

Name	Research Interests/Topics	Department
ABUR, ALI	Power system monitoring, estimation and optimization, fault location and identification in power grids. Recent works include "Engineering Research Center for Ultra-Wide Area Resilient Electric Energy Transmission Network" and "Graph-Learning-Assisted State and Event Tracking for Solar-Penetrated Power Grids with Heterogeneous Data Sources."	Electrical and Computer Engineering
ADAMS, DANIEL	Negotiating architectural design with environmental context, with specific focus on integrating infrastructural systems in cities. Global production and transport of salt and the unique integration of these industrial landscapes with urban communities and ecology.	Architecture
AGUILERA, RUTH	The intersection of international business, economic sociology, and organization studies. Comparative corporate governance, corporate sustainability, and firm internationalization processes.	International Business & Strategy Group
ALDRICH, DANIEL	Security, resilience, emergency disaster response/management, and energy policy. A recent work includes "Oasis of resilience? An empirical investigation of rain water harvesting systems in a high poverty, peripheral community."	Political Science
ALSHAWABKEH, AKRAM N	Geoenvironmental engineering, soil and groundwater remediation; electrokinetic and electrochemical processes; contaminant fate and transport environmental restoration.	Civil and Environmental Engineering
AMIRABADI, MAHSHID	Design, modeling and control of power converters, power electronics for renewable energy systems, microgrids, variable speed drives and wireless power transfer. A recent work includes "Universal SiC-Based Power Converters for Renewable Energy Systems."	Electrical and Computer Engineering
ARSANO, ALPHA YACOB	Passive and hybrid building strategies for various climatic contexts. Analysis method called climabox as a toolset to evaluate the potential for low-carbon building strategies in any location for which climate data is available.	Architecture
BAI, JOHN	Empirical corporate finance, behavioral corporate finance, corporate diversification, and labor finance. Most recent work focuses on Fintech, ESG, and DE&I-related issues.	Finance Group
BAKER, BROOK K	Intellectual property rights, trade, investor-state dispute settlement, access to medicines, and medicines regulatory policy. Policy issues concerning the Global Fund and the US PEPFAR Program, and how those priority disease initiatives might contribute more broadly to improving health care delivery in developing countries. Resource needs for global health, innovative financing mechanisms and IMF macroeconomic policies that restrict increased government and donor spending on health and education in developing countries.	School of Law
BAKER, SHALANDA HELEN	Energy reform, climate change, social justice and indigenous rights.	School of Public Policy and Urban Affairs
BANSIL, ARUN	Electronic structure and spectroscopy of high-T _c superconductors, topological insulators, nanosystems, and other complex materials. He is also a faculty member of the NU Center for Renewable Energy Technology and has collaborated on research involving hydrogen fuel cells and quantum physics.	Physics, Department of

BARRETO, AMILCAR A	Nationalism and ethnic politics, citizenship and race. Most of his work has focused on Puerto Rico and Latinos in the United States. A recent work includes "American Nationhood in Transition: Sexual Orientation, Race and the Media."	Political Science; Cultures, Societies, and Global Studies; International Affairs Program
BEIGHLEY, EDWARD EDWARD	Hydrologic and hydraulic modeling, remote sensing of the hydrologic cycle, hydrologic impacts of climate and/or land use change, and flood hazard and risk assessment.	Civil and Environmental Engineering
BHIMANI, SHAWN	Supply chain labor, risk and corporate social responsibility (CSR). He is focused on preventing forced labor (i.e. human trafficking) in supply chains.	Supply Chain and Information Management Group
BLUM, LINDA M	Contemporary gender relations; disability, health, and the body; and families, work, inequality and intersectionality. She has long studied how gender ideologies in the United States measure women against each other, as respectable or disreputable, fit or unfit, in ways that reinforce class and race inequality and individualize responsibility for larger structural inequality.	Sociology and Anthropology, Department of
BOSSO, CHRISTOPHER J	Current areas of research and teaching interest are in food and environmental policy.	School of Public Policy and Urban Affairs
BOWEN, JENNIFER LYNN	How human derived nutrients are altering the structure and function of salt marshes to examining whether oyster aquaculture increases the prevalence of both beneficial and harmful microorganisms in the environment. How human activities are altering the structure and function of microbial communities and in turn how microbial communities can help ameliorate pollution from human sources.	Marine and Environmental Sciences
BROWN, PHIL	Per- and polyfluorinated compounds (PFAS) (biomonitoring, analysis of activism, water monitoring, policy analysis), biomonitoring and household exposure, social policy concerning flame retardants, ethics of reporting back research data to participants, data privacy, and health social movements. This work combines environmental sociology, medical sociology, environmental health, science and technology studies, and social movement studies.	Health Sciences; Sociology and Anthropology
CARACOGIA, LUCA	Structural dynamics, wind engineering, wind energy, wind-induced vibration, fluid-structure interaction, linear and nonlinear cable dynamics, climate change.	Civil and Environmental Engineering
CARR, SARA JENSEN	Research focuses on the connections between urban landscape, human health, and social equity.	Architecture
CHEN, QIN JIM	Coastal engineering and science, particularly in the development and application of state-of-the-art numerical models to address coastal resiliency and sustainability.	Civil and Environmental Engineering; Marine and Environmental Sciences
COLEY, JOHN	The structure of knowledge, reasoning, and conceptual development. This includes looking at how people think about rich real-world knowledge domains like plants and animals, food, and people. A recent work includes "Coastal Sustainability: Clean, Safe, Smart, and Equitable Communities"	Psychology

CONSTANTINO, SARA	Research focuses on understanding the interplay between individual, institutional and ecological factors on perceptions, policy preferences and resilience to extreme events or shocks (e.g. climate change).	School of Public Policy and Urban Affairs
DAU, LUIS	Global strategy, emerging market firms, institutional changes, pro-market reforms, business groups, family firms, firm performance, international corporate social responsibility, sustainability, formal and informal entrepreneurship, and culture.	International Business & Strategy Group
DAVIS, MARTHA F	Human rights, women's rights, water rights, and social justice issues.	School of Law
DOMINGUEZ, SILVIA	The welfare of vulnerable populations in the United States and abroad, emphasizing race, violence, immigration and social networks.	Sociology and Anthropology
ECKELMAN, MATTHEW JENSEN	Environmental engineering and sustainability, life cycle assessment, energy efficiency and emissions modeling, environmental assessment of bio and nanomaterials, material and energy use in urban buildings and infrastructure.	Civil and Environmental Engineering
EPSTEIN, SLAVA S	Environmental/medically important microorganisms and their strategies of survival. This involves exploring how microbial cells react to unfavorable conditions, survives environmental challenges, and decides when/where to start dividing and form a new successful population. Research interests also include microbial individuality, interactions between/within populations, applied microbiology; and the exploration of newly discovered species in human health, their potential for bioremediation and alternative fuel production, and ability to produce bioactive compounds.	Biology
ERGUN, OZLEM	Design and management of large-scale networks, supply chain design and resilience, collaboration and crowdsourcing in logistics, humanitarian logistics. A recent work includes "The Nutritious Supply Chain: Optimizing Humanitarian Food Assistance"	Mechanical and Industrial Engineering
FABER, DANIEL R	The political economy and crisis theory, environmental sociology and policy, social movements, classical and contemporary social theory, environmental justice, philanthropy, Central America and underdevelopment, climate justice, and globalization.	Sociology and Anthropology
FANNON, DAVID JOSEPH	Sustainable and high performance building design, persistent architecture and resilience, human health, safety, and comfort in the built environment.	Architecture; Civil and Environmental Engineering
FERNANDEZ, LORETTA ANA	Environmental organic chemistry, passive sampling methods, transport and transformation of contaminants in built and natural environments.	Civil and Environmental Engineering; Marine and Environmental Sciences
FITZGERALD, JOAN	Urban climate action and strategies for linking it to equity, economic development, and innovation.	School of Public Policy and Urban Affairs
FLYNN, STEPHEN EDWARD	Critical infrastructure, supply chain resilience, post-disaster resilience assessments.	Political Science
FURTH, PETER	Traffic signal control; transit signal priority; transit operations modeling; transit data collection and sampling. Applications in bicycle and pedestrian planning.	Civil and Environmental Engineering
GALLAWAY, JOSHUA WESLEY	Electrochemical engineering, batteries and energy storage, and energy sustainability.	Chemical Engineering

GANGULY, AUROOP R	Geoscience (climate science, hydrology, hydrometeorology), engineering (infrastructure resilience, water resources, lifeline systems), and data sciences (machine learning, data mining, nonlinear physics).	Civil and Environmental Engineering
GOUHIER, TARIK	Identifying the processes that govern the dynamics of populations in order to both predict and mitigate their susceptibility to environmental change.	Marine and Environmental Sciences
GRABOWSKI, JONATHAN HENRY	Ecology, fisheries and conservation biology, ecological economics, habitat degradation and restoration, management initiatives and their impact on local habitat recovery. Also, examining a number of other important topics aimed at enhancing our ability to restore and conserve aquatic species and ecosystems: fish migratory behavior, population structure, and age validation; the economic value of ecosystem services associated with coastal habitats; seafloor habitat mapping and its role in ecosystem management; and the influence of climate change and biogeography on species range shifts, ecological interactions, and ecosystem functions.	Marine and Environmental Sciences
GRINSTEIN, AMIR	The interface between marketing and society/public policy, especially various social and environmental contexts such as the enhancement of "green", healthy or other socially-desirable behaviors and the effectiveness of demarketing; marketing strategy, including the study of strategic orientations and international marketing topics.	Marketing Group
GUPTA, SURENDRA M	Green manufacturing; green supply chains; disassembly modeling; remanufacturing; reverse logistics; managing end of life products; environmentally conscious manufacturing; manufacturing sustainability; reverse and closed-loop supply chains; just-in-time (jit) manufacturing and materials management; operations research: stochastic and simulation modeling.	Mechanical and Industrial Engineering
HAJJAR, JEROME F	Steel and composite steel/concrete structures; earthquake engineering; structural stability; large-scale experimental testing of structures; regional simulation. A recent work includes "Design for Deconstruction Using Sustainable Composite Beams with Precast Concrete Planks and Clamping Connectors."	Civil and Environmental Engineering
HARLAN, SHARON L	Environmental health, environmental sociology, environmental justice, social impacts of climate change.	Health Sciences; Sociology and Anthropology
HARTEVELD, CASPER	Decision Making, Game Analytics, Game Design, Game User Research, Learning, Resilience, Sustainability, and Systems Thinking. Past work has included designing and evaluating games on flooding, urban heat islands, debris collection, and pro se litigants.	Art + Design
HELMUTH, BRIAN	Predicting the likely ecological impacts of climate change on coastal ecosystems, and on the people who rely on them for their well-being. Measuring the vulnerability of key marine organisms, and the mapping of these vulnerabilities to inform marine spatial planning. Exploring how people perceive the world around them, and how this influences their engagement in conservation. Also, explores climate adaptation strategies.	Marine and Environmental Sciences; School of Public Policy and Urban Affairs

HEYDARI, BABEK	Socio-technical systems, systems engineering and design, social and economic networks, resilience of networked systems, computational social sciences, platform-based systems, sharing economy systems, computational social sciences, game theory, artificial intelligence	Mechanical and Industrial Engineering
HIDROVO CHAVEZ, CARLOS HILLER	Multiscale and multiphase flow and transport phenomena, surface tension interactions in micro/nanoengineered structures, and electrokinetic ion transport in porous media for applications in energy storage, portable biochemical diagnostics, thermal management, and water treatment systems.	Mechanical and Industrial Engineering
HOPKINS, JULIA	Coastal morphodynamics, including effects of extreme weather events on sediment transport in the surf zone; wave-current interactions in the nearshore; developing and implementing field-verified numerical models to study coastal processes, informing coastal management with process-based research	Civil and Environmental Engineering
HUGHES, RANDALL RANDALL	The ecological and social causes and consequences of biodiversity change, and applying that knowledge to the conservation and restoration of marine systems.	Marine and Environmental Sciences
HUNG, FRANCISCO RODOLFO	Molecular modeling and process simulation of interfacial/nanoconfined systems and mixtures relevant to separations, development of nano/bio-materials, energy and the environment	Chemical Engineering
HUNT, MATTHEW O	Intersections of race/ethnicity, social psychology, and inequality in the United States.	Sociology and Anthropology
JOSHI, NEEL SATISH	Biologically inspired materials, protein engineering, self-assembly, and biointerfaces. Past work includes investigating the use of these living materials systems in the context of gut therapeutics, bioremediation and resource extraction, and bioplastics.	Chemistry and Chemical Biology
KAMARTHI, SAGAR	Sensing, diagnostics and prognostics for manufacturing machines and equipment, AI for smart and sustainable manufacturing and manufacturing systems integration, Machine learning models for personalized medicine and healthcare, Computational methods for pain assessment physiological sensing systems, Engineering education, personalized learning, and mass-customized instruction model	Mechanical and Industrial Engineering
KANE, MICHAEL BRUCE	Occupant-centric building controls, community resilience, model predictive control, hybrid systems.	Civil and Environmental Engineering
KIMBRO, DAVID LLOYD	Population dynamics, community ecology, invasion biology, ecosystem science, and coastal oceanography. He pursues these interests to understand why the conditions of important coastal habitats change and to learn how these changes impact services to society.	Marine and Environmental Sciences
KOUTSOPOULOS, HARIS N	Urban transportation networks and informatics, public transportation operations, and mobility on demand.	Civil and Environmental Engineering
KUHL, LAURA N	Climate adaptation and sustainable transitions in the United States and internationally. She is particularly interested in questions of power and equity in processes of transformation across multiple scales from individual decision-making to international policymaking. Current work focuses on climate finance, particularly adaptation finance, energy equity after crises, and transformational adaptation.	School of Public Policy and Urban Affairs; International Affairs Program
LABOY, MICHELLE	Architecture that has agency in resilient urban landscapes. Her research and teaching are focused on how buildings are grounded in a place, examining how socio-ecological thinking influences architectural theory and practice to shape experience, performance, and adaptability to changing environments.	Architecture

LARESE-CASANOVA, PHILIP	Physical, chemical, and electrochemical transformation processes of metallic, inorganic, and organic water pollutants, with applications to groundwater environments and unit operations.	Civil and Environmental Engineering
LAW-ADAMS, Marie	Architecture and urban design practice focused on the design of just and sustainable infrastructure.	Architecture
LEVENDIS, YIANNIS A	Gasification and combustion of solid fuels, generation and containment of combustion-generated pollution, synthesis and characterization of combustion-generated materials, fire suppression – fire extinction, engine design and operation. A recent work includes "Containment of Greenhouse Gases Through Use of Refrigerants that are based on Petroleum-derived Products and Recycled Carbon Dioxide Principal Investigator."	Mechanical and Industrial Engineering
LI, ANG	Alongside her teaching she maintains a collaborative design practice that works through material experiments and built interventions to explore the role of reference and reuse in contemporary architectural production. Her most current research examines the latent design opportunities that arise out of architectural obsolescence from radical approaches to preservation and adaptive reuse to the emerging second-hand material economies of demolition practices.	Architecture
LOPEZ, STEVEN ALEXANDER	Quantum mechanical and machine learning techniques to identify next-generation organic materials for applications in renewable energy and photomedicine.	Chemistry and Chemical Biology
LOTTERHOS, KATIE ELIZABETH	Eco-evolutionary genomics to understand how climate has shaped biodiversity and how a now rapidly changing climate will affect biodiversity in the future. Current research projects include responses of marine invertebrates to ocean acidification and pollution, the population dynamics of fisheries with applications to management and marine reserve design, and methods development in statistical genomics.	Marine and Environmental Sciences
LOVE, TIM	His work is not driven by aesthetics, but by collaborative deep-dive research focused on the technical, cultural, regulatory, and environmental issues of urban design problems. Love and his teams find opportunities for design by uncovering latent issues and fully leveraging and synthesizing them.	Architecture
MAAS, KAYSE	Stochastic optimization, network theory, facility location modeling, and supply chain design for applications regarding equity, access, human trafficking, mental health, and humanitarian logistics	Mechanical and Industrial Engineering
MANJOURIDES, JUSTIN	Current research interests involve developing new statistical methodologies to better analyze observational health data in the presence of missing or misspecified information, with specific applications to environmental health, real world data, and occupational health interventions. He is currently working across several NIH, EPA, and CDC funded grants involving research on hybrid machine learning and biostatistical methods for estimating associations between environmental exposures and adverse birth outcomes, risk mapping of drug-resistance tuberculosis, and the design and analysis of occupational health and wellbeing interventions for construction workers.	Health Sciences
MARANO, VALENTINA	The intersection of international business and organization theory which involves practice adoption, organizational legitimacy and performance of multinational corporations from both emerging and advanced economies, and broader issues of comparative corporate governance and corporate sustainability.	International Business & Strategy Group

MELACHRINOUDIS, EMANUEL S	Deterministic operations research and multi-criteria optimization; facility location; supply chain, transportation and logistics; wireless sensor networks wildfire prediction and mitigation.	Mechanical and Industrial Engineering
MELLO, SUSAN LORRAINE	The intersection of risk perception, health communication, and the environment. Her recent work explores how exposure to risk information in the media, specifically about environmental toxins, COVID-19, and cancer, impacts individual perceptions and protective health behaviors.	Communications Studies
METGHALCHI, MOHAMAD	Thermodynamics, combustion, chemical kinetics, renewable energy, energy analysis.	Mechanical and Industrial Engineering
MICHELLE, CARA	Highlights the structural inequalities and institutionalized racism perpetuated by the urban design field.	Architecture
MUELLER, AMY	Biogeochemistry of natural and engineered systems, in-situ sensors and instrumentation for high-resolution process characterization, remediation and sustainability in natural and built coastal environments, sensor-driven closed-loop controls for resource optimization in engineered systems, signal processing and machine learning, embedded systems, and sensor networks.	Civil and Environmental Engineering; Marine and Environmental Sciences
MUKERJEE, SANJEEV	Research is focused on an interdisciplinary approach encompassing the areas of solid state chemistry, spectroscopy, and electrochemistry of electrode materials for electrochemical energy conversion and storage. The current focus is targeted towards technologies for proton exchange membrane (PEM) fuel cells and for batteries, these encompass electrocatalysis of oxygen reduction, CO tolerance and methanol oxidation reactions, elevated temperature polymer electrolyte membranes, advanced rechargeable batteries with nickel metal hydrides and lithium insertion electrodes for lithium ion and lithium polymer batteries.	Chemistry and Chemical Biology
MUNOZ, SAMUEL ERIK	Hydrological extremes and their connections to the natural and built environment. This includes the influence of climate variability, greenhouse warming, urbanization, land use on flood risk; and how floods and climate-related disasters shape landscapes and the inhabitants of those landscapes.	Civil and Environmental Engineering; Marine and Environmental Sciences
MYERS, ANDREW THOMSON	Fixed and floating offshore wind structures, multi-scale experimental testing of structures, computational simulation, probabilistic modeling.	Civil and Environmental Engineering
NISBET, MATTHEW	Studies the process by which the public and decision-makers come to understand complex scientific and technological issues, analyzing the influence of ideas, culture, expertise, and journalism. Focuses environmental topics.	Communications Studies
O'BRIEN, DAN	The physical and social conditions of neighborhoods and the citywide systems that serve them, often emphasizing questions of equity. This includes topics around crime, education, transportation, climate resilience, public health, and public infrastructure.	Criminology and Criminal Justice; School of Public Policy and Urban Affairs
PARSONS, CHRIS MICHAEL	The devastating spread of smallpox and other European illnesses in the northeast (New France, New England, and New Netherland) in the 1630s in order to understand how epidemic disease shaped colonial encounters and imperial rivalries. He has a longstanding interest in highlighting the contribution of indigenous peoples to the evolution of European and Euro-American environmental sciences.	History

PATTERSON, MARK ROBERT	Research involves designing a deep-sea autonomous vehicle swarm that can persist on-station for months, and return thousands of miles back to shore with physical samples. Exploring how biologically-inspired autonomy (from organisms as diverse as salps, squids, sponges, fishes, and marine mammals and reptiles) can increase the robust intelligence and extended deployment performance of AUVs. Integrating new sensors for the detection of microplastics into AUVs in collaboration with Ocean Diagnostics, a blue-tech startup in Canada.	Civil and Environmental Engineering; Marine and Environmental Sciences
PEROVICH, LAURA JONES	Creating physical, contextual, and interactive experiences around data that can help people understand and act on big social challenges. Her data physicalizations are informed by research in information visualization and human computer interaction and often address environmental issues such as air pollution and water pollution. She is also influenced by work in experience design and environmental art, and her projects seek to create emotionally resonant, knowledge-producing, and community-building experiences with data and people.	Art + Design
PIEPER, KELSEY JANETTE	Applied environmental chemistry, corrosion, drinking water quality, treatment, infrastructure, post-disaster drinking water recovery and public health engineering.	Civil and Environmental Engineering
PUFFER, SHEILA M	International business, sustainability, leadership, strategy, entrepreneurship, corporate governance, informal networks, ethics, and migration. Her work on sustainability focuses on the global sand crisis and the international construction and mining sectors.	International Business & Strategy Group
RIES, JUSTIN B	Marine and geological sciences, including global climate change, paleoceanography, paleobiology, carbonate sedimentology, sulfur isotope geochemistry, biomineralization, and carbon sequestration. A common theme for this research is oceanic change, which is investigated over broad temporal scales. This allows for direct exploration of the biogeochemical processes that have changed the state of our oceans throughout the geologic past, as well as those that will drive critical changes in the immediate future.	Marine and Environmental Sciences
ROBINSON-WOOD, TRACY L	Intersectionality among race, ethnicity, gender, sexuality, and class. Her current research projects are: Resist to remain resilient among millennial women of African descent, Qualitative investigation of microaggressions among highly educated LGBT and people of color, Racial socialization practices in interracial families.	Applied Psychology
SANDLER, RONALD L	Environmental ethics, ethics and emerging technologies, ethical theory, and Spinoza.	Philosophy and Religion
SASANI, MEHRDAD	Progressive collapse of structures; earthquake engineering; structural integrity and reliability; building and community resilience.	Civil and Environmental Engineering
SENIER, LAURA	The sociology of medicine and public health, community environmental health, and environmental justice. Her research identifies political, social, and economic barriers in research translation, or the effort to migrate scientific discoveries into clinical and public health practice. Previous research focused on community mobilization in communities burdened by environmental injustices, in the Boston area and in the upper Midwest.	Health Sciences; Sociology and Anthropology
SHATKIN, GAVIN	Globalization, social equity, and sustainability in the rapidly urbanizing societies of Asia. Recent work investigated the impacts of climate change-induced flooding in Southeast Asian metropolises on political debates about urban planning and policy and debates about property rights and infrastructure-induced displacement.	Architecture; School of Public Policy and Urban Affairs

SHRIVASTAVA, AATMESH	Self-powered and ultra-low power circuits and system for Internet-of-things (IoTs). Currently research is focused on working to solve the power issue, in order to make IoT devices easily deployable in our environment. Also on energy-harvesting and power-first system/computer architecture, ultra-low power bio-medical and neural circuits, exascale computing, and high-reliability circuits and system design.	Electrical and Computer Engineering
SMOTKIN, EUGENE S	The discovery of better materials for clean energy sources and processes. This includes the development of catalysts and supports for electrochemical reactors for synthesis, power generation and environmental remediation.	Chemistry and Chemical Biology
SONG, LILY	Relations between urban infrastructure and redevelopment initiatives, socio-spatial inequality, and race, class, and gender politics in American cities and other decolonizing contexts. Work centers the experiences and insights of historically marginalized groups as bases for reparative planning and design.	Architecture
STEPHENS, JENNIE CATHERINE	Social-political aspects of renewable energy transformation, energy democracy, climate resilience, reducing fossil-fuel reliance, gender diversity in energy and climate, and social, economic and racial justice in climate and energy policy.	School of Public Policy and Urban Affairs
STUBBINS, ARON PAUL	The natural carbon cycle, how humans are altering it, and plastics in the environment; and how plastics are a novel component of the carbon cycle as well as potential pollutants.	Chemistry and Chemical Biology; Marine and Environmental Sciences; Civil and Environmental Engineering
TANG, XIAOYU	Research interests include multiphase flow, microfluidics, colloidal science, and soft matter, with applications in energy, environment, and healthcare.	Mechanical and Industrial Engineering
TASLIM, MOHAMMED E	Experimental and numerical research in gas turbine cooling technology, solar and wind energy, non-newtonian liquid droplet interactions with hydrophobic surfaces, nano-sensors	Mechanical and Industrial Engineering
TRUSSELL, GEOFFREY C	Evolutionary, community and ecosystem ecology. These interests are being explored in a number of systems including rocky intertidal shores, old fields, and freshwater amphibian communities. Much of the current work emphasizes the evolutionary and ecological significance of predation risk, with an emphasis on the evolution of phenotypic plasticity and inducible defenses, the ecological significance of nonconsumptive predator effects, and the influence of trait-mediated indirect interactions on community dynamic and ecosystem function.	Marine and Environmental Sciences
VILLAR, MARIA ELENA	Strategic communication and health/science communication, focusing on community engagement with under-represented and hyper-vulnerable populations	Communications Studies

VOLLMER, STEVEN V	Prof. Vollmer studies the evolutionary ecology of marine organisms; primarily on the reef-corals, and specifically, how evolution shapes the genetic architecture of coral populations and species. He primarily studies organisms that are in the Caribbean Acropora corals, which have been decimated by White Band Disease (WBD) over the past thirty years and are now listed as threatened on the US Endangered Species Act.	Marine and Environmental Sciences
WANG, QI (RYAN)	Urban and social resilience; geo-social networking; coupled, human-natural systems, natural disaster response and evacuation; urban computing	Civil and Environmental Engineering
WIEDERSPAHN, PETER	Architectural design, building technologies, and design research entrepreneurship. In general, he focuses on architectural design, production, performance, and systems. In particular, he has conducted research on the following topics: future-use architecture; wood construction and its cultural impact at the detail, architectural and urban scales; wood-frame building envelope performance; mutable domestic space; high-performance, rapid-assembly structural/thermal component construction system; and flat-pack, rapid-deployment, long-term-use emergency shelter system; furniture design.	Architecture
WYLIE, SARA ANN	Developing new modes of studying and intervening in large-scale environmental health issues through a fusion of social scientific, scientific and art/design practices, and is engaged in developing open-source research projects on low cost thermal imaging, low cost imaging of water pollution, community-based methods for detection of hydrogen sulfide among other civic science projects.	Health Sciences; Sociology and Anthropology
XIE, WEI	Interpretable AI, IoT, computer simulation, data integrity and big data analytics, data-driven stochastic optimization, blockchain design and development for complex end-to-end cyber-physical system learning and risk management with applications, including biopharmaceutical manufacturing and supply chains, smart power grids with renewable energy, and health care.	Mechanical and Industrial Engineering
ZELLNER, MOIRA	Examining how specific policy, technological and behavioral factors influence the emergence and impacts of a range of complex socio-ecological systems problems, where interaction effects make responsibilities, burdens, and future pathways unclear. Focus on stakeholder and decision-making for collaborative policy.	School of Public Policy and Urban Affairs
ZHANG, YANG	Air quality, atmospheric chemistry, cloud/aerosol microphysics, sensitivity and uncertainty analysis, multiscale atmospheric modeling and forecasting, climate and Earth system modeling, health impact assessment, eco-environmental sustainability, and human-Earth system interactions.	Civil and Environmental Engineering
ZHENG, YI	Nanoscale thermal transport, nanoengineered materials, multifunctional composites, microfluidics, chemical and biological nanosensors, renewable energy harvesting, thermophotovoltaics, and photon-based radiative cooling.	Mechanical and Industrial Engineering
ZHU, HONGLI	Energy storage, advanced manufacturing, multifunctional bio-inspired material from nature, nano/microfabrication of devices and materials; Bendable, implantable, and biocompatible electronics; Investigations of sustainable biomaterial, like cellulose, hemicellulose, and lignin, in life science and engineering.	Mechanical and Industrial Engineering