

# NATIONAL INSTITUTE FOR UNDERSEA VEHICLE TECHNOLOGY (NIUVT)

INNOVATION PARTNERSHIP BUILDING AT UCONN TECH PARK



## About

The University of Connecticut (UConn) and the University of Rhode Island (URI) have established a unique partnership, the National Institute for Undersea Vehicle Technology (NIUVT) that leverages the collective engineering talents of UConn, URI, Naval Undersea Warfare Center (NUWC), and the defense industry to enhance performance and reduce costs of the shipbuilding process while insuring that advanced technologies are implemented into the next generation and next platform of undersea vehicles.

NIUVT builds upon the experience and expertise of UConn and URI to engage in research, technology transition, and workforce development alongside with government and industry, including Electric Boat (EB), its flagship partner, in the extensive, regional undersea domain. Through these activities, NIUVT will develop the personnel and knowledge needed to accelerate critical research and enhance U.S. superiority in submarine and other undersea vehicle technologies.

## Areas of Expertise

- Acoustics, Sensors and Signal Processing
- Advanced Materials and Structures
- Advancing Manufacturing Processes
- Cybersecurity
- Human Factors
- Marine Hydrodynamics
- Propulsion Enabling Technologies
- Structural Integrity, Vibration and Control
- Systems Engineering/Modeling
- Unmanned Underwater Vehicles (UUVs)
- Underwater Energy Systems
- Underwater Shock

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## Center Characteristics

### Overview

NIUVT leverages extensive laboratory, faculty and education infrastructure at UConn and URI to offer outstanding research capabilities for Navy-relevant research.

NIUVT has identified 12 technical areas directly related to undersea vehicle technologies of strategic importance to the Navy. Through ongoing collaboration with our industry partners, NIUVT will identify and pursue research in additional areas of focus that meet the ever-changing needs of the Navy.

The partners have a rich history of research and collaboration with the Navy in these areas, and NIUVT has the expertise and laboratory facilities to support technology advancements for transition to the next generation US undersea fleet.

### Technology Transition

The transfer of advanced technologies to the next vehicle or the next platform will be achieved by fostering an environment where Navy-relevant basic and applied research is integrated into the design and manufacturing process by EB and the 600 naval-related companies in the supply chain, as well as NUWC, and the Undersea Warfighting Development Center.

While research is the core activity of the Institute, the most highly leveraged activity is the transition of technology advancements into major DoD acquisition programs. Effectively transitioning research results is critical to providing a significant and positive impact on naval capabilities.



### Workforce Development

UConn and URI are major public universities that, in addition to conducting extensive research for the Navy, contribute hundreds of graduates to the Navy and naval industries.

As of 2017, UConn and URI have approximately 1400 active alumni working at EB and NUWC in Newport, Rhode Island, and annually provide approximately 125 engineers and 75 interns to EB.

NIUVT provides a range of opportunities to educate and train engineers for the naval workforce. We offer a Navy Science, Technology, Engineering, and Mathematics (STEM) concentration for undergraduate engineering students designed to train students in naval technologies and to transition them to naval careers. Since its inception in 2017, over 200 undergraduate students have participated in this program.

NIUVT also provides workforce development programs to facilitate recruitment, retention, and reinvigoration of the undersea technology ecosystem through internships, fellowships, and opportunities for advanced academic degrees.

## Contact

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