SCI COMM IDENTITIES PROJECT

Embracing science communicators' unique perspectives for inclusive engagement

THE
UNIVERSITY
OF RHODE ISLAND

Metcalf

Knight Center
for Environmental Journalism

PROJECT SCI COMM IDENTITIES

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The SciComm Identities Project (SCIP) Fellowship was a one-year professional development opportunity for pre-tenure faculty at U.S. institutions who identify as underrepresented racial or ethnic minorities in Science, Technology, Engineering and Mathematics (STEM).

Through this fellowship, SCIP aimed to shift the paradigm of science communication training and create a more representative suite of academic science communicators.

In addition, SCIP aimed to amplify the perspectives of SCIP Fellows as science communicators and public intellectuals. To that end, we created this source book for journalists covering environmental topics to provide a more representative range of expert sources with science communication experience.

2023 FELLOWSHIP - **ENERGY**

Fellows study issues ranging from data-driven sustainable transportation to institutional barriers of energy poverty.

2024 FELLOWSHIP - **WATER**

Fellows study issues ranging from disaster management to irrigation management strategies.

2025 FELLOWSHIP - **FOOD**

Fellows study issues ranging from food insecurity and precision agriculture to aquaculture.

The SCIP Fellowship supported faculty whose research related to climate change.

In seeking a wide range of disciplinary expertise that could connect across cohorts, the fellowship offered three cohorts that each focused on a specific subtheme: energy, water, and food.

Fellows are listed according to cross-cutting topics to easily identify their primary areas of expertise.

Please note that some Fellows' work actually incorporates more than one of these topics, as noted in their short biographical descriptions.

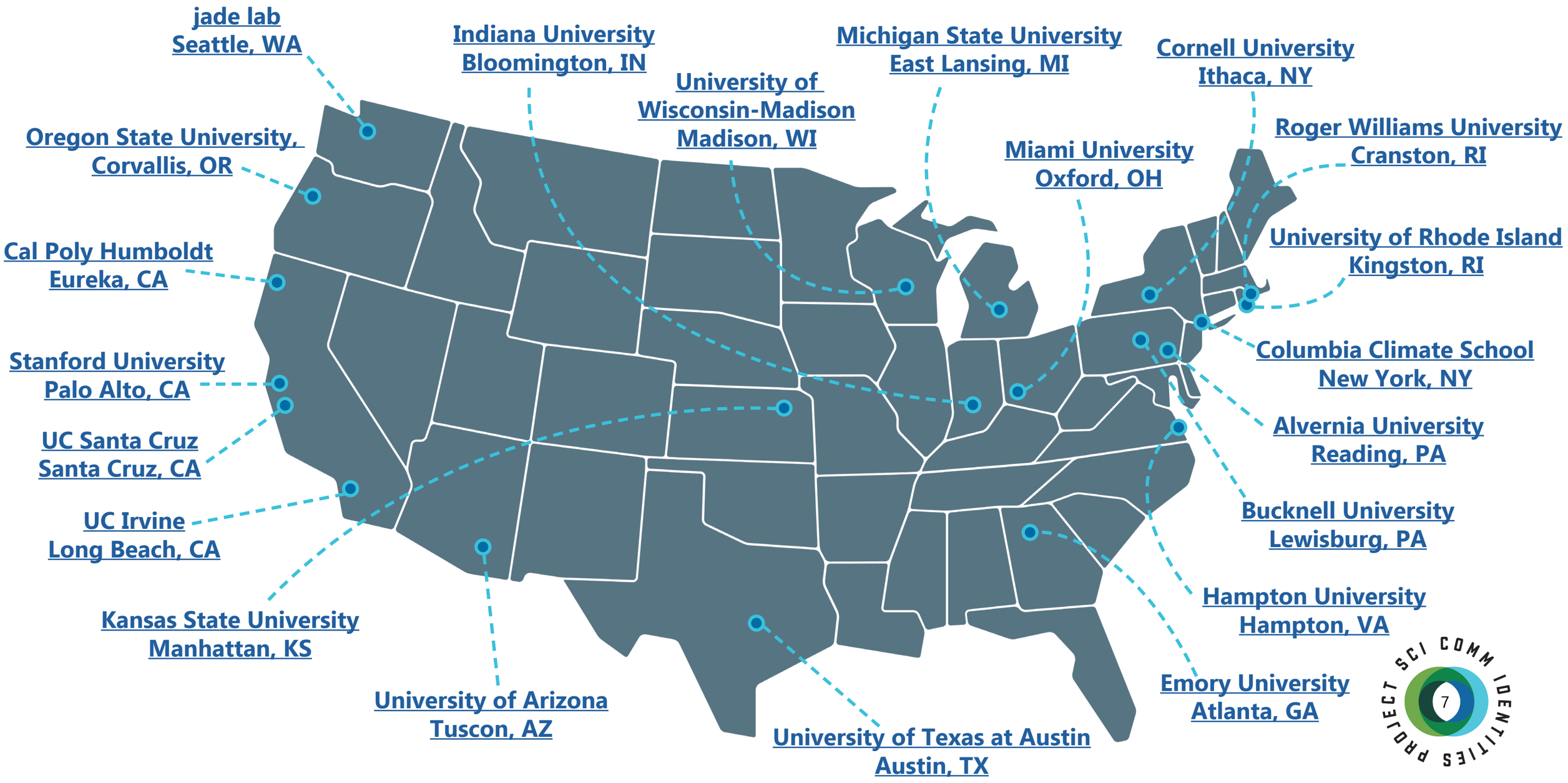
RESEARCH TOPICS

Click on a research topic to navigate to the corresponding Fellow.

Agriculture
Agricultural Water Management
Agricultural Water Usage
Air Quality and Health
Animal Evolution
Aquatic Physiology
Behavioral Design
Climate Change
Climate Impacts
Climate and Health
Co-Production of Knowledge
Community Engagement (S. CA)
Community Engagement (N. CA)
Community Engagement (WA)
Corporate Social Responsibility
Drinking Water Access
Drought and Water Limitations
Electrical Grid
Electricity
Energy Development
Energy Justice (CA)
Energy Justice (TX)
Energy Poverty in Sub-Saharan Africa
Environmental Justice (WA)
Environmental Justice (TX)
Engineering Education (PA)
Engineering Education (CA)
Environment and Cancer
Environmental Justice (PA)
Environmental Justice (CA)
Environmental Microbiology
Environmental Sustainability Goals
Food Assistance
Food Security
Gene Expression
Groundwater Depletion
Impacts of Natural Disasters
Indigenizing STEM
Indigenous Knoweldge
Infrastructure Management
Implementation Science
Marine Invertebrates
Microbial Diversity
Microbial Genomics
Marine Ecology
Mycology
Oyster Reefs
Pastoralism
Plant Pathology
Precision Water Management
Predator-Prey Interactions
Public Relations
Remote Sensing
Science Communication
Serious Games
Social Vulnerabilty
Soil Sensing
Sustainable Aquaculture
Sustainable Engineering
Sustainable Microbial Water Sampling
Sustainability
Wastewater Reuse
Water Equity
Water Quality
Weather and Climate Extremes
Wildfires

FELLOWS BY GEOGRAPHY

Click on a university to learn more about the Fellow who calls it home.



MEET OUR FELLOWS

While Fellows bring a diverse range of cultural and disciplinary backgrounds, they all share a strong history of personal commitment to science communication and inclusive community engagement.

Click on any of the following icons to access the fellows' social media links and/or personal websites.

BlueSky

Instagram

LinkedIn

Website

X/Twitter

AREAS OF INTEREST

Click on an area of interest to navigate to the corresponding Fellows.

AGRICULTURE

Prof. Alonso Favela (Uh-lon-soh Fuh-veh-luh)

Assistant Professor | University of Arizona | Tuscon, AZ

Agricultural Water Usage | Drought and Water Limitations | Sustainable Microbial Water Sampling

Dr. Favela's research seeks to understand how the planet's smallest and most diverse communities—microbial ecosystems—function and adapt, especially as human civilization continues to shape their ecology and evolution. His work explores how plant genetics shape root microbes, how human activities have domesticated microbial communities, and how we can harness microbes to enhance agricultural sustainability. He hopes this research will contribute to a more sustainable future and help protect ecosystems from irreversible damage. He is an Arizonan through and through, with roots tracing back to his campesino parents from Durango, Mexico—so naturally, his love language is tacos and tequila!

Fluent in:
English

alonsof@arizona.edu

Dr. Gaurav Jha (Gaw-rev Jah)

Assistant Professor | Kansas State University | Manhattan, KS

Remote Sensing | Precision Water Management | Soil Sensing

Dr. Jha is a precision agronomist whose work sits at the intersection of technology, environment, and food systems. His research explores how sensor-based technologies, remote sensing, and artificial intelligence can support sustainable crop production and smarter water management, especially across the climate-challenged Great Plains. He leads the Digital Agronomy Research Team (DART) at Kansas State University and collaborates with farmers, engineers, and data scientists to develop tools that improve yield while conserving water and energy. His current projects involve evaluating AI-driven irrigation systems, mapping abiotic stress with drones and satellites, and co-developing decision support tools with growers to enhance on-farm water stewardship. Fun Fact: When not in the lab, he loves to travel with his partner. In his free time, he enjoys painting traditional folk art from India called "Madhubani."

Fluent in:
English, Hindi, Bengali

gjha@ksu.edu

Dr. Leslie Holland (Less-lee Hall-end)

Assistant Professor & Extension Specialist | University of Wisconsin-Madison | Madison, WI
Plant Pathology | Agriculture | Mycology

Dr. Holland researches the diagnosis, epidemiology, and management of plant pathogens affecting fruit crops, with a focus on cranberry, apple, grape, and berry systems, using both molecular and field-based approaches. Through her extension program, she works directly with farmers, translating research into practical solutions to enhance productivity and sustainability in the fruit industry. Her work has been funded by several USDA NIFA programs, including the Specialty Crop Research Initiative.

Fluent in:
English

laholland@wisc.edu

BIOLOGY

SHE/HER

Fluent in:
English, Spanish

Dr. Aide Macias-Muñoz (Ay-deh Mun-yos)

Assistant Professor | University of California, Santa Cruz | Santa Cruz, CA

Gene Expression | Animal Evolution | Marine Invertebrates

Dr. Macias-Muñoz's lab uses jellyfish and relatives to understand how complex structures (such as eyes) or complex processes (such as development or regeneration) evolve. They are interested in seeing whether the genes used for these traits are similar or different in animals that are distantly related. This will help us better understand the drivers of biodiversity.
Her research has been funded by the George E Hewitt Foundation for Medical Research, the American Philosophical Society, and the UC Chancellor's Postdoctoral Fellowship.
When she is not at work, she is spending time outdoors with her two wonderful kids.

amacia16@ucsc.edu

HE/HIM

Fluent in:
English, Arabic

Dr. Hisham Abdelrahman (Hee-SHAHM Ab-dell-RAH-man)

Assistant Professor | Roger Williams University | Cranston, Rhode Island

Sustainable Aquaculture | Aquatic Physiology | Water Quality

Dr. Abdelrahman is an aquaculture specialist whose research focuses on sustainable aquaculture, water quality management, and aquatic animal physiology. His work explores innovative production systems, optimizing growth conditions, and assessing environmental impacts to support sustainable seafood production. He has published extensively and mentors undergraduate and graduate researchers, many of whom present at national conferences. Dr. Abdelrahman has also initiated multiple international academic partnerships. Fun fact: He has worked with fish farms on three continents and enjoys exploring local seafood wherever he travels. When he's not in the lab or field, he's passionate about soccer and tennis.

habdelrahman@rwu.edu

SHE/HER

Dr. Janani Hariharan (JAH-nuh-nee Har-ee-har-uhn)

Smith Postdoctoral-to-Tenure Track Fellow | Bucknell University | Lewisburg, PA

Microbial Diversity | Environmental Microbiology | Microbial Genomics

Dr. Hariharan's research investigates the ecology and evolution of environmental bacteria. She is particularly interested in how microbes evolve with each other, and the sharing of resources within these communities. Current research interests include mapping the evolution of resource sharing in bacteria, assessing the carbon storage potential of microbial communities in green roofs, and assessing how microbes are impacted during environmental disasters in streams and soils.

Fluent in:
English, Hindi, Tamil

jh069@bucknell.edu

HE/HIM

Dr. Joey Reustle (Jo-E Rice-Lee)

Assistant Professor | Hampton University | Hampton, VA

Marine Ecology | Oyster Reefs | Predator-Prey Interactions

Dr. Reustle is currently studying how food webs respond to oyster restoration in urban and rural systems. Specifically, he often works to better understand how predator-prey dynamics shape ecological communities and ecosystem services especially on oyster reefs or other estuarine habitats. Joey was awarded an NSF grant to initiate an assessment of how food webs respond to oyster restoration in urban and rural systems. A couple fun facts about him: he's a proud father of 3 and he's eaten his study organism 3 different ways.

Fluent in:
English

joseph.reustle@hamptonu.edu

COMMUNICATION

SHE/HER

Dr. Chuqing Dong (Chu-CHING Dah-ng)

Assistant Professor | Michigan State University | East Lansing, MI

Corporate Social Responsibility (CSR) | Environmental Sustainability Goals (ESG) | Public Relations

Dr. Dong's research explores the social impact of public relations through ethical and strategic CSR and ESG communication and public engagement. Drawing on interdisciplinary theories and using multimethod approaches, her research agenda is shaped by inquiries such as 1) the effects and effectiveness of CSR/ESG communications in the new media environment and within a global context; 2) strategic CSR alliances between Non-Profit Organizations (NPOs) and corporations and their impacts on the allies, publics, and the society; and 3) relationship management strategies for nonprofits and government agencies.

Fluent in:
English, Mandarin

cdong@msu.edu

SHE/HER

Dr. Paula Buchanan (PAW-luh byoo-KAN-uhn)

Lead Instructor | Columbia Climate School

Drinking Water Access | Sustainability | Science Communication

Dr. Paula R. Buchanan is a disaster and emergency management researcher. Her research focuses on sustainable drinking water access and the critical importance of effectively communicating scientific concepts like sustainability to a diverse audience. Her research aims to identify the barriers and challenges faced by underrepresented groups in the field of SciComm (science communication) and to develop strategies to make SciComm more inclusive and effective. By examining the intersectionality of identity and science communication, Dr. Buchanan's work seeks to create a more diverse and equitable landscape for sharing scientific knowledge about drinking water and its importance for life to exist.

Fluent in:
English

paula_buchanan@hotmail.com

ENGINEERING

HE/HIM

Fluent in:
English

Dr. Khalid Osman (KAH-leed Oz-MAN)

Assistant Professor | Stanford University | Palo Alto, CA

Water Equity | Environmental Justice | Infrastructure Management

Dr. Khalid K. Osman is an Assistant Professor of Civil and Environmental Engineering at Stanford University and a Center Fellow by courtesy at the Woods Institute for the Environment. Khalid also holds faculty affiliations at the King Center for Global Development and the Center for the Comparative Studies in Race and Ethnicity. He earned his PhD in Civil and Environmental Engineering from the University of Texas at Austin with support from the Bill & Melinda Gates Fellowship and a Ford Foundation Predoctoral Fellowship. His research focuses on the operationalization of equity and justice in the provision of infrastructure services. Specifically, employing qualitative and quantitative methods to develop novel frameworks at the intersection of the natural, built, and social environment. Fun Facts: 1) Khalid is child #5 of 11 children born to his parents - 2) He loves to travel and learn about new cultures.

osmank@stanford.edu

SHE/HER

Fluent in:
English

Dr. Qualla Jo Ketchum (Qua-lah Joe Catch-em)

Assistant Professor | Cal Poly Humboldt | Eureka, CA

Engineering Education | Indigenizing STEM | Community Engagement

Qualla Ketchum (ᎾᏍᎩᎠᏰᎵ) is an Indigenous engineer, educator, and Cherokee matriarch dedicated to reshaping how engineering is taught and practiced. Her research focuses on decolonizing engineering work and curriculum, the power of place in education and research, and community-based science and engineering, particularly in hydrology and groundwater monitoring. In all her work, she bridges Indigenous knowledge and Western techniques, moving beyond extraction practices toward relationships of respect and care with all our relations: human and more-than-human. A citizen of the Cherokee Nation, Qualla is also writing a book on Indigenous perspectives in engineering.

qjk3@humboldt.edu

Dr. Kushal Adhikari (Koo-SHAL uh-dhee-KAHR-ee)

Assistant Professor | Alvernia University | Reading, PA

Sustainable Engineering | Wastewater Reuse | Engineering Education

Dr. Adhikari's research focuses on integrating sustainability into engineering practices to foster a resilient and sustainable society. His work emphasizes innovative approaches to reducing, reusing, and recycling resources. His key research areas include water sustainability through reclamation and reuse, green stormwater infrastructure, climate-smart agriculture, the food-energy-water nexus, and materials sustainability. He has published in leading professional journals and has presented at numerous national and international conferences. Fun Fact: Dr. Adhikari has often been part of inaugural cohorts—starting from the first cohort at his school (grades 1–10), then college (grades 11–12), his undergraduate program, serving as the founding engineering faculty at Juniata College, and now launching the Civil Engineering program for the first time at Alvernia University.

Fluent in:
English, Nepali

adhikari.kushal1992@gmail.com

ENVIRONMENTAL JUSTICE

Dr. Dominic Bednar (Dah-meh-nik Bed-Nahr)

Assistant Professor | University of California, Irvine | Long Beach, CA

Energy Justice | Environmental Justice | Community Engagement

Dr. Bednar's research examines the institutional barriers of energy poverty recognition and response in the United States and explores the spatial, racial/ethnic, and socioeconomic patterns of residential energy affordability, consumption, and efficiency. Their research also explores equitable and just pathways towards decarbonization and clean energy workforce development in Black and Brown communities. His body of work promotes ongoing policy analysis and program evaluations to improve community health and to effectuate a just energy transition. He completed his Ph.D. in Environment and Sustainability at the University of Michigan's School for Environment and Sustainability concentrating on Energy Justice.

Fluent in:
English

dbednar@uci.edu

Dr. Naaborle Sackeyfio (Naa-boor-lee Sah-key-fee-oh)

Associate Professor | Miami University of Ohio | Oxford, Ohio

Energy Development | Electricity | Energy poverty in Sub-Saharan Africa

As an energy expert, Dr. Sackeyfio examines the role that electricity access and energy institutions play in modern life and the implications for economic development in sub-Saharan Africa (particularly in West African countries). She is interested in what a post-carbon economy can look like, the relationship between energy access, gender and empowerment; and how energy preferences and values inform struggles around who gets what, where, and how. Electricity access is often taken for granted in the industrialized and post-industrialized world, yet it remains an important driver of higher living standards across the global south in lieu of hundreds of millions who lack access. In her spare time, she loves to teach international dance fitness and yoga.

Fluent in:
English

sackeyn@miamioh.edu

EXTREME EVENTS

HE/HIM

Dr. Ambarish Karmalkar (Ahm-bar-eesh Car-mall-car)

Assistant Professor | University of Rhode Island | Kingston, RI

Climate Change | Weather and Climate Extremes | Climate Impacts

Dr. Karmalkar is a climatologist studying regional climate change and its impact on human and natural resources. He studies how regional climate is determined by complex interactions between local factors such as topography, proximity to the coast and large-scale atmospheric and ocean circulation. Climate change in the Northeast US has been a key focus of his research recently, along with projects focusing on climate change in the polar regions. Additionally, he collaborates with ecologists and hydrologists to evaluate the impacts of climate change and extremes and contribute to the development of actionable climate information.

Fluent in:
English, Hindi, Marathi

akarmalkar@uri.edu

SHE/HER

Dr. Shenyue Jia (Shen-YU Jee-ah)

Assistant Professor | Miami University | Oxford, OH

Wildfires | Impacts of Natural Disasters | Social Vulnerabilty

How likely is your home to face an extended power outage from wildfires or other natural disasters? And if you care for someone who depends on power for medical devices, are you ready for a long stretch without electricity? Dr. Jia combines crowdsourced and satellite data to explore these questions and help us adapt to our changing climate. Fun fact: She thought she'd escaped natural disasters when she moved from California to Ohio, but guess what? Tornado season has its own way of keeping things interesting!

Fluent in:
English, Mandarin

jias10@miamioh.edu

HEALTH

Dr. Christine Ekenga (Chris-teen EH-keng-ah)

Rollins Assistant | Emory University | Atlanta, GA

Climate and Health | Air Quality and Health | Environment and Cancer

Dr. Ekenga's research investigates how environmental factors influence human health and well-being. Her work primarily focuses on the prevention and control of chronic diseases, such as cancer, respiratory conditions, and diabetes. In recent years, she has explored environmental justice issues related to climate change, air quality, and fast fashion. A central theme of her research is addressing the experiences of marginalized and low-resource communities, who face disproportionate exposure to environmental hazards and limited access to the positive aspects of the environment. Dr. Ekenga's work has received awards from NASA and the American Association for Cancer Research (AACR)

Fluent in:
English

cekenga@emory.edu

Prof. Roger Figueroa (ROJ-err Fig-uh-ROH-uh)

Assistant Professor | Cornell University | Ithaca, New York

Food Assistance | Food Security | Implementation Science

Broadly, Prof. Figueroa is passionate about translating science into policy and community changes for public health benefit. His research program examines how social services and policies, as well as sustainable food systems influence diet-related chronic health conditions such as Type-2 Diabetes. Currently, his research examines food assistance policy to improve access to and the quality of community food services and programs to promote food and nutrition security.

Fluent in:
English, Spanish

rf453@cornell.edu

INFRASTRUCTURE

Dr. Bethany Hoy (Beth-uh-knee HOY)

Consultant | jade lab | Seattle, WA

Environmental Justice | Community Engagement | Behavioral Design

Dr. Hoy (formerly Gordon) is a consultant focused on equitable infrastructure, climate adaptation, and community engagement. As co-founder of jade lab, she works with public agencies, nonprofits, and community groups to co-create inclusive, justice-oriented processes for infrastructure and environmental planning—focusing on collaboration, capacity-building, and long-term impact. Previously an academic researcher, Dr. Hoy's work bridged civil engineering and the social sciences to explore how engineers can better collaborate with communities—insights that continue to inform her consulting practice today.

Fluent in:
English

bethany.hoy@thejadelab.com

Dr. Sergio Castellanos (Sair-hee-oh Kahs-teh-yah-nos)

Assistant Professor | The University of Texas at Austin | Austin, TX

Energy Justice | Environmental Justice | Electrical Grid

Dr. Castellanos analyzes just decarbonization pathways in various regions around the world, with a focus in the US and Latin America. He leverages data-driven approaches to examine the power grid, sustainable transportation, and equitable local energy and environmental injustices in Texas. With collaborators, his interdisciplinary projects have been awarded international prizes, won national competitions, and gathered media attention. He has also received recognition from an environmental justice organization in recognition of his leadership and transformative work to help better communities in Austin, Texas.

Fluent in:
English, Spanish

sergioc@utexas.edu

WATER MANAGEMENT

HE/HIM

Dr. Julio Postigo (HOO-lee-oh Poh-STEE-go)

Assistant Professor | Indiana University | Bloomington, IN

Indigenous Knoweldge | Pastoralism | Groundwater Depletion

Dr. Postigo investigates how the interactions of climate change and economic development generate impacts on livestock herders and their ecosystems in mountains (high altitude) and the Arctic (high latitude). His work explores, for instance, how impacts of climate change like the reduction of glaciers and sea ice may facilitate the expansion of mining in the Andes and oil exploration and cruise tourism in the Arctic, respectively. Another strand of his research analyzes how global demand of fresh produce and fruit over-extracts groundwater from one of the planet's driest places—Ica, Peru. His work also focuses on Indigenous knowledge and adaptive responses to impacts of climate change among Andean farmers in Bolivia and Peru, and pastoralists in Pakistan. He was a Lead Author of the IPCC Sixth Assessment Report from 2020 to 2024. He received the Indiana University 2024-2025 Outstanding Junior Faculty Award.

Fluent in:
English, Spanish

jpostigo@iu.edu

THEY/THEM

Dr. Malena Orduña Alegría

(Mah-LEH-nah Ohr-DUNE-ya Ah-leh-gree-yah)

Assistant Professor | Oregon State University | Corvallis, Oregon

Agricultural Water Management | Co-Production of Knowledge | Serious Games

Prof. Malena Orduña Alegría researches how water, agriculture, and human systems interact, developing models to improve water sustainability. Their work combines hydrology, data science, and serious games to help farmers, policymakers, and community members make informed choices. They have led projects on sociohydrology in four continents and enjoys photography and board games. Passionate about bridging science and real-world applications, they are building a research lab dedicated to innovative, data-driven solutions for agricultural water management.

Fluent in:
English, Spanish

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