

MAINE NASA EPSCOR



NASA EPSCoR provides seed funding for eligible states to develop an academic research enterprise directed toward long-term, self-sustaining, nationally-competitive capabilities in aerospace-related research. Maine became eligible for funding in 2000.

Since 2000, Maine has been awarded a total of \$8,759,982. 60 projects supported at 16 different institutions.

IN MAINE

The Maine Space Grant Consortium (MSGC) is responsible for administering the NASA EPSCoR programs in Maine. It's mission is to improve research infrastructure in areas of mutual interest to NASA and the state of Maine; encourage more students to consider careers in fields of science, technology, engineering, and mathematics (STEM); and enhance NASA's presence throughout the State of Maine. MSGC works with undergraduate and graduate institutions, not-for-profit research laboratories, state agencies, technology-based businesses, and science and education organizations.

RECENT AWARDS



FY2019 Maine Space Grant Consortium

PI: Dr. Terry Shehata

Maine NASA EPSCoR provided cost share to an award from the Maine Technology Institute to conduct a feasibility study for a spaceport that would focus on the growing global nanosatellite market and become the foundation of a new space economic cluster, building on existing economic activity and attracting new companies to utilize its unique capabilities.



FY2016-FY2019 – University of Maine

PI: Dr. Andrew Thomas

Multi- and Hyperspectral bio-optical identification and tracking of Gulf of Maine water masses and harmful algal bloom habitat: Use multi and new hyperspectral data from multiple NASA satellite platforms and field data to bio-optically classify different Gulf of Maine surface water masses, identify those water masses that are Alexandrium habitat, track these water masses and map their interaction with, and impact on, coastal shellfish harvesting sites.

PAST AWARDS



FY2015-FY2018 - University of Maine

PI: Ali Abedi

Joint leak detection and localization based on fast Bayesian inference from network of ultrasonic sensors arrays in microgravity environment: Development of a flight ready wireless sensor system to detect and localize leaks in the International Space Station.

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PAST AWARDS CONTINUED



FY2015 – FY2018 – Gulf of Maine Research Institute **PI: Dr. Andrew Pershing**
Earth System Data Solutions for Detecting and Adapting to Climate Change in the Gulf of Maine: Create high resolution dynamic models of the distribution of commercially and ecologically important marine species based on Earth system data. These products will provide a foundation for hindcasts, real time estimates, and seasonal forecasts to support climate adaptation in fisheries throughout New England, including specific forecasts for Maine's \$1B lobster industry.



FY2017 - University of Maine **PI: Dr. Daniel Hayes**
Development of an observational network for assessing the effects of climate change on Maine's forest: Developing an enhanced strategic network of field sites for forest inventory in the state of Maine by using emerging remote sensing technologies.



FY2017 University of Southern Maine **PI: Dr. Raymond Albert**
Catalyzing Maine's Cybersecurity Future through Visioneering: The Maine Cyber Security Cluster (MCSC) is an academic and research center that brings together government, businesses, and academia for workforce development and the enhancement of educational and undergraduate research opportunities, public service, training and educational programs in the field of cybersecurity exemplifying community engagement. MCSC organized and implemented a "visioneering" workshop that brought together academic, government, and business leaders and practitioners to generate ideas and potential solutions for addressing the cybersecurity vision and applied research growth opportunities in Maine and the greater New England Region.



FY2016 University of Maine **PI: Dr. Aaron Weiskittel**
Visionary Workshop for Understanding and Forecasting the Impact of Climate Change on Maine's Forest: Organizing and hosting a 3-day visionary workshop in Summer 2016 that would bring together academics, government, and practitioners to generate ideas and potential solutions for addressing the potential of climate change on Maine's forest. The workshop's primary goal would be to generate two to three ideas that could be pursued as research projects that would simultaneously address the needs of both NASA and Maine.



FY2016 – Valt Enterprises, LLC **PI: Karl Hoose**
Hypersonic Inlet Design for Air-breathing Propulsion Accelerators: Development of a small launch vehicle for nanosatellites, that combines hypersonic-air breathing and rocket propulsion to dramatically reduce the launch vehicle size, weight and cost.