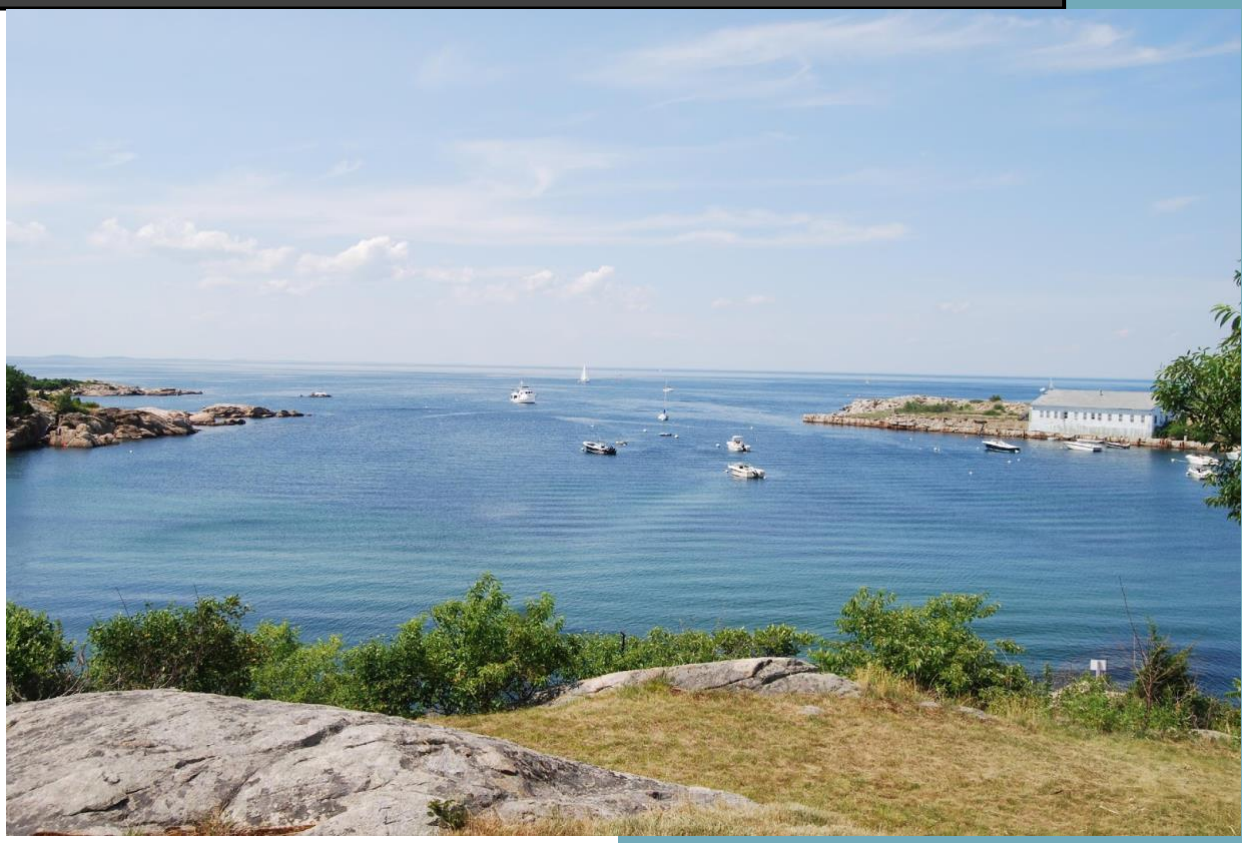
2021

Northeast Center for Coastal Resilience Directory



KOSTAS ANDREADIS
Assistant Professor
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Flooding, Machine learning, Remote sensing
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Dr. Kostas Andreadis has been an Assistant Professor in the Civil and Environmental Engineering department since 2018. He received his Ph.D. in Civil and Environmental Engineering from the University of Washington in 2009, and after spending two years as a post-doctoral researcher at Ohio State University's Byrd Polar Research Center, he went on to become a Research Scientist at NASA's Jet Propulsion Laboratory in 2011. Dr. Andreadis has a broad interest in water resources and his research has focused on the intersection between applied hydrologic modeling and remote sensing, data assimilation, as well as the study of large-scale hydrology as it relates to climate change and environmental monitoring. In 2015 he was the recipient of the NASA Early Career Achievement Medal for his work in developing a framework for assimilating satellite and other datasets into land surface models.

NICK ANGUELOV
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Nick studies prioritizing sustainability in economic development policies, the political will to support sustainability mandates and the market structures for the implementation of sustainable production and operation practices. He analyzes the policy diffusion of sustainability mandates and the cultural diplomacy through which informal governance has an impact on sustainability policy learning and design. Nick offers applied examples of this interplay through his works on international fashion economics, renewable energy, economic sanctions and soft power, illegal marijuana markets and trade, and the global brand proliferation of multinational corporations.

CAMILLE BARCHERS
Assistant Professor
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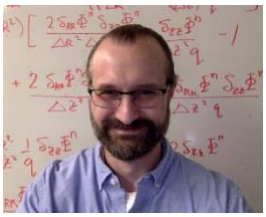
Camille Barchers has practiced as a regional planner throughout Florida, the Southeast and mid-Atlantic. Prior to joining LARP, Camille taught in the Leadership Education and Development program at the Georgia Institute of Technology. Camille's work examines how planners use technology and how it changes the way we engage with the public. Her research interests include community engagement via information & communication technology, big data applications for equitable long-range planning, and the interaction between land use & transportation planning.



MATT BARLOW
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Heavy precipitation and flooding, Heat waves
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Dr. Barlow is a Professor of Climate Science in the Department of Environmental, Earth and Atmospheric Sciences at the University of Massachusetts Lowell. His research interests focus on the influence of large-scale climate variability and change on local conditions of importance to society, with an emphasis on drought and precipitation extremes in locations ranging from the Northeast US to the Middle East. His research has been supported by NSF, NOAA, and NASA, and he has served as a US CLIVAR panelist and Extremes Working Group co-chair, an editor for the Journal of Climate, on the AMS Applied Climatology Committee, and on the AMS Board of Higher Education. He is currently a Lead Author in Working Group I for the IPCC Sixth Assessment Report, the extreme precipitation team leader for the climate assessment currently being prepared for the greater Boston area, and a member of NOAA's Fourth Drought Task Force (DTF4).

RYAN D BEEMER
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Dr. Ryan D Beemer is a geotechnical engineering assistant professor in the Department of Civil and Environmental Engineering at the University of Massachusetts Dartmouth. He received his PhD from Texas A&M University in 2016 and completed his postdoctoral research at the University of Western Australia. He is an experimentalist, with a background in laboratory soil element testing and geotechnical centrifuge scale modeling. His research interests include marine soil mechanics, foundation and anchoring systems for marine infrastructure, and infrastructure sensing systems.

DAVID BOUTT
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David Boutt (@davidboutt) is a professor of Hydrogeology in the Department of Geosciences at UMass-Amherst. His research interests focus on understanding the governing physical processes associated with the movement of water in subsurface and near surface systems. His research group uses numerical modeling and field observations of physical and geochemical properties of water to constrain rates and movements of water in terrestrial and coastal systems.

CASEY BROWN
Professor
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UMass Amherst
Decision making under climate uncertainty, Risk analysis, Machine learning applications to climate prediction
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Dr. Casey Brown is an internationally recognized expert in water resources systems analysis and climate risk assessment. Dr. Brown is Professor of Civil and Environmental Engineering at the University of Massachusetts at Amherst and Adjunct Associate Research Scientist at Columbia University. His primary research interest is the development of analytical methods for improving the use of scientific observations and data in decision making, with a focus on climate and water resources, and he has worked extensively on projects around the world in this regard. His is funded by NSF, Rockefeller Foundation, NOAA, DoD, WRF among others. He consults for the World Bank, private sector, state agencies and municipalities and serves on the National Academies' Committee on Independent Scientific Review of Everglades Restoration Progress, and the Steering Committees of the Alliance for Global Water Adaptation, World Wildlife Fund Basin Report, and City Water Resilience Framework. He has several awards to his credit, including the Presidential Early Career Award for Science and Engineering, the National Science Foundation CAREER award, the Huber Research Prize from the American Society of Civil Engineers and the Climate Science Award from the California Department of Water Resources.

BOB CHEN
Interim Dean
School for the Environment
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Sensors, Salt Marshes, Ocean Education
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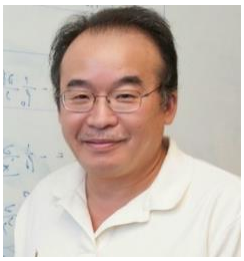
Bob Chen is a professor and the Interim Dean of the School for the Environment at the University of Massachusetts Boston. He received his A.B. from Harvard University in Chemistry and Physics and his Ph.D. in Oceanography from Scripps Institution of Oceanography. After a postdoctoral fellowship at the Woods Hole Oceanographic Institution, he has remained at UMass Boston since 1993. His research interests include carbon cycling in coastal waters, contaminants in urban harbors, and the application of coastal sensor networks to societal needs. He is also dedicated to ocean and environmental science education and outreach at the local, national and international levels. He led the Watershed-Integrated Sciences Partnership (WISP; wisp.umb.edu), COSEE OCEAN (coseeocean.net), Boston Science Partnership, Boston Energy in Science Teaching (bostonscience.net), and NSF IGERT Coasts and Communities (https://www.umb.edu/igert) projects. He has published over 70 peer-reviewed articles in coastal observations, carbon cycling, contaminant distribution and fate, and environmental education.



CHANGSHENG CHEN
Montgomery Charter Chair Professor
School for Marine Science and Technology
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Northeast coastal ocean forecast system developer, Coastal inundation system developer, Northeast biogeochemistry and ecosystem model developer
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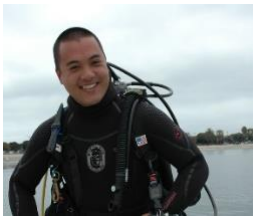
Dr. Chen is an oceanographer with his research activities on modeling and observational explorations of multi-scale ocean circulations, ecosystem dynamics, polar sea ices, and climate change. He has published 130 papers in reputable scientific journals. Dr. Chen is the leader of the Marine Ecosystem Dynamics Modeling Laboratory (MEDM Lab). This lab has developed 1) the unstructured-grid Finite-Volume Community Ocean Model (FVCOM), 2) the Northeast Coastal Ocean Forecast System (NECOFS) with four coastal inundation models in Boston and Scituate Harbors, MA, the Hampton River, NH, and Saco Bay, ME, 3) the Northeast Biogeochemical and Ecosystem Model (NeBEM), and 4) the Global/Arctic Ocean FVCOM nested model system (Global-FVCOM/AO-FVCOM), etc. NECOFS has been placed into the 24/7 forecast operations since 2007.



BRIAN CHENG
Assistant Professor
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Brian Cheng is a field ecologist who asks questions in coastal marine ecosystems. His research focuses on the intersection of climate change, biological invasion, and the interaction among species (e.g. predation). He uses experimental and observational approaches to understand what makes natural ecosystems tick. At UMass Amherst, much of his activity is based out of the Gloucester Marine Station, a marine lab located 1 hour north of Boston. The marine station is an ideal staging area for climate change research in the Gulf of Maine, which is warming faster than 99% of planet Earth. Research in his lab also addresses broad scale questions in marine ecology using meta-analysis approaches, synthesizing data across disparate sources to address general questions in nature.

ANDY DANYKCHUK
Professor of Fish Conservation
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Throughout his life, Dr. Danylchuk has been on a personal crusade to ensure that fish are around for future generations to enjoy, whether on the end of a fishing line, on a dinner plate, or simply to watch in wonder. His work spans both marine and freshwater systems, and includes stress physiology, behavioral ecology, spatial ecology, predator-prey interactions, and adaptations in life history traits as a response to natural and anthropogenic disturbances.

Andy pursued graduate degrees focused on fundamental elements of fish biology and ecology, receiving a Master's degree from Trent University and PhD from University of Alberta. During his PhD, Andy received several awards for teaching and research, including the Peter Larkin Award from the Canadian Aquatic Resources

Section of the American Fisheries Society. Following graduate school, he was instrumental for the development of the Cape Eleuthera Institute, in The Bahamas, before joining the Department of Environmental Conservation at UMass Amherst in 2009.

Much of Andy's current research focuses on evaluating the potential impacts of recreational angling on fish populations and working with stakeholder groups to develop best practices for catch-and-release. Fish species he has studied include bonefish in The Bahamas, Puerto Rico, and the South Pacific, Atlantic tarpon and permit in the Florida Keys, and striped bass and sea-run brook trout in New England. He has also done or continues to do research on fish in Canada, India, Republic of Kiribati, Brazil, Argentina, Bolivia, Costa Rica, Guyana, and the Seychelles. Andy and his graduate students are also working on several species of sharks (great hammerhead, tiger, white sharks), examining their essential habitats and how they interact with humans. Some of this work involves the use of telemetry and associated emerging technologies to understand the ways fish (including sharks) function under "normal" and disturbed conditions, and combines the results of these studies with laboratory and field manipulations to identify specific mechanistic causes of stress.

ROBERT DARST
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Conflict between equitable coastal access and privatization/armoring of the coast.
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Robert Darst is Associate Professor of Political Science at UMass Dartmouth. His past research has focused on environmental politics in Russia and the former Soviet Union, the politics of nuclear waste disposal, and opposition to industrialized animal agriculture. His current research interest is the conflict between those seeking more equitable coastal access and those seeking to restrict such access, a conflict increasingly exacerbated by rising sea levels and coastal armoring.

ROB DECONTO
Co-Director of the School of Earth & Sustainability, Professor
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Rob DeConto is a Professor of Geosciences and Co-Director of the School of Earth & Sustainability at the University of Massachusetts Amherst. Previously, he held research positions at the US National Center for Atmospheric Research and the National Oceanic and Atmospheric Administration. Rob studies polar climate change, the response of ice sheets to a warming climate, and coastal impacts of sea-level rise. Rob serves on international science advisory boards and is a lead author for the Intergovernmental Panel on Climate Change (IPCC).

JOHN DUFF
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Environmental law and policy, Science history and communication
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John Duff is a professor of environmental law and policy in the School for the Environment at the University of Massachusetts Boston. He received his J.D. from Suffolk University and his LL.M. from the University of Washington. He also holds degrees in Business and Journalism. He has worked as a newspaper reporter and radio production associate; an attorney in private practice; general counsel to a marine conservation organization; and, served as president of The Coastal Society. He teaches, researches and writes on issues of ocean and coastal management, planning and land use law, environmental policy, and natural resource management. His research has been employed by legislative committees; cited by state supreme courts; and, integrated into executive branch analyses and reports.

JYNESSA DUTKA-GIANELLI
Senior Research Fellow
Gloucester Marine Station, Department of Environmental Conservation
UMass Amherst
Community engagement, Sustainability, Adaptation
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Jynessa is a senior research fellow the Department of Environmental Conservation, based full-time at the Gloucester Marine Station. She works with integrative fisheries sciences and human dimension of fisheries, engaging local communities and fishing industry partners using participatory research tools; evaluation of management strategies and impacts on fisheries and livelihoods, and initiatives to enhance resources conservation, sustainability, and resilience. Her previous work includes coastal fisheries research in Florida and small-scale fisheries in the Brazilian Amazon.

GAVIN FAY
Associate Professor
School for Marine Science and Technology
UMass Dartmouth
Marine ecosystem-based management, Fisheries decision-making under climate change, Sustainable seafood systems for coastal community wellbeing
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Dr. Gavin Fay (he/him) is an Associate Professor in the Department of Fisheries Oceanography at University of Massachusetts Dartmouth's School for Marine Science and Technology (SMAST). Gavin's research group applies statistical and mathematical models for better ecosystem-based decision making for fisheries and our oceans. He is interested in both developing new methods for statistical modeling, fisheries assessment, and ecosystem-based management; and also, how open data science tools can empower better communication of scientific results for management and policy advice. Gavin received his BSc (Hons) in Marine Biology from the University of Stirling, and his MS & PhD in Aquatic and Fishery Sciences from the University of Washington. At SMAST, Gavin teaches courses in statistics, population modeling, science communication, and Ecosystem-Based Fisheries Management.

Gavin currently serves on the Mid-Atlantic Fishery Management Council's Scientific and Statistical Committee, as well as the New England Fishery Management Council's Ecosystem-Based Fisheries Management Plan Development Team.

JILL FITZSIMMONS
Assistant Research Professor
Department of Resource Economics
UMass Amherst

Jill is an Assistant Research Professor in the Resource Economics Department at the University of Massachusetts Amherst. Jill's research focuses on behavioral models of agricultural producer and consumer choices in imperfectly competitive markets. Jill is interested in practical problems that stakeholders and policy makers face in providing public goods, and particularly in the tension between the effects of market power and policy solutions that engage stakeholders through their preferences for pro-social outcomes. To date, Jill's research focuses on mid-scale intermediated agricultural markets in which producers', processors', and distributors' marketing decisions may be influenced by both market structure and firms' pro-social motivations. Jill combines field research, econometric methods, and theory based in behavioral and industrial organization to develop a model to analyze equilibria and policy interventions in these markets. Jill is motivated to work with community partners and stakeholders to define research questions and projects that have practical public and private applications. Jill's research interests largely stem from practical questions and needs of stakeholders. Jill's pre-PhD career work gave me experience presenting to community stakeholders, and Jill relishes opportunities to make economic research relevant to non-economists.

ROBERT GRIFFIN
Research Assistant Professor
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UMass Dartmouth
Ecosystem services, Public goods, Economics
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Rob's research interests are focused on how preferences and incentives relate to the values people hold for coastal and marine environmental services. Rob received a B.A. in Economics and his Ph.D. in Environmental and Natural Resource Economics from the University of Rhode Island. During his graduate studies, Rob was a National Science Foundation IGERT fellow with an interdisciplinary research focus on coastal ecosystems. His dissertation research focused on the use of auctions for allocating rights to offshore energy resources. At the Natural Capital Project he has worked on developing models to value the role ecosystems play in providing a variety of different ecosystem services, including coastal protection, scenic quality, carbon sequestration, and drinking water quality.

ELISABETH HAMIN INFIELD
Professor
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Municipal resilience planning, Climate migration/land use, Public participation
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Dr. Hamin Infield is the Professor of Regional Planning. She teaches and researches in land use planning, with a particular focus on planning for climate change adaptation and large-scale landscape planning. Through studios and projects, she works with regional planning agencies and communities on master plans, special projects, and climate change planning. She served as Department Chair from 2013-2017 and program director for the PhD in Regional Planning for over ten years prior to that. Her most recent book is Planning for Climate Change: A Reader in Green Infrastructure and Sustainable Design for Resilient Cities, co-edited with Yaser Abunnasr and Robert L. Ryan (2019, Routledge Press).

Prior to coming UMass, Dr. Hamin Infield taught at Iowa State University (1995 to 2001). During her doctorate she worked in land use and energy consulting, and before her doctorate she worked in real estate consulting and development, providing financial and marketing analysis to major real estate developers across the United States.

JAMES HEISS
Assistant Professor
Department of Environmental, Earth, and Atmospheric Sciences
UMass Lowell
Impact of climate change, sea level rise, and humans on coastal groundwater resources. Role of groundwater-surface water interactions at the coast on affecting nutrient delivery to nearshore ecosystems.
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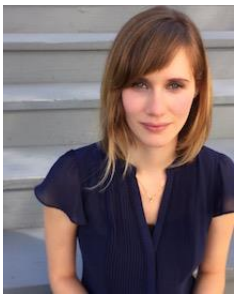
James is an assistant professor in the Department of Environmental, Earth, and Atmospheric Sciences at UMass Lowell, with research interests in coastal groundwater-surface water interactions, climate change and sea level rise impacts to coastal groundwater resources, and chemical fluxes along the land-sea transition zone. His current research focuses on the hydrologic forcings (waves, tides, currents, extreme precipitation, storm surge, and sea level rise) that move water and chemicals between aquifers and nearshore surface water bodies. James explores these processes using field and laboratory techniques, numerical models, and quantitative synthesis of large datasets.



KELLY HELLMAN
Assistant Professor
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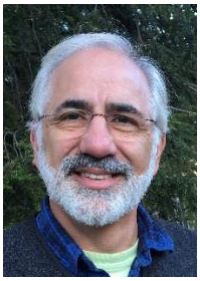
Kelly Hellman is an assistant professor in the Economics Department at the University of Massachusetts Lowell. Kelly received her PhD in Resource Economics from the University of Massachusetts Amherst in 2018. From 2018-2019, Kelly was a postdoctoral fellow at the Wharton Risk Center, a center within the University of Pennsylvania focused on developing innovative policy solutions to promote climate change resilience. As an empirical environmental economist, Kelly uses real-world data to understand market and behavioral responses to various environmental risks to inform public policy. Her current work focuses on analyzing economic and policy tools to incentivize individual and community efforts in preparing for and protect against damages due to climate change. For more information about Kelly's work, please visit her webpage: https://sites.google.com/site/kleighhellman/



SCOTT JACKSON
Extension Professor
Department of Environmental Conservation
UMass Amherst
Salt marsh vulnerability, Landscape scale ecological assessment, Aquatic & terrestrial connectivity
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Scott's research interests include aquatic connectivity, wetland assessment and monitoring, impacts of roads and highways on wildlife, landscape-based ecological assessment, and climate adaptation. He and Charlie Schweik lead a project investigating the use of Unoccupied Aerial Systems (drones and sensors) to assess the vulnerability of salt marshes to sea level rise and other stressors. As a member of the UMass Landscape Ecology Lab, Scott has developed landscape assessment tools and approaches including the Conservation Assessment and Prioritization System (CAPS), Designing Sustainable Landscapes (DSL) and Critical Linkages. Scott has developed standards for road-stream crossings, survey protocols for assessing crossing structures for aquatic passability, and approaches for prioritizing structures for replacement. He coordinates the North Atlantic Aquatic Connectivity Collaborative, a network of practitioners in the 13-state North Atlantic region working to enhance river and stream connectivity.

ADRIAN JORDAAN
Director of the Gloucester Marine Station and an Associate Professor
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UMass Amherst
Ecosystems, Ecosystem services, Modeling
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Dr. Adrian Jordaan is the Director of the Gloucester Marine Station and an Associate Professor of Fish Population Ecology and Conservation in the Department of Environmental Conservation. He joined the University of Massachusetts Amherst in September 2012 and began leading the revitalization of the Gloucester Marine Station (GMS) in 2015. His research employs quantitative modeling and statistical approaches to understand ecological patterns and life processes in marine, near-shore, and freshwater systems. He is particularly interested in the links between ecosystems, the services they provide and resource management. From an applied perspective, he seeks to understand anthropogenic and natural variation within aquatic and marine animal populations, and help to develop effective regulatory, restoration, and social options for cross boundary ecosystem-based management. A critical part of this research focus is the engagement of fisheries practitioners and other stakeholders and managers towards finding the "sweet spots" where science can advance sustainability and enhance access to resources. In this vein, he actively engages as part of his research, the GMS directorship, as appointed member of the New England Fishery Management Council Scientific and Statistical Committee, and representative on the Northeast Region Coordinating Council Assessment Working Group.

KATIE KAHL
Extension Assistant Professor
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Kahl is an Extension Assistant Professor at the UMass Amherst Gloucester Marine Station. She leads the North Shore Blue Economy initiative in collaboration with a broad team of regional leaders to build and implement a resilient, sustainable, equitable Blue Economy network on the North Shore, which builds upon strengths and positions the region to capitalize on emerging opportunities in the Blue Economy. Kahl co-leads a multi-state Salt Marsh Work Group of over 80 coastal researchers and practitioners to facilitate a coordinated approach to identifying resilient regional salt marsh research priorities and design collaborative funding approaches. She guides organizational strategy development at the Gloucester Marine Station, building partnerships, financing strategies, and research opportunities focused at the intersection of the Blue Economy, Sustainable Seafood, Marine Ecology and Coastal Resilience. Prior to UMass, Kahl worked for seven years with The Nature Conservancy in Michigan, focused on climate change adaptation and coastal resilience strategies with Great Lakes communities, state and provincial governments and other partners. Additional applied experience in conservation policy, green infrastructure implementation, and land conservation ground her role at UMass. She has a master's and Ph.D. in fisheries and wildlife with an emphasis in landscape ecology from Michigan State University. She holds a B.S. in biology from Truman State University in Missouri..

DAVID KEISER
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Department of Resource Economics
UMass Amherst
Economics of water quality
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Dr. David Keiser is an Associate Professor of Resource Economics at the University of Massachusetts Amherst. He is an environmental and natural resource economist with a focus on the economics of U.S. water quality policy. Dr. Keiser has published in leading economic and science journals including Science, Proceedings of the National Academy of Sciences, Science Advances, Quarterly Journal of Economics, Journal of Economic Perspectives, and the Journal of the Association of Environmental and Resource Economists. His work has been cited in Congressional testimony, incorporated in graduate training at leading universities, and appeared in major news outlets. Dr. Keiser has been a PI or Co-PI on over $3 million in federal and state grants. He serves on the Editorial Council for Land Economics and previously co-chaired a year-long study for the External Environmental Economics Advisory Committee to review the economic analyses that support the new Navigable Waters Protection Rule.

PAUL KIRSHEN
Professor and Director, Stone Living Lab
School for the Environment
UMass Boston
Infrastructure, Flooding, Social justice
Paul.Kirshen@umb.edu

Paul Kirshen is a Professor in the School for the Environment at University of Massachusetts Boston. He is also Director of the Stone Living Lab – a partnership of the university, Boston Harbor Now, the National Park Service, and the City of Boston focused on research on nature-based solutions for coastal resiliency and flood risk reduction. He has much experience serving as Principal Investigator of complex, interdisciplinary, participatory research related to water resources, coastal zone, and infrastructure management, and climate variability and change. He was a Lead Author for the IPCC Assessment Report and the US National Climate Assessment. He works at scales ranging from local to international. He has been conducting research on the integrated vulnerability of metro Boston and Massachusetts to present and future climates and adaptation/management strategies since 1990. He received his ScB in Engineering from Brown University and his MS and PhD in Civil Engineering from the Massachusetts Institute of Technology.

HANGJIAN LING
Assistant Professor
Mechanical Engineering
UMass Dartmouth
Collective behavior of bird flocks, Energy saving in marine transportation
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Hangjian Ling is an Assistant Professor in Mechanical Engineering at University of Massachusetts Dartmouth. He received his Ph.D. from Johns Hopkins University in 2017, and was a Postdoc at Stanford University from 2017 to 2019. His research area includes experimental fluid dynamic, super-hydrophobic materials, and collective animal behavior. His lab develops advanced optical measurement technologies to study fluid and animal motions across different length scales. The measurement tools include digital holography, holographic microscopy, stereo-imaging, and particle image velocimetry. Applications range from turbulent boundary layers to drag reductions, bird flocks, and bacteria motions. One research goal is to understand the behavior rules of wild animals by tracking and modeling the animal movements. Some of his work has been published in Nature Ecology and Evolution, Nature Communications, and Journal of Fluid Mechanics.

STRATTON LLOYD
Executive Vice President and COO
Essex County Community Foundation
Environmental justice, Equity, Systemic
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As Executive Vice President & COO, Stratton manages the Foundation's strategy, finance and business operations and serves as the lead for systems philanthropy initiatives, which focus on tackling some of the most complex social issues facing Essex County today. Stratton joined the ECCF staff in July 2018 after serving as a strategic advisor on Impact Essex County, the Foundation's lasting commitment to effecting positive change in the region. Since then, he has been consistently inspired by the relentless efforts, smart ideas and passion of the many community partners that he collaborates with on this work. Prior to joining ECCF, Stratton served as executive vice president of Strategy, Product Management and Customer Operations at EBSCO Information Services, a private Fortune 200 company based in Ipswich, where he worked for 14 years. He was also the founder and managing director of First Look, Inc., now known as YouthServe, a nonprofit global youth service-education organization that empowers young people through volunteerism and leadership.

Outside of work, you can often find him biking the roads and trails of Essex County. He also enjoys spending time with his family of three girls and sweet dog, Sunny, reading and skiing. He loves to travel, especially to Latin America, and practicing his Spanish whenever he gets the chance.

DANIEL MACDONALD
Professor and Chairperson
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UMass Dartmouth
River plume (and estuary) dynamics, Marine renewable energy
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Dr. MacDonald is a Professor and Chairperson of Civil and Environmental Engineering at UMass Dartmouth. His research interests include turbulence, mixing and transport in estuaries and river plume environments, and the use of autonomous underwater vehicles (AUVs) for environmental data collection. He is also active in the marine renewable energy sector, specifically the development of small-scale wave energy convertors for the Blue Economy.

EZRA MARKOWITZ
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Behavior change, Public engagement with climate change
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Ezra Markowitz, Ph.D. is Associate Professor of Environmental Decision-Making in the Department of Environmental Conservation at the University of Massachusetts Amherst. His research and teaching focus on the intersection of decision-making, persuasive communication, public engagement with science, and environmental sustainability. He is particularly interested and expert in the practical application of behavioral science to improve individuals' and communities' environmental decision-making; he also has deep expertise in the field of climate change communication and public engagement. He is the author of over four dozen peer- reviewed research papers, book chapters, and reports, including the 2015 Connecting on Climate guide to climate change communication. At UMass Amherst, Markowitz teaches courses on Environmental Decision-Making, Conservation Social Science, and Public Engagement and Communication for Scientists. He holds a Ph.D. in Environmental Sciences, Studies & Policy and an M.S. in Psychology from the University of Oregon, as well as a B.A. in Psychology from Vassar College. Markowitz previously held appointments as an Earth Institute Fellow at Columbia University and as a Postdoctoral Research Associate at Princeton University.

MARTIN MEDINA-ELIZALDE
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Dr. Martin Medina-Elizalde is an Associate Professor in the Department of Geosciences. His research areas include the climate and the collapse of the Maya civilization, sea-level change during the glaciations, paleoclimate sensitivity, and glacial-interglacial tropical climate variability. He graduated with his B.A. in Marine Biology from the Universidad de Baja California Sur, México. He did his Master's in CINVESTAV-

Merida in coral geochemistry with Prof. Gerardo Gold and got his Ph.D. in tropical climate evolution with Prof. David W. Lea at the University of California, Santa Barbara. During his postdoc at UMass Amherst, he and his advisor, Stephen Burns, obtained the first quantitative estimates of the magnitude of the droughts associated with the demise of the Maya civilization. Since then, Martin has been working on the thermal and hydrologic reconstruction of tropical regions and their sensitivity to greenhouse gases. Martin was previously an assistant professor at the Centro de Investigación Científica de Yucatán, a visiting Assistant Professor at Amherst College, and Associate Professor at Auburn University, Alabama.

THADDEUS MILLER
Professor
School of Public Policy
UMass Amherst
Co-production of knowledge with stakeholders, Resilience governance/infrastructure governance, Structuring transdisciplinary research
thaddeusmill@umass.edu

Thaddeus Miller is associate professor at the School of Public Policy. His work focuses on interdisciplinary research collaborations and research-community partnerships to advance urban sustainability and resilience, from the local to the international level.

He serves on the leadership team the $12 million National Science Foundation-funded Urban Resilience to Extremes Sustainability Research Network project that engages with nine cities in the US and Latin America to advance research, policy, and practice on resilience in the face of climate change. Miller also is engaged in projects on the municipal and regional level, partnering with local governments in both Portland, Oregon, and the Phoenix area on issues related to resilience, equity, sustainability, and emerging technologies.

Miller is the author of Reconstructing Sustainability Science: Knowledge and Action for a Sustainable Future (Routledge, 2015), which examines how the emerging field can be used to advance positive social action. He has published articles in journals including Urban Studies, Science as Culture, Sustainability Science, and Issues in Science and Technology and his research has been funded by federal, regional, and industry partners. He also publishes regularly in general-audience outlets, including Slate and The Conversation, on technology, governance, and sustainability issues.

Prior to joining UMass, Miller was associate professor at the School for the Future of Innovation in Society and the Polytechnic School at Arizona State University, where was also co-director of the Center for Smart Cities and Regions. Before that, he was an assistant professor at the Toulan School of Urban Studies and Planning at Portland State University.

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Pia Moisander's research is on marine microbial community ecology and microbial activities in marine biogeochemical cycles; specifically, the nitrogen cycle. Her research combines molecular, microbiological, genomic, and biogeochemical approaches in studies from the open ocean to coastal and estuarine systems. Recently her laboratory has studied marine nitrogen fixation, zooplankton microbiomes, and biofilms, and has collaborated with engineers in projects developing new antifouling solutions. Dr. Moisander got her M.S. at the University of Helsinki, Finland; and received her Ph.D. in Marine Science at the University of North Carolina at Chapel Hill, supported with an ASLA-Fulbright fellowship. She held a National Research Council Research Associateship at the NASA Ames Research Center, followed by a Postdoc and Assistant Researcher positions at the University of California Santa Cruz until 2010. Her research been funded by NSF, DoD, DOE, and USGS.

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Rosalyn is a socio-cultural/urban anthropologist in the Department of Anthropology. Rosalyn is also an Affiliate Faculty at the Gastón Institute for Latino Community Development and Public Policy, and the Critical Ethnic & Community Studies graduate program, and a member of the Core Team for UMass Boston's Sustainable Solutions Lab, a research institute dedicated to understanding the disproportionate impacts of climate change on vulnerable populations and working with them to develop sustainable and equitable solutions. I received my PhD in Anthropology from the University of Florida in 2007.

Rosalyn's work engages with two main themes: 1) an overarching interest in the role of complex social environments on the decisions that people make for their social, economic, and physical well-being: migration and health decisions, identity negotiations, linguistic and educational choices. 2) Understanding ways to build relationships and bridges that make collective action possible, especially in ways that connect frontline communities to expanded forms of power.

With a range of applications, Rosalyn's work bridges multiple substantive and disciplinary areas, including social network analysis, sociolinguistics, health disparities, and disparities in STEM participation. I have done research in Jamaica, Florida, New York City, Puerto Rico, and Boston. Rosalyn's research has been funded by the National Science Foundation, National Institutes of Health, the Ford Foundation, and the Max Planck Institute for Religious and Ethnic Diversity.

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Sheree Pagsuyoin is an Assistant Professor in Civil and Environmental Engineering at the University of Massachusetts Lowell. Her overall research encompasses the environment-health nexus and focuses on human-environment interactions that impact water systems, the ecological and public health impacts of emerging contaminants, and water treatment technologies. Her research has been funded by different sources including the National Science Foundation, US Department of Interior, Grand Challenges Canada, Canada Natural Sciences and Engineering Research Council, and private industries. Dr. Pagsuyoin received her PhD in Civil and Environmental Engineering from the University of Virginia and her MSc in Environmental Engineering from the University of the Philippines Diliman. Her research about the impact of residual drugs on aquatic ecosystems has recently been awarded the National Science Foundation National Faculty Early Career Development award.

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Dr. Renski's research focuses on understanding the forces driving regional economic competitiveness and transformation and building upon this knowledge to improve the effectiveness of economic development policy. His current work examines regional influences on entrepreneurship; empirical tests of agglomeration theory; industrial cluster analysis and cluster-based development strategies; and the application of spatial-analytical techniques to local economic policy decision-making. Prior to joining LARP, Dr. Renski worked as a Special Assistant to the Governor of the State of Maine as both the Deputy Program Manager of Maine's WIRED (Workforce Innovations in Economic Development) initiative and as a Research Economist with the Maine State Planning Office.

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Antonio Raciti's training integrated a variety of disciplines from landscape architecture, civil engineering, architecture, and urban and regional planning. He is particularly interested in bringing these approaches together within an overarching theoretical framework that emphasizes ecological principles and theories. Raciti has the good fortune to lead the design of numerous transdisciplinary research projects focused on critical environmental issues confronting urban areas in Sicily and the U.S. Among these are the Librino Housing Study, Simeto River Stewardship Initiative, Vance Avenue Community Transformation Plan, and the Urban Environmental Education Camp Project. In addition to his research, and that of his students, he runs the School of Environment's Simeto

River Restoration program, which brings students from the environmental and planning disciplines together with students from Cornell University and the University of Memphis to work with students and colleagues in the Simeto River region of Sicily on a large-scale restoration of the river valley and the implementation of the cutting-edge Simeto River Agreement, Italy's first legally enforceable sustainability plan.

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Professor Rolfe's research interests include individual & organisational decision-making, media and public opinion, social networks, text analysis, and research methodology.

Prior to joining UMass, Professor Rolfe was a Lecturer in Management at the London School of Economics, and a Postdoctoral Prize Research Fellowship at Nuffield College, Oxford.

Dr Rolfe holds a PhD in Political Science from the University of Chicago, and is the author of Voter Turnout. Her research has been funded by the National Science Foundation, the British Academy, Oxford's John Fell Fund, the EU-sponsored EqualSOC Framework, and the Oxford University Centre of Corporation Reputation.

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Krish Thiagarajan Sharman is an Endowed Chair in Renewable Energy & Professor in the Department of Mechanical & Industrial Engineering, University of Massachusetts Amherst. He holds a PhD in Naval Architecture and Marine engineering from the University of Michigan, and has been an academic at various universities in Australia and the US over the past 25 years. He is a Fellow of the Society of Naval Architects and Marine Engineers since 2016, and was selected as the Faculty Advisor of the Year in 2016. He is the coordinator of the Ocean Renewable Energy Symposium of the Ocean Offshore and Arctic Eng conference along with serving in the co-chair role of the International Offshore Wind Technical Conference. His areas of interest focus on design and fluid-structure interaction analysis of floating offshore wind systems, wave and tidal energy systems, coastal food production systems and offshore platforms in general.

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Hongbing Tang, ASLA, licensed landscape architect in MA, adjunct faculty at the Boston Architectural College, and co-founder of LANDD International LLC, has over 20 years of professional experience in architecture, landscape architecture, and regional planning. She is currently a PhD student in Regional Planning at UMass Amherst, who holds a B. Arch. degree from Tsinghua University in China, and MLA and MRP degrees from UMass Amherst. She worked at Carol R. Johnson Associates, Inc. in Boston for seven years and worked at several other renowned landscape architectural and construction companies in the US and China in the past. Hongbing has designed and managed a wide range of projects in the US and China with creative design solutions. She brings a unique cross-cultural perspective to her practice, teaching and research. Her work has engaged with local and global issues regarding sustainable and resilient planning and design.

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Eric Thomas is a cultural anthropologist with appointments in the Departments of Environmental Conservation and Geosciences at UMass. He holds a Ph.D. from the University of North Carolina, Chapel Hill. His research examines local and state responses to inequalities created by capitalist development projects in coastal communities. He has worked in Chilean Patagonia, where he focused on the social, economic, and environmental impacts of state-backed industrial aquaculture on remote fishing communities. He also works on the North Shore of Massachusetts, where he is piloting a project investigating local sustainable shellfish networks and the uneven spatial distribution of community-based aquaculture.

His work is situated at the intersection of political ecology and political economy and his research methods include semi-structured interviews, participant observation, and participatory mapping.

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Iren Valova is currently a professor with the computer science department at the University of Massachusetts Dartmouth. For many years, she has been working with neural network architectures and the applicable learning algorithms. In more recent years, her work has centered on applying deep learning techniques to the analysis of ocean floor mechanical properties. She has also been in collaboration with Australia on a study of coral reefs developments.

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Marta Vicarelli is Assistant Professor of Economics and Public Policy at the University of Massachusetts, Amherst. Her research focuses on: (i) the risks and the socio-economic impacts of climate variability and climate change; (ii) renewable energy economics and policy analysis; (iii) the economics of green infrastructure, nature-based solutions and ecosystem-based disaster risk-reduction.

From 2004 to 2010, she worked as research fellow at the National Aeronautic and Space Administration (NASA) Goddard Institute for Space Studies investigating observed impacts and responses to climate change. She is a contributing author to the Intergovernmental Panel for Climate Change (IPCC) Fourth Assessment Report, Working Group II, on impacts, adaptation and vulnerability. She is the recipient of the Peccei Fellowship (2007) awarded by the International Institute for Applied Systems Analysis (IIASA) in Vienna for her work on integrating inter annual climate variability forecasts into weather-indexed crop insurance. In 2009 she was awarded the Giorgio Ruffolo Fellowship by the Harvard University Sustainability Science Program and she worked as research fellow at the Harvard University's Center for International Development from 2009 to 2011. She joined the Yale University Climate and Energy Institute as postdoctoral fellow in 2011 until 2013 investigating the impacts of climate change and weather extremes on human capital formation.

She holds a B.S. in Earth and Atmospheric Sciences from the École Normale Supérieure in Paris, a Master of Environmental Economics from the École Polytechnique, as well as a Master of International Affairs and a Ph.D. in Sustainable Development from Columbia University.

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Jon Woodruff is a sedimentologist who focuses on coastal, estuarine and fluvial processes. In particular, he studies mechanisms of sediment transport during extreme flooding, as well as how these high-magnitude, low-frequency events are recorded within the geologic record. Recent projects include assessing relationships between climate and tropical cyclone activity using storm-overwash reconstructions from the Western North Atlantic, flooding impacts by extreme precipitation within floodplain settings, and tsunami and typhoon reconstructions from southern Japan. Jon received his PhD from the Massachusetts Institute of Technology and Woods Hole Oceanographic Institution Joint Program (MIT/WHOI) in Geology and Geophysics, M.S. in Applied Ocean Physics and Engineering (also in the MIT/WHOI Joint Program), and B.S. in Civil and Environmental Engineering at Tufts University.

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Weile Yan is an associate professor in the Civil and Environmental Engineering Department at UMass Lowell. Her research is focused on reactions at water/solid interfaces and contaminant transformation mediated by natural minerals and engineered materials. She seeks to apply insights gained through research to addressing issues such as emerging and legacy contaminants in the aquatic environment, groundwater and soil remediation, and sustainable water use/re-use technologies.