Science and Technology Department
Innovating Tomorrow’s Navy Today

Science and Technology (S&T) Department
FY19: 79 FTEs
53 Programs / Projects

- Technical management, research and development, and integration support to develop advanced technologies that ensure technological superiority for the Navy, Marine Corps, and Joint Warfighters.
- Develop, motivate and sustain partnerships with industry and academia to expand research opportunities, recruitment and promote technology transfer from the private sector.
- Analyze C4ISR and Space systems to identify gaps in capability; assist in strategic roadmaps to future technology development.
- Rapidly prototype and demonstrate capabilities that address emergent Naval technology needs.

Customer Support
- Defense Advanced Research Projects Agency (DARPA)
- Office of Naval Research (ONR)
- Office of the Secretary of Defense (OSD)
- Strategic Capabilities Office (SCO)
- Deputy Assistant Secretary of Defense (Emerging Capability and Prototyping) (DASD (EC&P))
- Navy Tactical Exploitation of National Capabilities (TENCAP)

Leadership
Suzanne Huerth, PhD – SSTM Department Head

- Michael Thomas – Deputy
  - S&T Lead Managers:
    - Tom Glaab – Naval Innovation Science and Engineering (NISE)
    - Jason Livingston – DARPA
    - Scott Batson, PhD – ONR and Advanced Technology Research

Achievements
- Annual NR&DE Data Science and Analytics (DS&A) Workshop
- Successfully integrated and demonstrated projects and provided assessor support for Fight the Naval Force Forward (FNFF) – ANTX West & ANTX East
- Demonstrated the Automated Dive Profile Transmission and Synchronization (Auto-DPTS) ONR TechSolution to Navy Divers. The technology provides a web-based tool for documenting dive data for future analysis
- Science, Technology, Engineering and Mathematics (STEM) outreach to over 77,000 students, 530 teachers & parents. Conglomerate of 11 Education Partnership Agreements (EPAs) with Universities and Colleges within the Charleston SC, Hampton Roads VA, and New Orleans LA districts

Science and Technology Focus Areas
To give our Fleet an advantage over adversaries

- Lead the Navy in developing novel swarm technologies, autonomous systems, advanced communications, and command and control (C2) capabilities; demonstrating them in a relevant environment through participation in Naval exercises and demonstrations.
- Research and develop data analytics algorithms supporting the realization of automated decision aids for Naval C4ISR applications.
- Establish leadership in electromagnetic maneuver warfare (EMW) systems design. Research and develop spectrum management technologies and systems supporting Naval communications and C2.
- Research and develop cutting-edge technologies in cyber warfare supporting cybersecurity situational awareness and shore industrial control systems cybersecurity.

Areas of Emphasis
- Seek innovative means for accelerated technology transition to Warfighters.
- Create opportunities to engage with industry and academia.
- Reduce the cost of products and services.
- Leverage the Naval Research and Development Establishment (NR&DE) and employ high-velocity learning.

Delivering mission-critical information warfare capabilities to the Warfighter

Naval Information Warfare Center (NIWC) Atlantic is a Navy engineering and Information Technology (IT) Command and part of the Naval Research and Development Establishment.

Our work is shaped by requirements that demand research and engineering with the goal of delivering the operational advantage gained from fully integrating Naval information functions, capabilities and resources to optimize decision making and maximize warfighting effects.

We deliver the products and solutions that help our customers accomplish their mission today and into the future and most importantly, serve our nation by delivering information warfare solutions that protect national security.
Science and Technology Integrated Product Teams

- **DARPA**: The Defense Advanced Research Project Agency (DARPA) Integrated Product Team (IPT) focuses on providing DARPA with technical expertise and direct support to DARPA Science and Technology programs which are focused on providing or preventing strategic and tactical surprise. These programs are high-payoff, high-risk development efforts of critical technologies and systems that enable information warfare solutions for the Warfighters of today and the future.

- **ONR**: The Office of Naval Research (ONR) IPT provides technical expertise and direct support to S&T programs facilitated by ONR that enable the future operational concepts of the U.S. Navy and Marine Corps. In support of ONR objectives, the Business Unit currently performs innovative research and development (R&D) of leap ahead technologies and future Naval capabilities; leadership and Program Management (PM) duties for major S&T programs; quick reaction, prototyping, and experimentation; and global technology awareness. In addition, we support technology demonstrations and assessments where industry, academia, and/or government-developed prototypes are presented for Warfighter feedback.

- **NISE**: Section 219 of NDAA established a mechanism whereby a defense laboratory may fund basic and applied research, transition of technologies developed by the defense laboratory into operational use, recruitment and retention of personnel with needed scientific and engineering expertise, and revitalization and recapitalization of the laboratories. Basic research is directed toward greater knowledge of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. Applied research is understanding the means to meet a recognized and specific need. It may be oriented toward the design and development of prototypes. Technology transition moves mature technologies into programs of record. Workforce development grows the technical knowledge, skills and abilities of our scientists and engineers according to their assigned competencies. Facilities recapitalization builds the infrastructure of our laboratories with new equipment or for the establishment of new laboratories.

- **ATR**: The Advanced Technology Research (ATR) IPT provides technical expertise and direct support to S&T programs sponsored by a variety of DoD organizations, including OSD, DASD (EC&P), SCO and TENCAP. Initiatives define and enable the future Naval and Joint operational concepts.