 2019 the NPSAT-1 satellite was launched on a SpaceX Falcon Heavy from Kennedy Space Center. Over the course of the craft’s development, NPSAT-1 supported well over 40 student theses, with countless more students contributing via directed study. And it’s a functioning satellite performing technical, secure research such as Naval Research Laboratory (NRL) experimentation to investigate space weather and support space situational awareness.

Central Budget

- Resources for staff and academic departments to execute core mission
- Direct and Reimbursable Funding Pots
  - O & M — Direct (Reimbursable)
  - Tuition (Reimbursable) — Direct
- Contrained budgeting and oversight; decentralized execution

Research Portfolio

- Reimbursable Research
  - 50% DOD, Non-DOD Dollars (non-federal)
- Direct Research
  - Naval Research Program (NRP)
  - Gift Fund Foundation
- Contrained proposal review and approval and funds receipt and acceptance; decentralized execution

Fighting at Light Speed

U.S. Navy Lt. Cmdr. Austin West’s thesis examined the atmospheric effects of the maritime environment on the Navy’s High Energy Laser Weapons System (HELWS), and how adaptive optics could compensate for those effects making the futuristic weapon system more effective. He received the Rear Admiral William S. Parsons Award for Scientific and Technical Progress, from the Navy League.

Marine Corp Maj. Michael Wade leveraged his NPS education and classified research in radar systems to apply it to development of the LMIC - Accessible Task Oriented Radar (GATOR) program.

NPS professors Isaac Kaminer and Abe Clark emerged as national leaders in the development of a counter-swarm analysis toolbox. Both professors had already spent years studying the analytical foundations for owners-on-owners engagements. Kaminer and Clark used optimization techniques to develop a mathematical theory of control to allow room for unknown variables while providing feedback to enactors for decision-making.

With support from the Office of Naval Research, Kaminer and Clark applied their work to provide a countermeasure against drone swarms.

Research Programs

NPS Research Programs are comprised of:

- Sponsored Research Programs
  - Basic and Applied Research
  - Individual and Group Projects
  - Fleet Support
  - Cooperative Research and Development Agreements with Non-Federal Entities
  - Cooperative Research with Eligible Non-Federal Entities
  - Naval Research Programs (NRP)
- Institutionally Funded Research Programs
  - Develop New Research Thrusts
  - Complement Existing Sponsored Programs
  - Support Institute for Joint Warfare Analysis
  - Sponsor Research Initiation Programs for New Faculty
  - Reimbursement of Major Scientific Equipment
- Integrated Graduate Education and Research Programs
  - Space Systems
  - Total Ship Systems Engineering
  - Control Systems

BY SPONSOR

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BY TYPE OF ACTIVITY

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Current programs at NPS include:

- Counter Swarm
- Unmanned Systems
- Sensors and Algorithms
- Modeling and Simulation
- Intelligence and Strategy
- Energy
- Human Systems
- Cyber
- Logistics and Acquisition
- Wargaming

Centralized proposal review and approval and funds receipt and acceptance; decentralized execution.
Research Centers

Research and education each temper the other’s steel at NPS—together they forge innovative solutions and intellectual prowess to create the cutting edge of decisive capability. Research Centers are established at NPS under the auspices of the Dean of Research as per NPSINST 3900.2B. A Research Center is a group of faculty/staff with a significant concentration of expertise in a particular area normally with an emphasis on applications. [Research centers receive no funding from the Navy mission budget; they serve to organize and promote interdisciplinary experts around a common theme.] Every Research Center supports the NPS educational mission and displays a clear benefit to NPS, the Department of the Navy and/or DoD. For more see nps.edu/web/research

ACComplimentary Co-Located Programs

Complementing NPS research efforts are teams, groups and programs that include NPS stakeholders, sponsors and communities of interest. These co-located entities are essential to the value proposition of NPS as they contribute to learning studies, problem solving and applied research without additional cost.

- Acquisition Research Program (ARP)
- Adaptive Optics Center of Excellence for National Security (ADCOE)
- Crew Endurance Program
- Center for Executive Education (CEE)
- Center for Homeland Defense and Security (CHDS)
- Center for Information Warfare and Innovation (CIWI)
- Center for Joint Services Electronic Warfare (CJSW)
- Center for Network Innovation and Experimentation (CENETIX)
- Center for Infrastructure Defense (CID)
- Center on Combating Hybrid Threats (CCHT)
- Center on Contemporary Conflict
- Common Operational Research Environment (CORE) Lab
- DOD Information Strategy Research Center
- Littoral Operations Center (LOC)
- Remote Sensing Center (RSC)
- SEED Center for Data Farming
- Spacecraft Research & Design Center (SRDC)
- TurboPropulsion Laboratory
- Naval Warfare Studies Institute (NWSI)

NWSI serves as a front door for the Fleet and US Marine Corps to working with NPS. It was established in 2020 to coordinate NPS interdisciplinary research and educational response to naval warfighting needs. Enabling teamwork and collaboration with the NPS ecosystem, NWSI informs, coordinates, integrates and communicates in support of USN N7 and USMC CD&I requirements. For more see nps.edu/web/nwsi