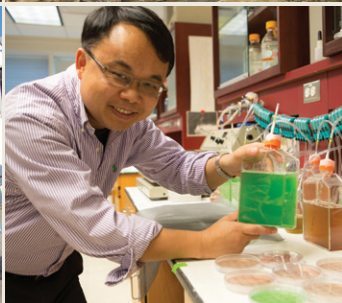


University of Maryland Center for Environmental Science

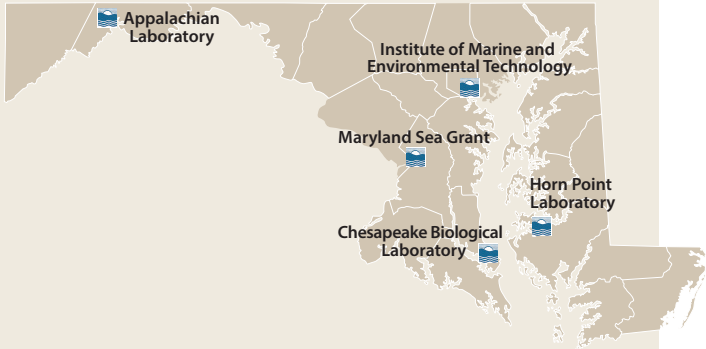
GUIDE TO EXPERTS



University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE

University of Maryland Center for Environmental Science

For 90 years, the University of Maryland Center for Environmental Science has led the way toward better management of Maryland's natural resources and the protection and restoration of the Chesapeake Bay. UMCES scientists provide sound advice to help state and national leaders manage the environment and prepare future scientists to meet the global challenges of the 21st century.



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“Nutrient and sediment pollution carried by stormwater are important factors in Chesapeake Bay health. It’s not the rain that affects the report card scores. It is what the rain carries.” —Bill Dennison

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“We’re combining tree rings with satellite data to find out the growth rate of trees. If trees are growing faster, then they are taking more carbon out of the atmosphere.”—Andrew Elmore

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SOFT SHELL CRAB DISEASE—**Eric Schott**, Research Assistant Professor (IMET): Molecular detection and characterization of aquatic invertebrates pathogens and viruses, soft-shell crabs
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“Male crabs do a beautiful mating dance. He has to dance for her and show her he has good genes. He stands on tiptoe, spreads his claws and waves them like a fan.”—Sook Chung

ENVIRONMENTAL EDUCATION

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ENVIRONMENTAL STATISTICS

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“The digital age has transformed so much of the science we do. Some fish stay put and others don’t—it turns out it’s very common. It just hasn’t been fully appreciated for marine fish. Now we see them—with tracking and telemetry.”—Dave Secor

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“We’re trying to predict when the storm comes in, which area will be flooded, which street will be flooded on a very fine scale. This will help emergency responder managers and people in the area of the predicted flooding make better choices as the storm nears.” —Ming Li

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"Underwater robot gliders will be deployed as storms approach the Atlantic Coast. The gliders will relay water temperatures back to hurricane forecasters to improve storm predictions." —Bill Boicourt

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“Invasive species is an enormous problem. It can
change habitats and cause crashes of fisheries.
The biggest transporter is ships—ballast water or
what’s growing on the side. Our job is to test ballast
water treatment systems on ships to see how reliable
they are.”—Mario Tamburri

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STREAM HEALTH

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“As the number and size of offshore wind developments increases, there is a growing need to consider the consequences on marine species. It is essential to identify where whales, dolphins and other species occur to help avoid adverse impacts.”

—Helen Bailey

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"In aquaculture the typical fish diet are smaller fish that are turned into fishmeal and oil. You can make a commercially viable diet with plant proteins—and with the right quantity of omega three fatty acids, you can make a diet that works." —Allen Place

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“Adult American chestnut trees have been nearly wiped out from a blight. We’re trying to discover if there is disease resistance so we are giving saplings to citizens to plant and monitor growth. Ultimately we want to advance restoration and research the genetics of the trees”

—Katharina Engelhardt

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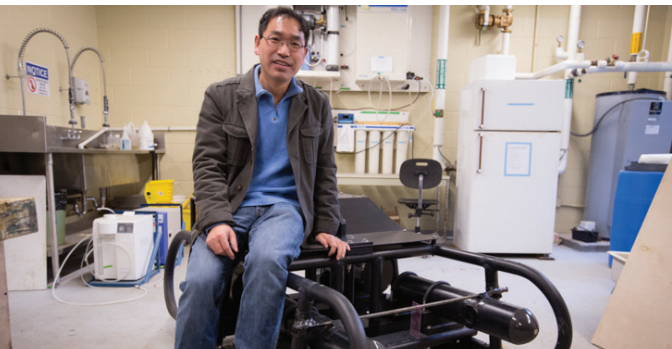
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"It's important to understand how climate variability
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populations that rely on these small crustaceans,
particularly during their early life stages."
—Hongsheng Bi

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“Over time, half of the peeler crabs would die in shedding houses and scientists didn’t know why. But in the absence of water quality issues, we found that it’s always viruses. An infected crab in your tank of 200 can affect the survivorship.” —Eric Schott



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