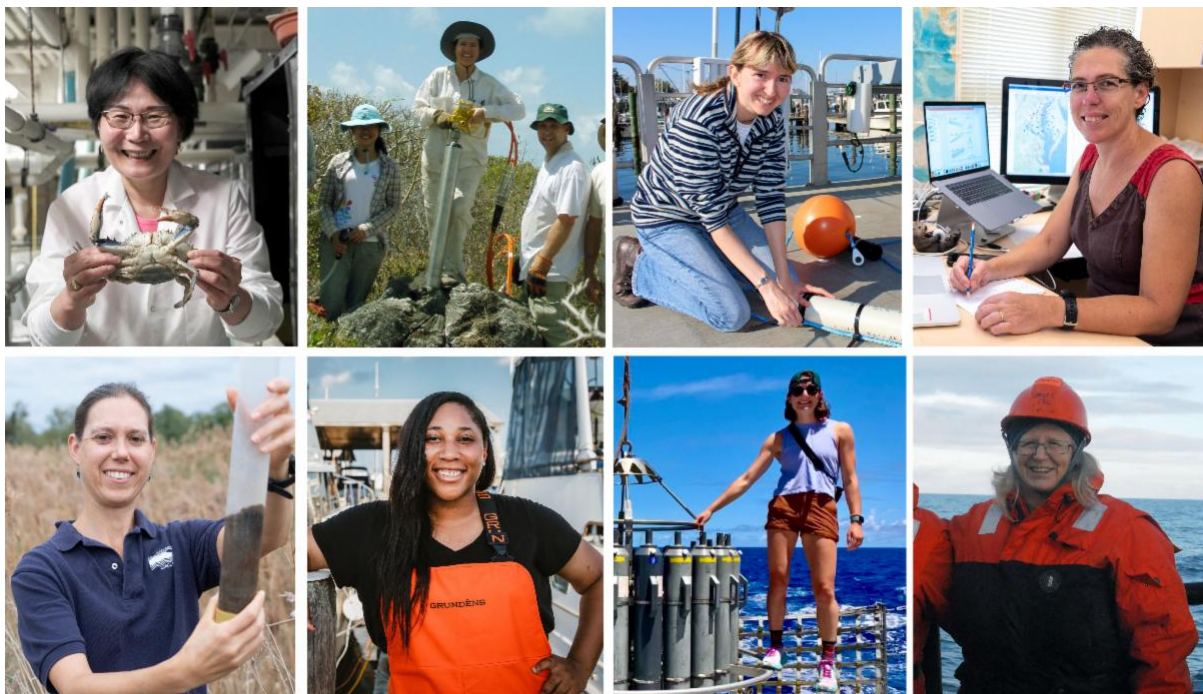


ENVIRONMENTAL INSIGHTS

NEWS FROM THE UNIVERSITY OF MARYLAND CENTER FOR ENVIRONMENTAL SCIENCE



Today we celebrate **International Women's Day** and recognize the contributions of the women who are leading the charge on climate change adaptation, mitigation, and the response to build a more sustainable future for all. Thanks to all of the women of UMCES for their efforts to power our institution's significant contributions to the understanding and sustainability of the world around us.

Emily Cohen receives NSF award to study migrating species

Emily Cohen was awarded a Faculty Early Career Development Program (CAREER) Award by the National Science Foundation to lead a five-year research program to help understand the processes that influence the formation of bird communities during spring and fall



migration.

“We live in a rapidly changing world where many species are declining, and this is especially true for migratory species. It is possible that changes in habitat, climate, and resource availability due to unprecedented human activity are inflating the costs associated with animal migration.” [MORE](#)

Urban oceans and waterfronts in focus in online community learning series

Urban waterfronts, including harbors and ports like Baltimore, are important areas that are particularly vulnerable to invasive species, chemical contamination, and conflicts related to intensified coastal development. The [Science for Communities](#) seminar series, hosted by UMCES' Chesapeake Biological Laboratory, will feature scientists sharing research related to the urban ocean on Tuesdays at 7 p.m. Following each presentation, there will be a moderated question and answer session. No scientific background needed; everyone is welcome!

World Harbour Project: Linking Urban Ocean Initiatives Around the Globe



March 29, 7 p.m.

Presented by Dr. Judy O'Neil, Horn Point Laboratory

The “World Harbour Project” created a global network of cities and linked research programs to investigate urban harbor health and ecosystem functioning. The program now includes 31 partners across the Pacific, Asia, Europe, the Middle East, and the Americas, including the U.S. Dr. Judy O'Neil explores UMCES' role in the project in both Baltimore Harbor and New York and discuss how innovation and an increased understanding of shared values and threats are helping

to achieve the project vision of building resilient and productive global ports and harbors. [REGISTER](#)

Solutions to Ship Introductions of Invasive Species

April 5, 7 p.m.

Presented by Dr. Mario Tamburri, Chesapeake Biological Laboratory

Commercial ships are fundamental to global economies, transporting over 80% of the world's goods and materials. Unfortunately, large ocean-going ships are the largest vector for the introduction and



establishment of aquatic invasive species in coastal waters around the world, including the Chesapeake Bay. Invasive species, can have significant impacts on local economic, ecological, societal, and cultural resources. This presentation will discuss ships, invasive species, and efforts to support wise regulations and effective innovations to solve the problem. [REGISTER](#)

Metals in Urban Estuaries



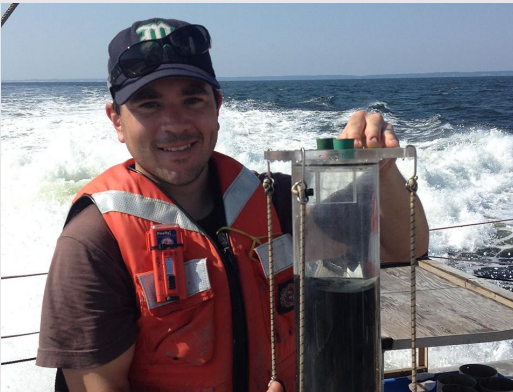
April 12, 7 p.m.

Presented by Dr. Andrew Heyes, Chesapeake Biological Laboratory

Contamination of the Chesapeake Bay and its waters extends beyond nutrients. Organic chemicals, “heavy metals” and trace elements once readily flowed into our urban waters unfettered, a practice clearly evident in our coastal sediments. Heavy metals continue to enter our coastal waterways, while urban expansion and climate change further compound this problem.

Dr. Andrew Heyes will explore how metals, such as mercury, chromium, copper and zinc, continue to enter our urban waters and how they may or may not impact wildlife and how we utilize this resource. [REGISTER](#)

The Keystone Molecule: What Oxygen and its Depletion Tells Us About Coastal Ecosystems



April 5, 7 p.m.

Presented by Dr. Jeremy Testa, UMCES Chesapeake Biological Laboratory

Dissolved oxygen is a keystone molecule in aquatic environments. It is produced by photosynthesis to support food webs, it controls the recycling of key nutrients, and it is essential to the health and survival of most animals. Our understanding of oxygen is central to our understanding of coastal ecology. Testa explores the role of oxygen in estuaries worldwide,

and how its depletion due to pollution and climate change is expected to change in the future.

[REGISTER](#)

Urban Seascaping: Principles and Practices for Co-Developing Cities with Shared Waters

April 26, 2022

Presented by Dr. Samia Rab Kirchner, Morgan State University

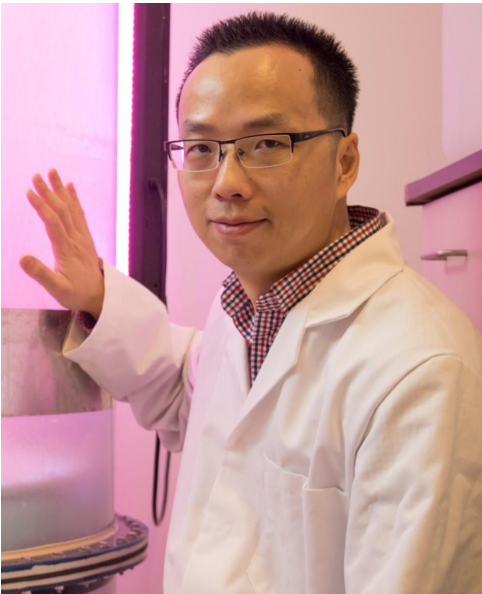
Climate adaptation science focuses on the assessment



of sea force versus community values. Dr. Kirchner will present indigenous practices of managing land for water and heritage conservation from the Pacific Ocean, Arabia, and Persia and discuss the need to widen the approach taken by resource managers and scientists beyond individual discipline and expertise to work collaboratively in the nexus between climate, culture, and civics. [REGISTER](#)

For a complete list of our seminars, visit [UMCES' online COMMUNITY LEARNING page](#).

Innovative grant aids research to mitigate global warming



Yantao Li was awarded an innovative \$50,000 grant to help design a microalgae-driven carbon capture system to address global warming. Certain microalgae strains have shown the potential for exceptional growth and the ability to reduce carbon dioxide emissions.

Researchers will be performing experiments at the Institute of Marine and Environmental Technology. The grant was awarded by Baydin Inc. (Boomerang), a productivity software company that donates a portion of their profits towards labs working in research and

development of climate technology. Grants awarded by private companies enable studies to be funded quickly and jumpstart projects that might otherwise have taken years to even commence.

Next Generation: Maddy Lahm on marine carbon cycling

Graduate student Maddy Lahm has traveled from coast to coast collecting data for her research at our Chesapeake Biological Laboratory. Her research will help experts better understand how dissolved organic matter transforms from its phytoplankton and is transported to the deep ocean.

"I found my time on research vessels to be extremely fulfilling while I collected samples for my projects, and engaging with marine technicians and their work was the most exciting part of being at sea," said Lahm. [MORE](#)



UMCES IN THE NEWS

[The Underground Railroad: How climate change is threatening to wash away parts of history \(WUSA9\)](#)

[Scientists to study movement of plastic pollution in Choptank River \(Bay Journal\)](#)

[How to Plant Millions of Oysters in a Day \(Hakai\)](#)

[Trove of oyster shells discovered in Potomac River. Now what? \(Bay Journal\)](#)

[Emily Cohen awarded NSF CAREER Award to study migrating birds as communities \(ScienMag\)](#)

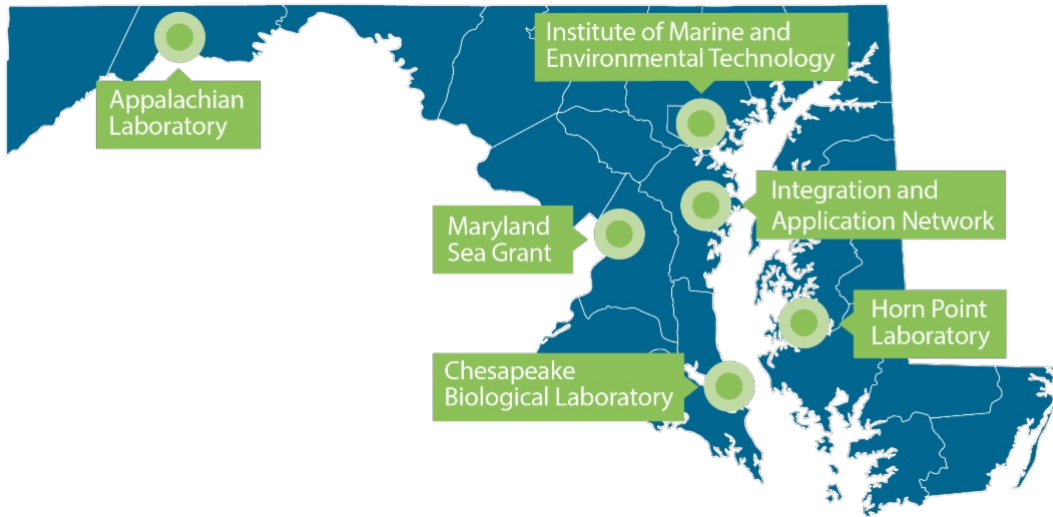
[Food, Plastic, and You: The World Has Been Conquered by Plastic \(Attraction Mag\)](#)

Bay is healthier, but there's room for improvement (SoMD News)

With climate change comes changes in Wisconsin winter activities (WPR)

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