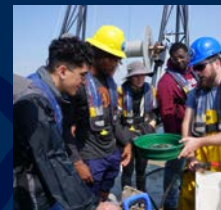




20th
ANNIVERSARY
2005-2025

Reflections:

Two Decades Supporting Stewardship of
Coastal Communities and Ocean Resources



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Hosting Ocean Luminaries
and Leaders at Monmouth

Our Mission

To serve Monmouth University and the public as a forum for **research**, **education**, and **collaboration** in the development and implementation of science-based policies and programs that support stewardship of healthy, productive, and resilient coastal ecosystems and communities.

Advancing Monmouth's Strategic Plan and Securing the UCI's Future

Since 2005, the Urban Coast Institute (UCI) has served as one of Monmouth University's Centers of Distinction, focusing on studying interactions between humans and the coastal and ocean environment, while identifying best practices and implementing actions to ensure healthy ecosystems and sustainable development along New Jersey's coast and watersheds. A go-to resource for the Monmouth County community, the state, and beyond, the UCI supports faculty research and assists student interested in pursuing fields of study ranging from environmental science and public policy to sustainable business, arts, and the humanities.

For 20 years, the UCI has proven to be a catalyst for University, state, and regional collaboration, interdisciplinary research, and educational programs. The institute serves as a visible and highly respected public face for the University, engaging community, and public policy leaders at all levels. UCI programs also directly support student scholarships, transformational student learning experiences, and faculty and student research.

At the University's doorstep, the New Jersey coast and the Atlantic Ocean present an ideal laboratory for the study of coastal and ocean science and management, conservation and restoration, community sustainability, and resilience. Amplifying the University's unique location along the Jersey Shore, the UCI has a special responsibility to engage with communities and key stakeholders in the stewardship of our coastal and ocean environment. How can we work, play and live sustainably at the coast?



As the country's most densely populated coastal state, New Jersey continues to attract increased population and development, which places significant strain on already stressed coastal and ocean ecosystems. Superstorm Sandy and more recent storms have been a stark reminder of the threat of extreme coastal weather events,

exacerbated by sea level rise and a changing climate. The UCI is a leader in developing innovative solutions and new approaches to support adaptation and resilient communities. There is also an increasing need to manage demand among often conflicting ocean uses including navigation, maritime commerce, fisheries, recreation, and offshore renewable energy, while at the same time assuring environmental protection.

Monmouth's strategic plan, "Excellence. Access. Ambition.," aims to make the University a national leader at integrating academic excellence and educational access. The UCI is uniquely positioned—figuratively and literally—to serve as a key player in making this ambition a reality.

I invite you to browse these pages for a glimpse at some of the impacts the UCI has made on and off campus in its first two decades. We have much to be proud of, and even more to be excited for ahead.

A handwritten signature in black ink, appearing to read 'Tony MacDonald'.

TONY MACDONALD

Director, Urban Coast Institute



Nautical Milestones

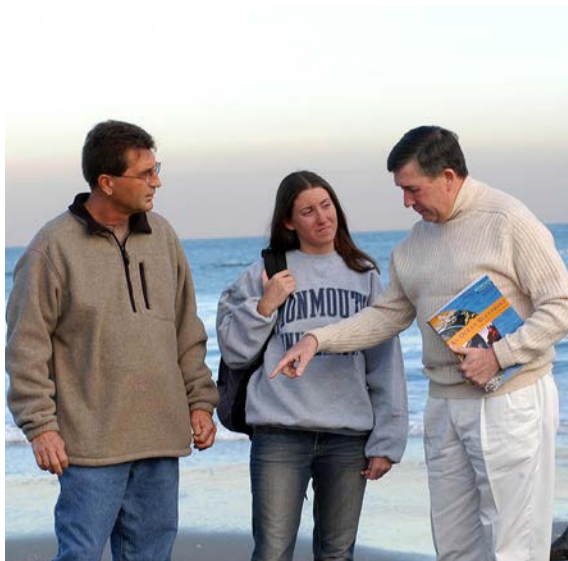
The UCI Through the Years



2005-2009

2005: Setting Sail

Monmouth University launched the UCI in the fall of 2005 as part of its strategic plan to take advantage of its location just a mile from the shore. Monmouth's president at the time, Paul G. Gaffney II, was a retired U.S. Navy vice admiral and oceanographer who had also served as a member of the U.S. Commission on Ocean Policy, which had completed its work just one year earlier. After a national search, Tony MacDonald, Esq., who had previously served in Washington, D.C., as executive director of the Coastal States Organization and director of environmental affairs at the American Association of Port Authorities, was selected as the first UCI director.



Former School of Science Assistant Dean John Tiedemann (l) and Monmouth University President Paul Gaffney II speak with a student shortly before the launch of the UCI.

John Tiedemann, assistant dean in the School of Science, served as the UCI's associate director in its early years. Tiedemann helped spark the institute's momentum by leading the development of a marine and environmental policy degree and successfully obtaining an EPA grant to conduct coastal watershed research and purchase the University's first research vessel, the 18-foot Little Hawk, still in use today.

2005: Champions of the Ocean



One of the UCI's first acts was to organize a Champion of the Ocean awards and ocean symposium on campus. The first honorees of this now annual event were Admiral James Watkins, chair of the U.S. Commission on Ocean Policy (aka the "Watkins Commission"); and Leon Panetta, chair of the private Pew Ocean Commission and a former secretary of defense, CIA director, and White House chief of staff. The Future of the Ocean Symposium and Champion of the Ocean Awards remains a signature UCI event that brings leading national ocean experts to campus to engage students and the public on the most important ocean issues of our times. The event has drawn legendary ocean leaders to campus, including Sylvia Earle, Jean-Michel Cousteau, philanthropist Wendy Schmidt, and astronaut and NOAA Administrator Kathy Sullivan (see pages 28-29 for full list). It also serves as a key fundraiser to provide support for student research.

2007: Water Quality Monitoring Network

The early years and continued growth of the UCI have been fueled by generous support from donors. With funding from the Fairleigh S. Dickinson Jr. Foundation and Monmouth University Trustee and alumnus Frederick Kaeli, Jr. '61, the UCI established a water quality monitoring network in the estuaries of Monmouth and Ocean counties. Readings were taken every 15 minutes for temperature, salinity, pH, dissolved oxygen, chlorophyll, turbidity, and depth at eight stations from Keyport to Manahawkin.

The data allowed scientists to better understand these ecosystems and discern the links between water quality, biological activity, and stress-induced events such as fish kills and harmful algae blooms. In one of the UCI's earliest impacts on policymaking, data from a station in Mantoloking was used to determine that the Upper Barnegat Bay has depleted oxygen levels, leading to its classification as an impaired waterbody.

The UCI also drew early support from New Jersey's Congressional delegation, including Rep. Frank Pallone and Sen. Frank Lautenberg, who secured federal funding to support operations and expanded outreach to coastal communities. That assistance continued over the years with support provided by Sens. Cory Booker and Bob Menendez and House members representing the state.



2007: Vessel Captain and Research

Jim Nickels was hired to manage the water quality monitoring network in 2007, beginning a long tenure as the UCI's marine scientist and vessel captain that was instrumental in the growth of Monmouth's field research and marine programs. When Nickels arrived, the Little Hawk was the University's lone vessel. Through an assortment of federal and private sector contracts managed by Nickels, and a second grant from the Fairleigh S. Dickinson Jr. Foundation, Monmouth acquired the 27-foot Seahawk, multibeam SONAR equipment, and other marine science technologies.

His grant and contract work conducting water quality monitoring, mapping local riverbeds and seafloor areas, and other research in those early days helped support the vessels while providing students with real-world field operations experience. Nickels retired in 2024, but still actively assists the University with projects.

UCI Marine Life Icon

The UCI's New Jersey marine life icon was created in 2008 and grew over time into an unofficial logo. In 2019, this was formalized when the University updated the artwork to bring its colors in line with Monmouth's branding. Its original tropical blue color was replaced by Monmouth's "Shadow Blue" and some of the smaller critters were replaced. Today the symbol adorns tees, beach towels, and caps, which you can purchase on the UCI website to support our program.



2009: Heidi Lynn Sculthorpe Scholars Student Research Grants

From its earliest years, the UCI has offered grant funding to students and faculty to conduct research projects that advanced the institute's mission while providing valuable opportunities for experiential learning. Its programs have expanded over time, supporting hundreds of students and their faculty mentors.

The Heidi Lynn Sculthorpe Scholars Program was established in memory of the daughter of Monmouth Trustee Emeritus Robert B. Sculthorpe '63, '15HN. The UCI also provides grant support directly to the School of Science's Summer Research Program. These programs continue to thrive thanks to the generosity of our many friends and supporters.

2010-2015

2010: Barnegat Bay Plankton Study

In 2010, the UCI began a 14-year research effort funded by the New Jersey Department of Environmental Protection (NJDEP) focused on plankton and zooplankton populations in Barnegat Bay. Monmouth was one of several partners studying aspects of the watershed's ecological health to help guide the state's development of a comprehensive action plan for the bay. The project provided many opportunities for students to conduct sampling and lab work under the guidance of Monmouth and UCI staff researchers.

Much of the work would have to be re-examined after Superstorm Sandy gashed an inlet through the barrier island at Mantoloking, carrying an influx of seawater that changed the makeup of plankton in the bay. Monmouth's work would be extended to monitor for environmental impacts from the 2019 closure of Oyster Creek Nuclear Power Plant, which regularly drew and discharged baywater as part of its operations.



2012: Superstorm Sandy Galvanizes UCI's Coastal Resilience Focus

Superstorm Sandy couldn't have hit closer to home, as Monmouth opened its OceanFirst Bank Center as an emergency shelter for local residents in need. In the aftermath, the UCI was contracted to scan local water bodies with sonar for debris that had been pulled in and posed a navigational hazard. Just weeks after the storm, the UCI, Monmouth's Kislak Real Estate Institute, and other partners organized a "Rebuilding a Resilient New Jersey Shore" conference on campus to explore lessons learned and how to prepare for the next major storm. The UCI would track the recovery progress closely through the years, hosting a public "Sandy One Year Later: Looking to the Future" symposium in 2013 and "To Build or Not to Build: That is the Question – Lessons We Haven't Learned 10 Years After Superstorm" in 2023.

Herrington Joins as Associate Director

Sandy sharpened the UCI's focus on finding ways to make communities more resilient to coastal storms. In 2017, Tom Herrington, Ph.D., one of the East Coast's leading voices on the subject and a coastal community resilience specialist for the New Jersey Sea Grant Consortium, joined the UCI as associate director.

Among the UCI's many contributions in this area since Sandy, it partnered with Sea Grant, Monmouth County, FEMA, and others on a High-Water Mark Initiative that placed signs in local communities showing visitors the height flood levels reached during the storm. The signs served an educational purpose and helped participating municipalities earn Community Rating System points that lowered homeowners' flood insurance costs.



With funding secured by State Sen. Vin Gopal in 2023, Herrington formed a team of six New Jersey universities to identify research needs and fill knowledge gaps that enable the state and communities to make more informed decisions on coastal resilience actions and respond to climate threats. He also serves as the managing director of the New Jersey Coastal Resilience Collaborative, a network of more than 100 public and private sector partners established in 2016 to foster sustainable and resilient coastal communities and ecosystems.

2014: UCI Challenge Grant Campaign

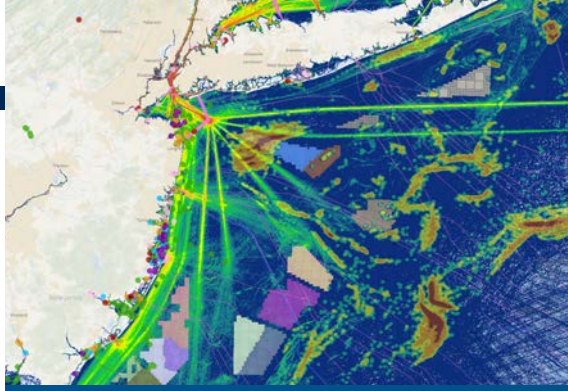
The Marine Science & Policy Initiative was transformational for the UCI. It sprung from a successful 2014 challenge grant campaign, in which the Rechnitz family pledged \$3 million if the University could raise \$2 million in matching gifts. The initiative substantially raised the UCI and Monmouth's profile as a premier regional center for ocean and coastal policy. Among the initiative's many outcomes, it significantly expanded the UCI's capacity to fund student and faculty research projects and programs, supported major renovations to the School of Science, and established the endowed professor of marine science position held by Jason Adolf, Ph.D. The initiative also supported a unique five-year collaboration between UCI and the Rockefeller University Program for the Human Environment (PHE) led by 2012 Ocean Champion honoree Jesse Ausubel. The UCI remains grateful to the Rechnitz family, Santander Bank, and the many other generous donors who made the campaign a success and elevated our work to a new level.

2015-2019

2015: Going Global

Weeks after the November 2015 terror attacks in Paris, MacDonald traveled to the city for the COP21 United Nations (UN) Climate Summit, where the UCI, Global Ocean Forum (GOF), and University of Delaware organized the first Oceans Day at a COP event. "The actions of a few should not derail the long, hard work of many nations and individuals who are fighting to make our oceans and world healthier and safer for future generations," MacDonald said at the time. The proceedings concluded with the famed Paris Agreement, in which nearly every world nation committed to holding the increase in global average temperature to below 2°C above pre-industrial levels. The UCI applied and was granted Observer status to the UN Framework Convention on Climate Change.

The GOF and UCI have since strengthened their partnership, organizing ocean-centered events at subsequent UN conferences and COP summits



2015: Enter the Portal

With an initial grant from NOAA and sustained support from the Gordon and Betty Moore Foundation, the UCI became the principal investigator for the development of the Mid-Atlantic Ocean Data Portal (portal.midatlanticocean.org), a free and publicly accessible GIS mapping and information site focused on ocean areas from New York through Virginia. The Portal contains over 6,000 map layers illustrating marine life distributions, shipping traffic, fishing activity, offshore infrastructure, and much more. It has become an essential tool for informing ocean management decisions and a valuable educational resource. Funding from the Mid-Atlantic Regional Council on the Ocean (MARCO) has enabled the UCI to continue to support its ocean planning efforts, including the creation of a first-ever Mid-Atlantic Ocean Action Plan (adopted by President Obama in 2016) and organizing annual Mid-Atlantic Ocean Forum events, the first of which was held at Monmouth in 2019. A mobile app version of the Portal designed by Monmouth computer science students was made available for download on Apple and Google stores in 2025.

Moore Foundation funding later enabled the UCI to hire Postdoctoral Researcher Christopher Haak to work with NOAA and the Mid-Atlantic Fisheries Management Council to develop habitat use models for commercially and ecologically important fish species, and support the efforts of UCI Fisheries and Ocean Conservation Fellow Jay Odell to examine climate impacts to ocean ecosystems, marine life, and fishing communities.

in Portugal, Scotland, Egypt, and France. In 2023, Monmouth and the GOF signed an agreement that positioned Monmouth as the international nonprofit's host organization. The agreement paved the way for student internship opportunities, the development of joint events, and collaborative research initiatives that mutually align with the UCI and GOF's missions.

2016: Rockefeller Partnership

As mentioned previously, with support from the Rechnitz family and Marine Science and Policy Initiative, the UCI and the Rockefeller University PHE kicked off a partnership in 2016 to conduct research and hold annual conferences on topics of regional and national interest, alternating between the Monmouth campus and Rockefeller's in New York City. The partnership included projects on ocean noise, ocean exploration and emerging technologies, and the use of marine environmental DNA (eDNA) to detect the presence of aquatic species.

The first National Conference on Marine Environmental DNA was held at Rockefeller's campus in 2018. Research by scientists from Rockefeller, Monmouth, and the NJDEP found that the amount of fish DNA in water samples collected during trawls closely corresponded to kilos of fish captured in the nets. The results of the eDNA research through the collaboration remains a signature focus of Adolf's work.

In 2016, Monmouth and Rockefeller convened a National Ocean Exploration Forum, "Beyond the Ships: 2020-2025," in New York City. The UCI presented legendary ocean explorer Bob Ballard—whose discoveries include the the wrecks of the Titanic, the Bismarck, and President Kennedy's PT-109—with its National Champion of the Ocean Award at a special ceremony.

Monmouth hosted the Mid-Atlantic Blue Ocean Economy 2030 forum in 2017, where participants examined future trends shaping key ocean industries and the impacts of environmental changes in the ocean. The importance of supporting a sustainable blue economy while protecting healthy coastal and ocean ecosystems remains a core UCI focus.



2018: Rechnitz Family/UCI Endowed Chair in Marine and Environmental Law and Policy

A gift from the Rechnitz family enabled the UCI to expand its expertise, reach, and capacity for student mentorship by establishing the Rechnitz family/UCI chair in marine and environmental law and policy position. The position has been held by two scholars who have raised Monmouth's global profile: Professor Randall Abate, J.D. (2018-22), who has authored books on animal law and the voiceless victims of climate change harms, and Peter Jacques, Ph.D. (2023-present), who has written extensively on the politics of sustainability and climate change denial and mentors students in his Political Ecology Lab.



Members of the Sculthorpe Family christen the R/V Heidi Lynn Sculthorpe in 2018.

2018: The R/V Heidi Lynn Sculthorpe

With a crash of the ceremonial champagne bottle, Monmouth University's newest and largest research vessel was christened as the R/V Heidi Lynn Sculthorpe in 2018. Originally the Nauvoo, the 49-foot vessel was transferred to Monmouth by NOAA and named in memory of the daughter of former Monmouth Board Chair Robert Sculthorpe. Gifts from Sculthorpe, George Kolber, and the Fairleigh

Dickinson Jr. Foundation made it possible to restore and outfit the vessel with enhanced technologies. The vessel has enabled the University to conduct research as well as educational and contract work at a larger scale than ever before. The vessel can take full classes and large groups on the water and work on the open ocean up to 20 nautical miles offshore.

2019: CLONet

Monmouth scientists, students, and community volunteers gathered on campus to launch the Coastal Lakes Observing Network (CLONet), a partnership dedicated to monitoring water conditions at a dozen seaside waterbodies. Through CLONet, community members regularly sample their local lakes and file their readings to an online database for analysis. By January 2025, the community scientists had recorded over 2,100 samples, helping reveal the likely drivers of harmful algal blooms and other issues in the lakes. The work, led by Adolf and UCI Community Science Coordinator Erin Conlon, has been supported with funding from the Jules L. Plangere, Jr. Family Foundation and the NJDEP.

2020-2024

2020: Endowed Scholarships

In 2018-19, Grey Dimenna, who served as Monmouth's president at the time, led "Together We Can," a campaign that raised over \$19 million for student scholarships. Through the efforts of the UCI Advisory Committee, the institute endowed four scholarships of its own, the first of which were available to students in 2020. To date, 15 outstanding students have received the Ann and Alfred L. Ferguson '13HN UCI Endowed Scholarship, Rita Mangan UCI Endowed Scholarship, MacDonald Family UCI Endowed Scholarship, and Urban Coast Institute Endowed Scholarship.

2020: The Pandemic

The COVID-19 pandemic was one of the greatest challenges ever to face higher education, with emergency social distancing measures forcing the closure of campuses nationwide. The UCI adjusted quickly, determined to carry on its mission as best it



Professor Jason Adolf trains a CLONet community volunteer to sample Fletcher Lake in Bradley Beach.

could. With on-campus events canceled, the UCI was an early adopter of virtual meeting tools and hosted a succession of events to keep students and the public engaged. Among them was the May 2020 online panel, “COVID-19 & New Jersey’s Environment,” which convened scientists from around the state to share early data on the quarantine’s environmental ramifications. CLONet reporting surged during the quarantine, as residents were eager to get outside and sample their lakes. The School of Science and UCI were also proactive in adopting safety protocols that enabled lab research and field work to continue, including aboard University vessels.



2020: Save the Whale

UCI Marine Scientist Jim Nickels responded to an emergency call aboard the R/V Heidi Lynn Sculthorpe to help free a humpback whale entangled in thousands of pounds of netting, ropes, and steel cables. The vessel’s net reel was used to lift up the gear enough to relieve the pressure and allow the whale to move and breathe easier, until the encumbrance could be fully hoisted out of the water by a crane and severed. The four-day rescue effort involved many partners and was chronicled in a video produced by NOAA. The whale has since been spotted swimming safely by whale watch vessels in the region.



2023: Oyster Restoration Projects

Through an agreement with NY/NJ Baykeeper, a portfolio of oyster restoration projects that were started by the organization were transitioned to Monmouth’s management. Meredith Comi, an expert in aquaculture, oyster restoration, and living shoreline projects, joined the UCI to continue to guide and build upon the initiatives she led as director of Baykeeper’s Coastal Restoration Program. Among them was a reef off the shores of Naval Weapons Station Earle that is restoring the environment while producing valuable data on the power of nature-based solutions for improving coastal resilience. As part of a separate project at Sandy Hook, the UCI worked with scientists from New Jersey City University, NOAA, and the New Jersey Sea Grant Consortium to study whether colonization by other organisms discourages oysters from living on the reefs. A third oyster reef project at Long Beach Township’s Clam Cove aims to stabilize an eroding marsh island.





UCI Student Research Grants:

A Legacy of Learning and Service

From AI to zooplankton, UCI-funded student research projects have covered a wide range of research areas. Soon after the UCI formed, it began offering funding and material support to students to pursue their passions for marine and coastal issues through experiential research. UCI grants have enabled hundreds of students to conduct hands-on research that provides real-world experience while helping make a positive impact in coastal communities.

The UCI has made competitive grants available to students through a handful of funding streams over the years (including the Marine Science & Policy Initiative, the UCI Scholars Program, and the School of Science-UCI Diversity in Marine and Environmental Biology and Policy Initiative) before consolidating them under the Heidi Lynn Sculthorpe Scholars Program banner in 2019. Heidi Lynn Sculthorpe Scholars grants are open year-round to students of all academic disciplines for projects that advance the UCI's mission and the University's strategic plan.

The UCI has also funded or contributed to numerous School of Science Summer Research Program

(SRP) projects since its launch in 2009. Rather than taking seasonal jobs back home, SRP and Heidi Lynn Sculthorpe Scholars students can be paid to spend their summers working under the guidance of faculty mentors on projects that they propose and design—an arrangement that few schools offer to undergraduates. The experience has proven advantageous for students when they apply to graduate schools and seek employment in their fields. Monmouth students also have access to the region's diverse ocean and coastal environments, which they can explore aboard the University's research vessels.

A Bold Path Forward

The UCI will continue to work with the University and its partners to increase internship and experiential learning opportunities and make Monmouth a more attractive option for prospective students.

Student Project Support

Includes project/activity title, student participants, and faculty mentors.

Blue – Heidi Lynn Sculthorpe Scholars grants
Light Blue – School of Science Summer Research projects with UCI support

2024

Identifying Relationships Between Visual Sightings and eDNA Detection of Humpback Whales (*Megaptera novaeangliae*) Along the Coast of New Jersey

Student: Brooke van de Sande

Mentors: Jason Adolf, Ph.D., and Sam Chin, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Love Blue Monmouth Beach Cleanup Equipment

Student: Katie Marshall, Love Blue Monmouth club president

2023

Programming Application Development for Hurricane Risk-Based Assessments of Coastal Residential Communities

Student: Johnathan Williams

Mentor: Tom Herrington, Ph.D., UCI associate director

Flood Designation Relative to Residential Real Estate Pricing Neighborhood Flooding

Student: Julianna Rubinetti

Mentors: Geoffrey Fouad, Ph.D., Department of History and Anthropology; Tjeerd Boonman, Ph.D., Department of Economics, Finance, and Real Estate

Evaluating the Predation Risk of an Eastern Box Turtle Population Inhabiting a Suburban Island

Student: Madison Patterson

Faculty Mentor: Sean Sterrett, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Suburban Turtle Ecology and Conservation

Students: Adriana Simancas, Richard Robinson

Mentor: Sean Sterrett, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Confluence and Anomaly of East-West Perspectives on Development: The Advent of Tata Steel on Local and Adivasi (Indigenous) Communities in India

Student: Lenien Jamir

Mentor: Rekha Datta, Ph.D., Department of Political Science

Analysis of the Effect of Wave Action on Clam Cove Island, Barnegat Bay, NJ

Student: Tyler Barkley

Mentor: Tom Herrington, Ph.D., UCI associate director

The Analysis of Sediment Transport at Clam Cove Reserve

Student: Alexis Baumgartner

Mentor: Tom Herrington, Ph.D., UCI associate director

Analyzing the Frequency of Inundation of Clam Cove Island, Holgate, NJ with Sea Level Rise

Student: Nicole Cappolina

Mentor: Tom Herrington, Ph.D., UCI associate director

2022

Sea-Level Rise Impacts in Monmouth County, New Jersey: A GIS-Based Analysis of Home Adaptation, Protection, and Elevation Modifications since Hurricane Sandy (2012)

Student: Alessandra Conte

Faculty Mentor: Geoffrey Fouad, Ph.D., Department of History & Anthropology

Voice Assistive Technology for Elderly and Individuals with Complex Cognitive and Communication Needs (CCCN) - Increasing Access to Care for Those in Coastal Communities

Student: Claire O'Connor

Mentor: Yao Du, Ph.D., Department of Speech-Language Pathology

Exploring Restoration Strategies for Salt-Flooded Maritime Forests

Student: Emma Gould

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Barnegat Bay Marsh Island Restoration Planning

Students: Keilan Swanzey, Jagger Turano-Riley

Mentor: Tom Herrington, Ph.D., UCI associate director

Harmful Algal Blooms in Monmouth County Coastal Lakes

Students: Marie Mauro, Nicholas Occhiogrosso

Mentor: Jason Adolf, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Reptile and Amphibian Ecology and Conservation in Urbanized and Suburbanized Ecosystems

Students: Adriana Simancas, Christopher Meehan

Mentor: Sean Sterrett, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program





2021

eDNA as a Tool for Surveying Turtles in New Jersey's Coastal Lakes

Student: Delaney Mestey-Jones

Mentor: Megan Phifer-Rixey, Ph.D., Department of Biology/UCI marine genetics faculty fellow

The Effect Hurricanes Have on Sustainable Tourism in the Bahamas and New Jersey

Students: Catherine Melman-Kenny, Sabria Smith

Faculty Mentor: Ken Mitchell, Ph.D., Department of Political Science & Sociology

Exploring Salt Tolerances of Lichens in Coastal Ecosystems

Student: Emily Vasquez

Faculty Mentor: Pedram Daneshgar, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Female Labor Force Participation and Care of Children in Coastal New Jersey

Student: James Allan

Faculty Mentors: Katherine Ramirez, Ph.D., Department of Economics, Finance, and Real Estate; Geoffrey Fouad, Ph.D., Department of History & Anthropology

New Jersey Coastal Resilience Collaborative Policy Analyst

Student: Samantha Pawlik

Mentor: Tom Herrington, Ph.D., UCI associate director

The "30 by 30" Initiative: Confronting the Threats of Biodiversity Loss and Climate Change

Student: Kyra Velock

Mentor: Randall Abate, J.D., Rechnitz Family/UCI endowed chair in marine and environmental law and policy

A Win-Win for Offshore Wind Energy in the Mid-Atlantic: Science and Policy Options to Mitigate Harm and Maximize Benefits to Marine Species and Biodiversity

Student: Riya Ajmera

Mentor: Randall Abate, J.D., Rechnitz Family/UCI endowed chair in marine and environmental law and policy

Geospatial Representation of Lower Hudson Raritan Estuary Water Quality

Student: Nicholas Box

Mentor: Jason Adolf, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Developing Harmful Algal Bloom Forecast Models for Monmouth County Coastal Lakes

Student: Karly Nolan

Mentor: Jason Adolf, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Comparative Soil Analysis of Healthy Maritime Forests and Ghost Forests

Student: Carrington Retzios

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Evolution of Coastal Lakes as Turtle Habitat in Monmouth County

Students: Megan Malaty, Christopher Meehan

Mentor: Sean Sterrett, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Assessing the State and Dynamics of a Turtle Assemblage in Lake Takanassee

Students: Christopher Meehan, Megan Malaty

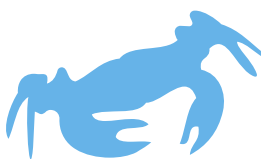
Mentor: Sean Sterrett, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

2020

Adapting to Protect the North Atlantic Right Whale from Climate Change

Student: Aidan Bodeo-Lomicky

Mentor: Randall Abate, J.D., Rechnitz Family/UCI endowed chair in marine and environmental law and policy



Beach Access and Race Discrimination in New Jersey

Student: London Jones

Mentor: Randall Abate, J.D., Rechnitz Family/UCI endowed chair in marine and environmental law and policy

Aerial Drone Survey and 3-D Model Construction of Crosswicks Creek, NJ, Colonial Shipwreck Site

Student: Breana DiRenzi

Mentor: Geoffrey Fouad, Ph.D., Department of History & Anthropology

Post-COVID Reset: Recommendations for Ocean-Climate Action and a Sustainable Blue Ocean Economy for New Jersey

Student: Johanna Vonderhorst

Mentor: Tony MacDonald, Esq., UCI director

Ecotherapy: Nature as a Co-Therapist:

Student: Nicole Owenburg

Mentor: Megan Delaney, Ph.D., LPC, Department of Professional Counseling

Using Artificial Intelligence to Track the Environmental and Economic Consequences of Climate Change

Student: Avery Jackson

Mentor: Katie Gatto, Ph.D., Department of Computer Science

Using eDNA as a Tool for Understanding Our Coastal and Estuarine Communities

Student: Cameron Gaines

Mentor: Megan Phifer-Rixey, Ph.D., Department of Biology/UCI marine genetics fellow

Harmful Algal Blooms in Monmouth County Coastal Lakes, Estuaries, and Ocean

Students: Karly Nolan, Skyler Post

Mentor: Jason Adolf, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Reptile and Amphibian Ecology and Conservation in Urbanized and Suburbanized Ecosystems

Students: Sara Grouleff and Angel Ireland

Mentor: Sean Sterrett, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

2019

Chesapeake Bay Archaeological Mapping

Student: Chris Menke

Mentor: Geoffrey Fouad, Ph.D., Department of History and Anthropology

Dominican Civil Society: A Democratic Response to Climate Change

Students: Matthew Gruhler, Alexis Vasquez

Mentor: Ken Mitchell, Ph.D., Department of Political Science and Sociology

Marine Biology Careers App Design

Students: Gianna Rossi, Stephanie Brown

Mentor: Linh Dao, Department of Art and Design

Conservation and Demographics of New Jersey Coastal Sharks and Sturgeon

Students: Hannah Craft, Lauren Kelly, Michael Nguyen, Charlie Vasas

Mentor: Keith Dunton, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Harmful Algal Blooms in Monmouth County Coastal Lakes, Estuaries, and Ocean

Students: Skyler Post, Ariel Zavala

Mentor: Jason Adolf, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Reptile and Amphibian Surveys in Urbanized Ecosystems

Students: Travis Kirk, Christiana Popo

Mentor: Sean Sterrett, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

2018

Discovering the Ecological Self

Student: Lia Stiles

Mentor: Kimberly Callas, MFA, Department of Art and Design

Exploring Nest-Site Selection in Northern Diamondback Terrapins

Student: Taylor Donovan

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program



The Impact of Environmental Factors on Government Stability in Guatemala

Students: Justin Dritschel and James Hawk

Faculty Mentor: Ken Mitchell, Ph.D., Department of Political Science and Sociology

Classification and Measurement of Aerial Imagery with TensorFlow

Students: Steven P. Cassidy, Mahmoud E. Shabana, Nianqi Tian

Mentors: Gil Eckert, Department of Computer Science/Software Engineering; Jim Nickels, UCI marine scientist

Conservation and Demographics of New Jersey Coastal Sharks and Sturgeon

Students: Lauren Kelly, Troy Ohntrup, Charlie Vasas

Mentor: Keith Dunton, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Harmful Algal Blooms in Monmouth County Coastal Lakes, Estuaries, and Ocean

Students: Erin Conlon, Skyler Post, Katelyn Saldutti

Mentor: Jason Adolf, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

2017

Lake Como Bathymetry and Flood Mapping

Student: Thomas Candiloro

Mentor: Geoffrey Fouad, Ph.D., Department of History and Anthropology

Selective Feeding Habits of Atlantic Sturgeon

Student: Marissa DeTorre

Mentor: Keith Dunton, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Superstorm Sandy Interactive Video Game

Students: Luke Tomkus, Michael Anatasio

Mentor: Jodee Vallone, Department of Computer Science and Software Engineering

Monmouth/Ocean Coastal Community Database

Students: Christopher McKenna, Zahra Yaramadi

Mentor: Susan Forquer Gupta, Ph.D., Department of Marketing & International Business

Assessing Climate Impacts on Maritime Tree Species Using Dendrochronology

Students: Jeff Dudek, Kelsey Connelly, Matthew Francis

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Assessing Coastal Lakes in Monmouth County

Students: Erin Conlon, Daniel Gerdon

Mentor: Jim Nickels, UCI marine scientist

Assessment and Inventory of New Jersey Coastal Fisheries

Students: Gina Badlowski, Jarius Bradley

Mentor: Keith Dunton, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program



2016

Assessment and Inventory of New Jersey Coastal Fisheries

Students: Marissa DeTorre, Matthew Francis, Shannon Lavelle, Alexander Salamone, and Jeffrey Webb

Mentor: Keith Dunton, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Coastal Identity in Counseling

Student: Christine Hennigan

Mentor: Laura Schmuldt, Ph.D., Department of Psychological Counseling

Coastal New Jersey Small Business Website

Student: Morissa Schwartz

Mentor: Deanna Shoemaker, Ph.D., Department of Communication

Collection and Analysis of Physico-Chemical Parameters of Water for Assessment of Intertidal Coastal Ecosystems

Student: Crystal Diaz

Mentor: Dmytro Kosenkov, Ph.D., Department of Chemistry and Physics

Digital Data Mining and Pattern Analysis

Students: Abid Khan, Sravan Kumar Puvvula, Rajesh Veeraballi

Mentor: Charles Willow, Ph.D., Department of Management and Decision Sciences

Food Recovery Network (FRN) at Monmouth

Student: Susan Pagano

Mentor: Nancy Mezey, Ph.D., Department of Political Science and Sociology

Impacts of Anthropogenic Factors on Ecosystem Processes of Coastal Ecosystems

Students: Kristina Guarino, Kristen Jezycki, Kylie Johnson, Rebecca Klee

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/ Marine and Environmental Biology and Policy Program

Mapping of Plastics in the Coastal Marine Environment

Students: Marc Mole and Alexander Salamone

Mentor: Jim Nickels, UCI marine scientist

Tracing Nitrogen Deposition Affects on Salt Marshes Using Nitrogen Isotopes

Student: Cayla Sullivan

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/ Marine and Environmental Biology and Policy Program

Environmental DNA (eDNA) in Wreck Pond

Students: Tatiana Castro, Chelsea Soriano, Cayla Sullivan

Mentor: Christine Thompson, Ph.D., Department of Biology

Environmental DNA (eDNA) in Lake Takanassee

Students: Nicole Sivetz, Sarah Falotico, Hemangi Patel

Mentor: Martin Hicks, Ph.D., Department of Biology

The National Flood Insurance Program Community Rating System (CRS)

Students: Albert Shalom, David Morales

Mentor: Michael Schwebel, Ph.D., UCI community resilience and climate adaptation specialist

Oyster Restoration in Barnegat Bay

Students: Gabriella Gerber, Sydney Lucas, Cameron McMath

Mentor: Christine Thompson, Ph.D., Department of Biology

2015

Creating Inundation Awareness: Flood Elevation Monitoring in Northeast Monmouth County

Students: Taylor Donovan, Kristina Guarino, Kristen Jezycki, Christopher Paone

Mentor: Jim Nickels, UCI marine scientist

Is the Invasive Asian Shore Crab (*Hemigrapsus Sanguineus*) Expanding into Upper Barnegat Bay?

Students: Emily Cristiano, Kylie Johnson, Kristen Ranges and Jeffrey Webb

Mentor: John Tiedemann, School of Science assistant dean

Understanding the Physiology and Behavior of Angled and Air-Exposed Striped Bass Using a Rapid Assessment Approach

Students: Emily Cristiano, Kylie Johnson, Kristen Ranges

Mentor: John Tiedemann, School of Science assistant dean

Characteristics of Eastern Oyster Populations in the Upper East River, New York

Students: Rebecca Klee, Amanpreet Singh, Chelsea Soriano

Mentor: Tiffany Medley, Ph.D., Department of Biology

2014

Carbon Sequestration of Native and Invaded Dunes

Students: Taylor Rodenberg, Toniann Keiling, Ashley Wriedt

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/ Marine and Environmental Biology and Policy Program

Challenges in Viticulture

Students: Alexandra Stucy, Ashley Wriedt, Toniann Keiling, Taylor Rodenberg

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/ Marine and Environmental Biology and Policy Program

Hydrography and Water Quality of the Lower Whale Pond Brook Watershed

Students: Mara Cige, Emily Cristiano, Jessica Heckman, Katherine Norris

Mentor: Jim Nickels, UCI marine scientist

Intertidal Survey and Analysis Of *Crassostrea Virginica* in The Hudson River Estuary

Students: Megan O'Donnell, Emily Caputo

Mentor: Tiffany Medley, Ph.D., Department of Biology



Ghost Fishing

In 2015, the UCI and Monmouth students began a two-year NOAA-funded project to take on the problem of “ghost fishing” in Barnegat Bay—when abandoned crab traps continue to lure and kill marine animals without any purpose. Crews alternated trips, with some focused on mapping the pots using side-scan SONAR, and others focused on removing them. The crews would locate nearly 1,300 derelict pots and a plethora of other debris, such as tires, electric cables, propellers, and a capsized boat that hadn’t been charted.

Comparison of Ichthyoplankton Collected During Diel (24-Hour) Sampling Events in Barnegat Bay

Students: Kristina Guarino, Kristen Jezyski

Mentors: Ursula Howson, Ph.D., Department of Biology;
Jim Nickels, UCI marine scientist

Seasonal and Spatial Trends in Gelatinous Macrozooplankton in a Mid-Atlantic Estuary

Student: Mackenzie Roche

Mentors: Ursula Howson, Ph.D., Department of Biology;
Jim Nickels, UCI marine scientist

2013

Annual Trend in the Distribution and Abundance of Ichthyoplankton in Barnegat Bay

Students: Katherine Markowitz, Erik Bugenhagen,
Grace McIlvain

Mentors: Ursula Howson, Ph.D., Department of Biology;
Jim Nickels, UCI marine scientist

Comparison of Disturbed And Non-Disturbed Hardwood Forest

Students: Chelsea Barreto, Carleigh Engstrom, Lauren Hitchner, Lael Phillips, Anastasia Van Ryck Degroot

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/
Marine and Environmental Biology and Policy Program

Diel Megalopae of Barnegat Bay

Student: Megan O'Donnell

Mentors: Ursula Howson, Ph.D., Department of Biology;
Jim Nickels, UCI marine scientist

Effects of Superstorm Sandy on Lake Takanassee in Long Branch, New Jersey

Students: Chelsea Barreto, Carleigh Engstrom, Lauren Hitchner, Lael Phillips, Anastasia Van Ryck Degroot

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/
Marine and Environmental Biology and Policy Program

Macrozooplankton of Upper Barnegat Bay

Students: Keith Leonard, Stephanie Mygas, Eric Pusey,
Ryan Casey, Devin Green

Mentor: John Tiedemann, School of Science assistant dean

Practices in Viticulture

Students: Chelsea Barreto, Carleigh Engstrom, Lauren Hitchner, Lael Phillips, Anastasia Van Ryck Degroot

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/
Marine and Environmental Biology and Policy Program

Seasonal and Spatial Trends in Gelatinous Macrozooplankton in a Mid-Atlantic Estuary

Student: Ryan Corbett, Mackenzie Roche

Mentors: Ursula Howson, Ph.D., Department of Biology;
Jim Nickels, UCI marine scientist

The Effect of Hurricane Sandy on Copepod Abundance in Barnegat Bay

Student: Chloe Baskin

Mentors: Ursula Howson, Ph.D., Department of Biology;
Jim Nickels, UCI marine scientist

Water Quality Monitoring of Barnegat Bay

Students: Michael Ruth, Charlotte Maiden

Mentor: Jim Nickels, UCI marine scientist

2012

Early Stages in Viticulture

Students: Peter Chace, Brett Gilmartin, Mitchell Mickley

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/
Marine and Environmental Biology and Policy Program

Impacts of Beach Nourishment On Asiatic Sand Sedge Invasion

Students: D. Patrick James, Lucas Rhoads, Andrew Bohackyj

Mentor: Pedram Daneshgar, Ph.D., Department of Biology/
Marine and Environmental Biology and Policy Program

Gelatinous Macrozooplankton of Upper Barnegat Bay

Students: Lorina Cacoilo, Keith Leonard, Dakota Perry,
Danielle Puma, Nicole Wisniewski

Mentor: John Tiedemann, School of Science assistant dean

Implications of Invasive Species on Breeding Success of Northern Diamondback Terrapin

Students: Chelsea Barreto, Kevin Dillon, Marvin Dobra

Mentors: Dana Ehret, Ph.D., and Pedram Daneshgar, Ph.D.,
Department of Biology

Skeletochronology as a Method of Age Assessment in Diamondback terrapins (*Malaclemys terrapin terrapin* and *Malaclemys terrapin rhizophororum*)

Students: Chelsea Bray, Cristina Lezcano

Mentor: Dana Ehret, Ph.D., Department of Biology

Barnegat Bay Ambient Water Testing

Students: Kyle Hunt, Bryan Hewins, Shelby Whitebread,
Chandler Shaeffer

Mentor: Jim Nickels, UCI marine scientist





Gen. Washington's Lost Galley

When master's degree candidate Jaclyn Urme took a marine archaeology course taught by UCI Marine Scientist Jim Nickels and Professor Richard Veit, it launched a new career passion and a search for a lost Revolutionary War vessel sunk in Bordentown. Thanks to their efforts, the 1778 wreck was found. The quest took on special significance for Urme, a naval veteran and social worker at Joint Air Force Base McGuire-Dix-Lakehurst who attended Monmouth on a G.I. Bill. For her thesis, she interviewed regional historians and pored over historical accounts from civilians living in the area and soldiers who fought on both sides of the war in an attempt to learn more about the vessel. Records indicate that it was part of a fleet of ships that George Washington, then camped at Valley Forge, ordered to be hidden in the creeks that fed the Delaware River and destroyed rather than fall into enemy hands.

Ichthyoplankton of Barnegat Bay

Students: Chandler Shaeffer, Katherine Markowitz, Bryan Hewins, Kyle Hunt, Shelby Whitebread

Mentors: Ursula Howson, Ph.D., Department of Biology; Jim Nickels, UCI marine scientist

Relationship of Abiotic Factors to Abundance and Distribution of Gelatinous Macrozooplankton in Barnegat Bay

Students: Shelby Whitebread, Chandler Shaeffer, Katherine Markowitz, Bryan Hewins, Kyle Hunt

Mentors: Ursula Howson, Ph.D., Department of Biology; Jim Nickels, UCI marine scientist

Water Quality Monitoring of Whale Pond Brook & Lake Takanassee

Students: Kyle Hunt, Bryan Hewins, Chandler Shaeffer, Shelby Whitebread,

Mentor: Jim Nickels, UCI marine scientist

2011

Macrozooplankton of Upper Barnegat Bay

Students: Ryan Gergely, Keith Leonard, Shelby Whitebread, Nicole Wisniewski, Emily Schaffer

Mentor: John Tiedemann, School of Science assistant dean

Nuisance Gelatinous Macrozooplankton of Upper Barnegat Bay

Students: Ryan Gergely, Keith Leonard, Shelby Whitebread, Nicole Wisniewski, Emily Schaffer

Mentor: John Tiedemann, School of Science assistant dean

Water Quality Monitoring of Whale Pond Brook and Lake Takanassee

Students: Christiana Brock, Katherine Markowitz, Allison Crawford, Catherine Leech, Elizabeth Kang

Mentor: Jim Nickels, UCI marine scientist

2010

Water Quality and Benthic Habitat Mapping

Students: Drew Hitchner, Erik Weber, John Marion, Anthony Arunkumar

Mentor: Jim Nickels, UCI marine scientist

2009

Effects of Ocean Acidification on Survival, Condition, and Behavior of Larval Fish

Students: Allison Bennett, Emma R. K. Simon

Mentors: Ursula Howson, Ph.D., Department of Biology

Semantic Web Technologies

Student: Jansen Orfan

Mentor: Richard Scherl, Ph.D., Department of Computer Science and Software Engineering

Benthic Habitat Assessment

Students: Lily Diehl, Tristan Hollingsworth, Alexa Kretsch, Chris Snyder, Katelynne Wolf

Mentor: Jim Nickels, UCI marine scientist





Advancing Faculty Research, Service Goals

UCI Faculty Enrichment Grants are a vital resource for Monmouth faculty to advance individual and collaborative projects that improve class experiences and create research, scholarship, and team-teaching opportunities. Administered through the Heidi Lynn Sculthorpe Scholars program, the grants are available to faculty in all schools and departments whose proposals tie to the UCI's mission.

Faculty members have successfully used these funds as a kickstarter for longer-term research projects that were funded by outside organizations. Students have also received UCI support to serve as researchers on these efforts.

Funds are also available to assist with short-term needs such as conference fees, aid for organizing events, equipment and supply purchases, and course-related activities. Read on to learn about the variety of ways Monmouth faculty have taken advantage of these grants.

A Bold Path Forward

The UCI will deepen the funding pool for faculty projects, making more and larger grants available and creating more student support positions. The expanded collaboration with faculty and students interested in marine, coastal and environmental studies at Monmouth will create new opportunities for the UCI and researchers of all disciplines on campus.

Top: Local youths try on ocean-themed masks they created as part of Professor Kimberly Callas' "Discovering the Ecological Self" program.

Faculty Enrichment Grants

includes project/activity title and recipients

2024

The Role of Water and Water-Based Chemistry in Biomimicry

Veronica Davidov, Ph.D., Department of History and Anthropology

2023

E.F. Schumacher and the Development of Ecological Economics

Robert Scott, Ph.D., Department of Economics, Finance, and Real Estate

2022

Superstorm Sandy and Monmouth County 10th Anniversary Interviews

Melissa Ziobro, M.A., Department of History and Anthropology

Ecotherapy: Taking it into Practice

Megan Delaney, Ph.D., LPC, Department of Professional Counseling

Karen Bright—Throughline with Just Beachy/After Sandy

Karen Bright, MFA, Department of Art and Design

Going Green Across the Garden State: Fostering the Formation of Green Teams in New Jersey School Districts

Michelle Schpakow, Ed.D., Department of Curriculum and Instruction; John Henning, Ph.D., School of Education

Ruin/Regeneration: A Sculptural Installation

Susan Meyer, MFA, Department of Art and Design

2021

Counseling with Nature: A Qualitative Study of the Experiences of Ecotherapy Clients

Megan Delaney, Ph.D., LPC, Department of Professional Counseling

Experiences of Youth Climate Activists

Alyson Pompeo-Fargnoli, Ph.D., Department of Educational Counseling and Leadership; Melissa Alvaré, Ph.D., Department of Political Science and Sociology

Sea Level Rise – Flood Risk, Property Values and Income Effects on New Jersey's Coastal Communities

Gina McKeever, MBA, Department of Finance, Economics and Real Estate

Are Ghost Forests Really Forests or Salt Marshes? Exploring the Impacts of Sea Level Rise and Flooding on Coastal Forest Communities

Pedram Daneshgar, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

2020

The Interface between Marine Biology and Creative Microscopic Inhabitants of the Sea

Patricia Cresson, MFA, Department of Art and Design

Paradoxical Paradise: Asbury Park, An African American Oral History and Mapping Project Phase I: Investigating Impacts of the COVID-19 Pandemic and Historic Health Disparities Learner

Hettie Williams, Ph.D., Melissa Ziobro, M.A., and Geoffrey Fouad, Ph.D., Department of History and Anthropology

Nourishing Book Deserts: Providing Access to Authentic and Relevant Interdisciplinary and Inclusive Books for Coastal Communities

Kenneth Kunz, Jason Fitzgerald, Ph.D., and Michelle Schpakow, Ed.D., Department of Curriculum and Instruction; Lori Burns, Department of Educational Counseling and Leadership; and Kurt Wagner, university librarian



Sandy Oral Histories

With UCI grant support, Professor Melissa Ziobro conducted oral history interviews with 21 homeowners, first responders, government officials, nonprofit leaders, social workers, and others impacted by Superstorm Sandy. The interviews, completed in advance of the storm's 10th anniversary in 2022, joined 17 others she conducted five years earlier. Together, the recordings and transcripts create an invaluable record for generations to come, adding to our understanding not just of Sandy as a historic event, but contributing to conversations on themes including coastal resilience, climate change, environmental justice, public/private partnerships, and emergency preparedness.



Ecotherapy: Improving Mental Health Through Nature

If you consider the beach your happy place, there's a growing body of evidence showing you're right. Associate Professor Megan Delaney, Ph.D., teaches courses on ecotherapy, which focuses on contact with nature as a method or element of counseling. According to Delaney, studies have indicated that regular exposure to the environment can reduce stress, obesity, childhood anxiety, and carry other mental and physical health benefits. Delaney has secured multiple UCI faculty enrichment grants to conduct research on ecotherapy with the support of student assistants, all of whom have graduated and are now doing ecotherapy work.

2019

Just Beachy - After Sandy Fall 2019 Art Exhibit Support

Karen Bright, MFA, Department of Art and Design

Deoxygenation, Harmful Algal Blooms and Fish Kills in The Shrewsbury River: A Case Study in Anthropogenic Impacts to Estuarine Waters

Jason Adolf, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Building a Multi-Institutional Collaborative Effort for Pelagic Shark Research Within the Mid-Atlantic Bight

Keith Dunton, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Evaluating the Use of Coastal Lakes by Anurans in New Jersey

Sean Sterrett, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Design of a Mobile App Platform or The Exploration of Career Paths in Marine Biology for High School Students and College Freshmen

Lihn Dao, Department of Art and Design

Development of an Art & Ecology Education Residency Experience for Monmouth Students at Joya, Velez-Blanco, Spain

Kimberly Callas, MFA, Department of Art and Design



Using Fractal Patterning to Explore the Coastline and the Human Body

Karen Pesce, Ph.D., Department of Biology, and
Sandra Zak, Ph.D., Department of Mathematics

Coastal Cultures for the Elementary Learner

Geoffrey Fouad, Ph.D., Department of History and
Anthropology; Erin Fleming, Production Services

Panel Chair and Presentation at 44th Annual Caribbean Studies Association Conference

Paul Humphrey, Ph.D., Department of World Languages
and Cultures

2018

Beach Towels – Artwork Inspired by the Physical Data Collected During Sandy

Karen Bright, MFA, Department of Art and Design

Service Learning and Community Engagement (SLCE) Oral History of Asbury Park Residents

Deanna Shoemaker, Ph.D., Department of Communication

The Condition of Tappan Zee – Haverstraw Bay Wild Oysters and Suitability for Continued Oyster Restoration in the Area

Tiffany Medley, Ph.D., Department of Biology

Cyanobacterial Harmful Algal Blooms (CHAB) in New Jersey Coastal Lakes: An Experimental Assessment of Deal Lake in Monmouth County

Jason Adolf, Ph.D., Department of Biology/Marine and
Environmental Biology and Policy Program

Discovering the Ecological Self

Kimberly Callas, MFA, Department of Art and Design

Disappearing Cattails: Documentary Video Project

Dickie Cox, MFA, Department of Communication

Assessing Student Outcomes of Discovering the Ecological Self

Megan Delaney, Ph.D., LPC, Department of Professional
Counseling

Establishing a Gillnet Survey to Examine Population Demographics of Atlantic Sturgeon within the Restricted Waterways of Naval Station Earle and Sandy Hook Bay

Keith Dunton, Ph.D., Department of Biology/Marine and
Environmental Biology and Policy Program

Impact of Interdisciplinary Team Teaching on Development of Student Critical Thinking Skills

Heide Estes, Ph.D., Department of English; Catherine Duckett,
Ph.D., School of Science associate dean

Aerial Drone Applications in Environmental Mapping and Education

Geoffrey Fouad, Ph.D., Department of History and
Anthropology

Using Population Genetics to Inform Management of New Jersey Fisheries

Megan Phifer-Rixey, Ph.D., Department of Biology

What Lies Beneath? – Identification and Cataloging of N.J. Shipwreck Resources

Richard Veit, Ph.D., Department of History and Anthropology

2017

Evaluating Essential Finfish Habitat and Movements within the Leased New York Wind Energy Area

Keith Dunton, Ph.D., Department of Biology/Marine and
Environmental Biology and Policy Program

Exploring the Factors that Affect Juvenile Tree Growth and Survival in a Maritime Forest

Pedram Daneshgar, Ph.D., Department of Biology/Marine and
Environmental Biology and Policy Program

Locally Based Mathematical Modeling

Joseph Coyle, Ph.D., Department of Mathematics

2016

Statistical Design and Analysis of Biological Experiments

Pedram Daneshgar, Ph.D., Department of Biology/Marine and
Environmental Biology and Policy Program

Evaluating Habitat Use of Sturgeon Around Naval Weapons Station Earle Pier

Keith Dunton, Ph.D., Department of Biology/Marine and
Environmental Biology and Policy Program

Integrating Emerging Technology Tools of Fisheries Science into the Classroom

Keith Dunton, Ph.D., Department of Biology/Marine and
Environmental Biology and Policy Program; Jim Nickels, UCI
marine scientist



Professor Pedram Daneshgar uses a tool to study core samples from trees in a New Jersey maritime forest.



Professor Deanna Shoemaker (second from r) and a team of students conducted oral history interviews with Asbury Park residents.

Tracking Nitrogen Deposition Effects on Salt Marshes

Pedram Daneshgar, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Walkability and Bikeability of the Jersey Shore

James Konopack, Ph.D., Department of Health and Physical Education; Stephen Chapman, Ph.D., Department of Political Science and Sociology

Automatic System for Collection of Physico-Chemical Parameters of Water for Assessment of Intertidal Coastal Ecosystems

Dmytro Kosenkov, Ph.D., Department of Chemistry and Physics; Pedram Daneshgar, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Evaluating the Potential Habitat Use of the Endangered Atlantic Sturgeon in Sandy Hook Bay

Keith Dunton, Ph.D., Department of Biology/Marine and Environmental Biology and Policy Program

Understanding the Physiology and Behavior of Angled and Air-Exposed Striped Bass Using a Rapid Assessment Approach

John Tiedemann, School of Science assistant dean

eDNA Laboratory Protocols and Wreck Pond Sampling Project

Christine Thompson, Ph.D., and Martin Hicks, Ph.D., Department of Biology

Coastal Aerial Photography and Video

Mark Ludak, MFA, Department of Art and Design

Class Magazine Mini-Grant

Shirley Crenshaw, Ph.D., Department of Chemistry and Physics

Hands-on Foldscope Demonstration at the National Science Teachers Association Conference

Judith Bazler, Ed.D., School of Education



Support for the Arts



Some of the UCI's proudest collaborations have been with the talented and imaginative art students and faculty on campus. Among them:

Sandy Art Exhibition:

In 2019 the UCI supported “Just Beachy/After Sandy,” featuring the work of Karen Bright, MFA, professor emerita in the Department of Art and Design, and Amanda Stojanov, MFA, assistant professor in the Department of Communication. The exhibition captured the destructive force of Hurricane Sandy and the mounting threats of climate change and sea level rise through abstract and participatory works of art.

Artist-in-Residence:

From 2021-22, the UCI was fortunate to have its own artist-in-residence, Kimberly Callas, MFA, associate professor in the Department of Art and Design, the creator of Discovering the Ecological Self (discoverecoself.org). The program provides at-risk youth with opportunities to take field visits and classroom lessons focused on nature-based topics, explore them from philosophical and cultural

perspectives, and create works of art inspired by them. Callas featured works she created during her time as artist-in-residence in the 2025 “Ocean Bodies” exhibition on campus.

Microscopic Marine Life:

The UCI awarded a grant to Pat Cresson, MFA, professor emerita in the Department of Art and Design, in 2020 to create a collection depicting unicellular and microscopic organisms that are abundant in our waters. The works were displayed in a 2023 retrospective show on campus, “PAT CRESSON: Taking a Leap – The Power of the Natural World, 45 Years of Creative Work.”

Ocean Event Posters:

With supplies purchased by the UCI, students in a digital illustration course taught by Jing Zhou, MFA, professor in the Department of Art and Design, designed a series of posters in 2019 promoting real and fictitious events about the ocean and coastal ecosystems. The posters can be seen hanging in the hall outside the UCI's office.



TOP LEFT: Professor Karen Bright shows Acting NOAA Administrator Timothy Gallaudet artwork from her “Just Beachy/After Sandy” exhibition. TOP RIGHT: Then-UCI Artist-in-Residence Kimberly Callas at work in 2021. BOTTOM LEFT: Professor Pat Cresson in her home studio. BOTTOM RIGHT: A poster created by a student of Professor Jing Zhou.



HIGH ABOVE THE
OCEAN'S ROAR,
THE BLUE HAWKS
TO MEET THE WIND

Urban Coast Institute Endowed Scholars

The UCI established its first endowed scholarships in 2020 to support undergraduate students at Monmouth with a demonstrated interest in coastal, marine, and environmental studies. The scholarships aim to encourage Monmouth students to become active, global citizens while fostering an understanding of the coastal and marine environment and communities, legal studies, public policy, and research methods.

The scholarships debuted at a time when families were experiencing widespread economic hardships as a result of the COVID-19 pandemic. The aid has helped widen access to a Monmouth education for students by lowering tuition burdens and alleviating debt upon graduation. Award amounts have increased each year thanks to the continued generosity of donors and the families that endowed scholarships in their names.

A Bold Path Forward

UCI endowed scholarship funds will be grown to levels where they can offset a significantly higher percentage of awardees' tuition costs.



Scholarship Recipients

with academic years received and majors

Ann and Alfred L. Ferguson '13HN UCI Endowed Scholarships

Riya Ajmera (2021-24), chemistry with a concentration in biochemistry and communication with a concentration in journalism and public relations

Lejla Canka (2021-23), political science with a concentration in international relations

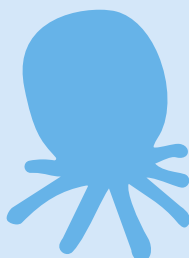
Mia Najd (2022-23), marine and environmental biology and policy

Samantha Pawlik (2021-22), political science with a concentration on legal studies

Christopher Reigel (2024-25), marine and environmental biology and policy

Adriana Simancas (2023-24), marine and environmental biology and policy

Brooke van de Sande (2023-25), marine and environmental biology and policy



MacDonald Family UCI Endowed Scholarship

Jasmine Barzin (2022-24), marine and environmental biology and policy

Nicole Cappolina (2022-24), marine and environmental biology and policy

Erica Santos-Reyez (2021-22), political science with a concentration in international relations

Siena Zisa (2024-25), marine and environmental biology and policy

Rita Mangan UCI Endowed Scholarship

Christopher Meehan (2023-24), marine and environmental biology and policy

Rebecca Pimentel (2024-25), marine and environmental biology and policy

Urban Coast Institute Endowed Scholarship

Jessica Maguire (2022-24), marine and environmental biology and policy

Sage Phelps (2024-25), marine and environmental biology and policy



Jean-Michel Cousteau in 2011.

Champions of the Ocean:

Hosting Ocean Luminaries and Leaders at Monmouth

As a marine research and policy institute located a mile from the ocean, the UCI believes it has a special educational role that extends beyond the classroom to the vibrant shore communities that surround its campus. Each year, the UCI organizes public events that serve as valuable forums for dialogue on ocean issues as well as a showcase for Monmouth's facilities and programs.

The UCI's signature annual event is its Future of the Ocean Symposium and Champion of the Ocean Awards. The symposium is a free and public event where the year's honorees share their stories and perspectives with attendees. It is typically followed by a Champion of the Ocean Awards reception, the UCI's prime annual fundraiser for student experiences and research activities highlighted in this publication. The event is made possible through the generosity of the **Leslie Hitchner Family**.

The Champion of the Ocean Award was established in 2005 to honor individuals who have demonstrated sustained leadership that ensures coasts and oceans are clean, safe, sustainably managed, and preserved for the benefit and enjoyment of future generations.

A Bold Path Forward

The UCI will increase sponsorships to grow the Champion of the Ocean Awards event's strength as a fundraiser for student research.

2005-24 Honorees

National Champion of the Ocean

2023: Margaret Leinen, Ph.D., Scripps Institution of Oceanography director; **Richard Spinrad, Ph.D.**, National Oceanic and Atmospheric Administration (NOAA) administrator

2019: Rear Admiral Timothy Gallaudet, NOAA deputy administrator

2018: Marcia McNutt, Ph.D., National Academy of Sciences president; former New Jersey Govs. **Thomas Kean** and **James Florio**, honorary co-chairs of the New Jersey Climate Adaptation Alliance

2017: Barry Gold, Walton Family Foundation environmental program director; **Biliana Cicin-Sain, Ph.D.**, director, Gerard J. Mangone Center for Marine Policy at the University of Delaware

2016: Robert Ballard, Ph.D., Ocean Exploration Trust president; **Christine Todd Whitman**, former New Jersey governor and EPA administrator

2015: Sylvia Earle, Ph.D., National Geographic Society explorer-in-residence; **Terry Garcia**, National Geographic Society chief science and exploration officer

2014: Kathryn Sullivan, Ph.D., NOAA administrator; **Wendy Schmidt**, Schmidt Family Foundation president and co-founder of Schmidt Ocean Institute

2013: Admiral Thad Allen, USCG (ret.), Booz Allen Hamilton executive vice president

2012: Jesse H. Ausubel, director of the Program for the Human Environment at the Rockefeller University and vice president for programs of the Alfred P. Sloan Foundation

2011: Jean-Michel Cousteau, Ocean Futures Society president

2010: Carl Safina, Ph.D., Blue Ocean Institute president and co-founder

2009: Lillian C. Borrone, member of U.S. Commission on Ocean Policy and Joint Ocean Commission Initiative and former port director, Port Authority of NY/NJ



2008: Congressman James Saxton (New Jersey D-3); **Shirley A. Pomponi, Ph.D.**, executive director, Harbor Branch Oceanographic Institute, Florida Atlantic University

2007: Jerry Schubel, Ph.D., president and CEO of the Aquarium of the Pacific; **Ted Ames**, director of the Lobster Hatchery in Stonington, Maine

2006: Robert Gagosian, Ph.D., past president and director of the Woods Hole Oceanographic Institution

2005: Leon Panetta, Pew Ocean Commission chair; Admiral James Watkins, U.S. Commission on Ocean Policy chair

Regional Champion of the Ocean

2019: Bradley Campbell, Conservation Law Foundation president

2016: Donald Boesch, Ph.D., University of Maryland Center for Environmental Science president

2015: Richard B. Robins, Mid-Atlantic Fishery Management Council chair; **Ernie Panacek**, Garden State Seafood Association president; **Jay Odell**, Mid-Atlantic marine program director, The Nature Conservancy





Ocean explorer explorer Sylvia Earle in 2015.

State, Coastal and Ocean Leadership

2024: Genevieve Clifton, New Jersey Department of Transportation (NJDOT) Office of Maritime Resources manager; **Scott Douglas**, NJDOT dredging program manager; **Dave Golden**, New Jersey Department of Environmental Protection (NJDEP) assistant commissioner; **Virginia Rettig**, Edwin B. Forsythe National Wildlife Refuge manager

2023: Tim Dillingham, American Littoral Society executive director; New Jersey State Sen. **Bob Smith** (D-17)

2019: Scott Glenn, Ph.D., Rutgers University Department of Marine and Coastal Sciences distinguished professor

2018: David Kinsey, Mark Mauriello, Norbert Psuty, and **John Weingart**, for their contributions to the creation and success of New Jersey's Coastal Management Program

2016: David Rosenblatt, NJDEP assistant commissioner of engineering and construction; **Elizabeth Semple**, NJDEP Office of Coastal and Land Use Planning assistant director

2012: Lawrence R. Dickerson, Diamond Offshore Drilling, Inc., president and CEO; **Cristopher Koch**, World Shipping Council president and CEO; **Rear**

Admiral Richard M. Larrabee, USCG (ret.), Port Authority of NY/NJ port commerce director

2011: Kenneth E. Pringle, Esq., founding member Pringle Quinn Anzano, and former mayor of Belmar

2010: New Jersey State Sen. Joseph M. Kyrillos, Jr. (D-13); **John Wnek**, Marine Academy of Technology and Environmental Science vice principal; **Steve Zeck**, volunteer for Jacques Cousteau National Estuarine Research Reserve, Rutgers Marine Field Station

2009: Claire Antonucci, New Jersey Marine Sciences Consortium/New Jersey Sea Grant Consortium vice president for education and acting president; **Barbara Boyd**, Marine Academy of Science and Technology teacher of oceanography; **Rosemary Brewer**, volunteer committed to enhancing life in coastal communities

2008: J. Fred Grassle, Ph.D., founding director, Rutgers University Institute of Marine and Coastal Sciences; **Margo Pellegrino**, citizen ocean activist

2007: Robert B. Abel, Ph.D., former director of the National Sea Grant, president of the New Jersey Marine Sciences Consortium and senior scientist at the Stevens Institute of Technology (posthumously); **Thomas Gagliano**, Jersey Shore Partnership chairman

2006: William Rosenblatt, Ed.D., former mayor of Loch Arbor and Surfrider Foundation Chair; **Tom Fote**, Jersey Coast Anglers Association chairman



Monmouth University President Patrick F. Leahy kicks off the 2023 Future of the Ocean Symposium.

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to develop the skills necessary to become leaders in environmental management, coastal resilience and sustainability. Reliance on annual funds, presents a challenge for the continued sustainability of the UCI, its programs, and the students it serves. The need for transformational commitments today is vital to ensure ongoing dividends of the UCI's work and assure support for its ambitious vision for the future.

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