UMass Dartmouth receives $4.3M grant from U.S. Navy for marine technology development

The third award in as many years from the Office of Naval Research will further the University's research efforts in the blue economy and offshore wind sectors.

On February 8, 2022, UMass Dartmouth and Congressman William Keating announced a $4.3M grant from the Office of Naval Research (ONR) to research projects through the Marine and UnderSea Technology research program (MUST) at UMass Dartmouth in collaboration with the Naval Undersea Warfare Center Division Newport (NUWCDIVNPT).

The $4.3M grant will fund nine projects that focus on supporting the blue economy and offshore wind sectors through remote underwater sensing, battery performance for autonomous vehicles, oxidation mitigation for naval vessels, predictive modeling algorithms, and the use of autonomous vehicles to survey coastal environments. The project teams feature UMass Dartmouth researchers from academic disciplines and researchers from NUWCDIVNPT, industry partners Teledyne Benthos and Black & Veatch, and higher education institutions like UMass Amherst, the University of California, and the University of Virginia.

"Our collaborations with the Office of Naval Research and the Naval Undersea Warfare Center in Newport allow us to produce advanced technologies to harness the power of our waters and create an international hub for advanced marine technology," said UMass Dartmouth Chancellor Mark A. Fuller. "We want to educate students from the SouthCoast and the Commonwealth for

Blue Economy jobs and produce graduates who will contribute to the industry's success, and with this grant, that is what we will continue to do."

"We're in a period where investments into our workforce are critical," said Congressman Bill Keating. "UMass Dartmouth's Marine and UnderSea Technology program will create a new generation of a highly trained workforce, addressing the needs of the U.S. Navy as well as the emerging blue economy in our district. This is also the third time UMass Dartmouth has been awarded this coveted funding and I congratulate the Chancellor and his team on that. I will continue to work with UMass Dartmouth to push for additional grant funding to expand this important program for years to come."

This most recent award follows a $4.6M grant in February 2020, the largest research award in the university's history, and a $4.2M grant in October 2020 to address the U.S. Navy's short-term concerns of a skilled technical workforce and long-term goals of advanced technology development.

"As the public research university for the South Coast of Massachusetts, UMass Dartmouth is a key driver of the state's blue economy. This $4.3M grant from the Office of Naval Research will fund critical research projects focused on supporting the blue economy and advancing technologies for autonomous vehicles, underwater sensing, and predictive modeling," said Senator Edward Markey. "This continued federal investment—now totaling more than $13 million in awards since 2020—illustrates the MUST program's capacity for high caliber research as well as the impact of the continued partnership between UMass Dartmouth and the U.S. Navy."

"Congratulations to the dedicated researchers and students at UMass Dartmouth for receiving this grant from the Office of Naval Research. This investment in the Marine and UnderSea Technology program will continue to drive research and growth in the blue economy and offshore wind sectors so that

Massachusetts can continue to lead in building sustainable communities and economies," said Senator Elizabeth Warren.

"Southeastern Massachusetts can and should be the center of the offshore wind revolution. This grant will spur innovation across the South Coast," said Congressman Jake Auchincloss.

MUST has funded 29 research projects for a total of $13.M, bringing together regional collaborators such as NUWCDIVNPT to strengthen the Navy's access to cutting-edge research and build a pipeline for a highly trained workforce. These areas of study include autonomous underwater vehicles and increasing their battery life, biofouling, composite materials, machine learning with marine robotics, modeling ocean dynamics, and undersea acoustics for communications and sensing technologies.

"NUWCDIVNPT looks forward to continuing to foster our educational partnership with UMass Dartmouth through the MUST program," said Ron Vien, Technical Director at the Naval Undersea Warfare Center Division Newport (NUWCDIVNPT).

"MUST's success is the result of a very productive collaboration between the Office of Naval Research, the Naval Undersea Warfare Center Division Newport, UMass Dartmouth faculty and industry in addressing the pressing needs of the US Navy. Training students in technologies of interest to the Navy is a critical focus of this program. We continue to strengthen our investments in these areas," said UMass Dartmouth Interim Provost Ramprasad Balasubramanian, who leads the Marine and UnderSea Technology (MUST) research program.

You can view the recorded event here.