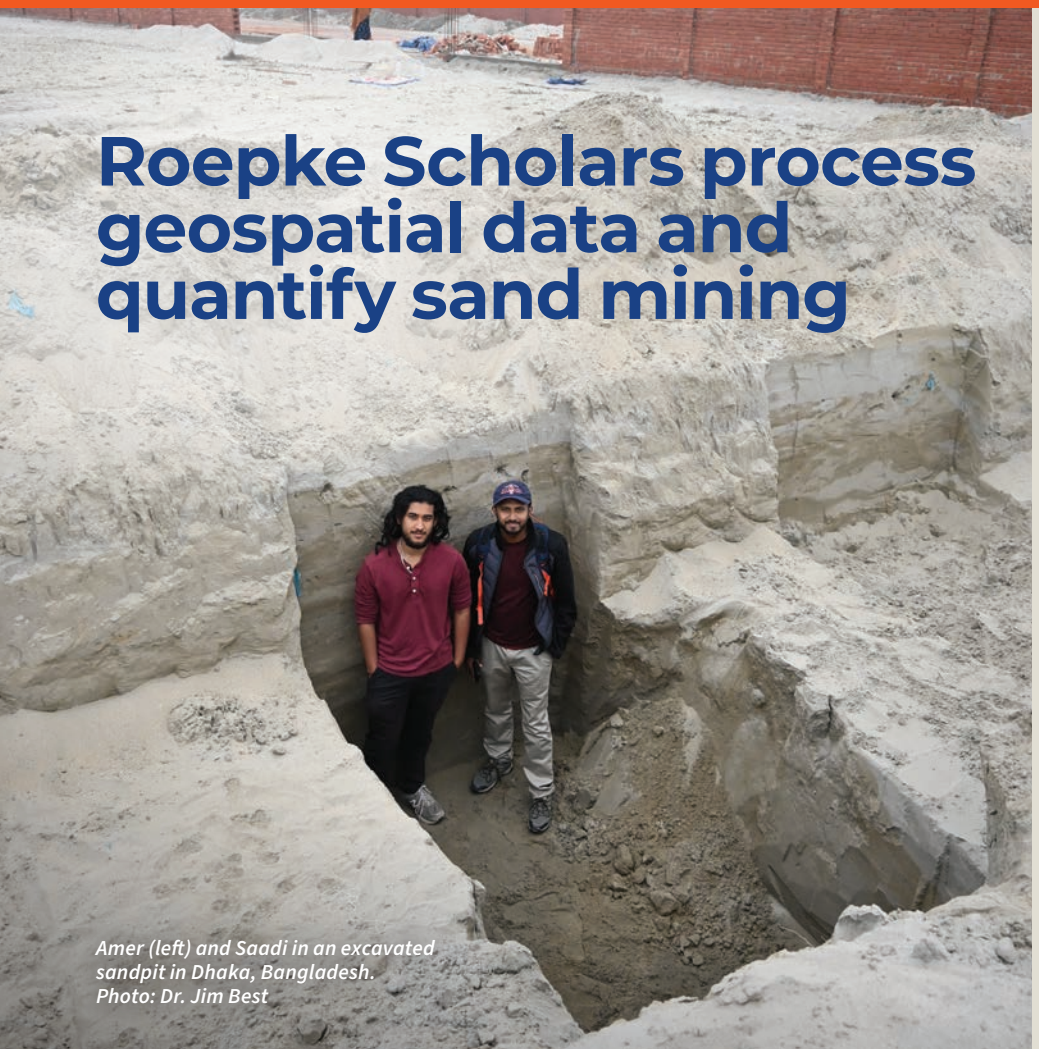
2022-2023

DEPARTMENT OF GEOGRAPHY & GEOGRAPHIC INFORMATION SCIENCE

Roepke Scholars process geospatial data and quantify sand mining



Amer (left) and Saadi in an excavated sandpit in Dhaka, Bangladesh. Photo: Dr. Jim Best

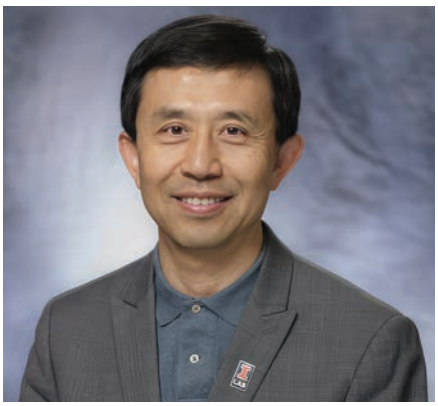
Stefan Ilic (senior)

I worked with Dr. Marynia Kolak as a member of the Healthy Regions & Policies Lab, which includes many projects dedicated to promoting the accessibility and literacy of geospatial data. The projects that I worked on mainly involved the collection, compilation, and manipulation of census data, as well as visualizing the data using software friendly for geospatial data. I was also introduced to the process of creating metadata, which is a vital component of making data both reproducible and accessible.

Amer Islam (BS '23)

The Roepke Scholarship supported my travel to northeastern Bangladesh with professor **Jim Best** and PhD student **Saadi Chyon**, where we investigated the nature and extent of sand mining. My role during the project was to use remote sensing to temporally and geographically locate key areas of interest and then utilize Google Earth Pro and Planetscope imagery to download the appropriate data for each region.

Continued on page 14



Shaowen Wang begins new role as College of LAS Associate Dean

Shaowen Wang, professor of geography and GIS and department head from 2017-2023, began serving this fall as Associate Dean for Life and Physical Sciences in the College of Liberal Arts & Sciences. In his new role, Shaowen liaises between the college and its academic units including those within the School of Earth, Society & Environment. Shaowen joined GGIS as an assistant professor in 2007 and has since founded the CyberGIS Center for Advanced Digital and Spatial Studies and the Institute for Geospatial Understanding through an Integrative Discovery Environment (I-GUIDE). In 2022, he became a faculty fellow with the Office of the Vice Chancellor for Research and Innovation. ■

More Faculty Awards and Honors on Page 8

FROM THE DEPARTMENT HEAD

Our GGIS Community

Greetings alumni and fellow geographers! I began this fall as the new Department Head of Geography & GIS and would first like to thank our outgoing Head Professor Shaowen Wang for six years of dedicated service and leadership.

I'm proud to have been a member of this department since starting as an assistant professor in 2007 after several years at California State University San Bernardino, but I grew up much closer to campus in Chicago's southwest suburbs.

My research involves the social and political aspects of transportation infrastructure as reflected in my research lab: Society, Mobility, and Infrastructure at Illinois (SMIIL). I also love teaching General Education courses, writing articles with graduate students, and helping to build community within and beyond Geography & GIS.

My vision as department head is to maintain and enhance four elements that we excel at: innovation, belonging, collaboration, and resilience. Our department reflects the wonderful diversity and creativity of geography as a whole, and I am excited to bolster that work in every way I can.

We also want to be a place where people feel they belong, whether as students or faculty, and we want our alumni to know they will always be part of GGIS. Let us know how you're doing and how we can connect you with current and former students to strengthen that sense of community. Please contact me if you have been considering a return visit to campus or making a gift to support our students and academic programs.

Julie Cidell
jcidell@illinois.edu

Visit **illinoisalumni.org** *to update your contact information, submit a class note, and check out news and events for and about Illinois Alumni.*

Matthew Anderson (PhD '12) receives Distinguished Alumni Award

Dr. Matthew Anderson has received the Geography & GIS Early Career Distinguished Alumnus Award. Anderson joined the Eastern Washington University faculty in 2014 and currently serves as professor and director of the Department of Urban and Regional Planning. He was awarded EWU's Jeffers W. Chertok Endowed Professorship in 2021 in recognition of his strong commitment to social and environmental justice research and his mentorship of undergraduate and graduate students.

Anderson's PhD advisor **Dr. David Wilson** notes that Matt was a dynamic and innovative graduate student in our department and is now a leading scholar and analyst of urban land and housing markets, city governance dynamics, and urban sustainability issues.

Since completing his doctorate at Illinois, Anderson has collaborated with Wilson and DePaul University professor **Carolina Sternberg (PhD '12)** on two journal articles about gentrification in two Chicago neighborhoods. He also collaborated more recently with **Steven Radil (PhD '11)** on two journal articles focused on critical GIS.

"I feel forever indebted to Illinois geography, my graduate cohort, fellow alumni, and to David in particular. He planted the seeds that would grow into my research program and taught several excellent graduate seminars. In fact, I closely model my own seminars here at EWU on David's at UIUC," said Anderson.

Dr. Anderson (right) with professor and former PhD advisor David Wilson

Through his research, teaching, and publications, Anderson has broadened our understanding of several vexing sociopolitical issues in the current United States city: how class-monopoly rent is extracted in the urban everyday, how gentrification is a profoundly racialized phenomenon, the dynamics of urban governance in pandemic times, and the widening rifts between urban haves and have-nots. His work in these areas has been widely cited and his current research continues to build on these insights.

Anderson returned to campus on May 4 to accept this Early Career Distinguished Alumnus Award, present his research: "Neoliberal Urbanization and the Pursuit of Class Monopoly Rent," and enjoy meals and conversation with faculty and students.

"The time I spent at UIUC was probably the time of my life. I met my wife there, and made a lot of good, lasting friends. It could not have gone better for me. Everything about the geography program set me up for success in ways that I am still discovering today." ■

Back row, from left: Aisha Syed, Augustyn Crane, Ryan Killian, Michael Minn, Julie Cidell, Bruce Rhoads. Front row: Andrea Pimentel Rivera, Lauren Weber, Aditya Allamraju, Wataru Morioka, Poushalee Banerjee

FALL 2022 | SPRING 2023 | SUMMER 2023 GEOGRAPHY & GIS DEGREE RECIPIENTS

Bachelor of Arts / Science

Edzel Antiporda
Guangyu Cai
Julia Cogan
Augustyn Crane
Sidney Harney
Amer Islam
Ryan Killian
Katie Niermann
Piper Siblik
Aisha Syed
Nicole Ward
Zijun Xu

BS, Computer Science + GGIS

Alycia Bhargava
Erin Dowdy
Rajit Ghai
Shalni Sundram

Undergraduate award recipients

Jerome D. Fellmann Award
Amer Islam

Presented to one graduating senior in recognition of academic excellence and completion of a senior honors paper.

John Thompson Award
Nicole Ward

Presented to graduating seniors for academic excellence and service to the department

Yvette B. Hernandez Scholarship
Grace Bowen

This annual scholarship, established by founder and CEO of UrbanGIS Keith Searles (BS, CEE '96) recognizes a student who demonstrate extensive GIS skills and excellent leadership qualities.

Professional Science Master's

Aditya Allamraju
Wei Dang
Xinyu Jiang
Gyudae Kim*
Jiaheng Liu
Raina Monaghan
Apurva Patil

Master of Arts / Master of Science

Poushalee Banerjee
Chang Liu
Lixuanwu Zhou

Andrea Pimentel Rivera,* MA thesis:
"Opposing powers at the helm: The production of (im)mobilities of maritime transportation in Vieques, Puerto Rico"

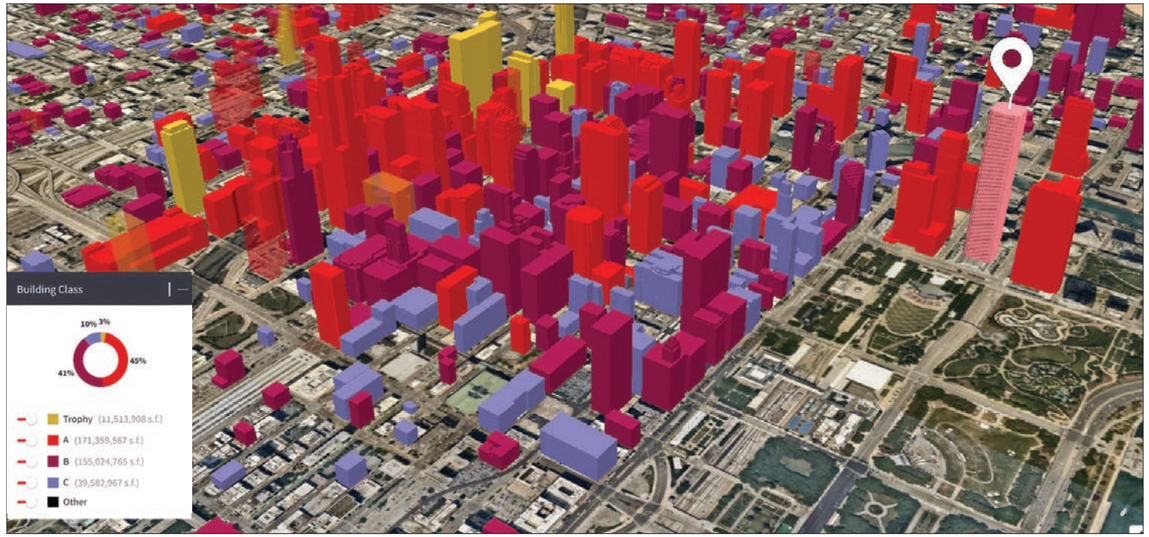
Lauren Weber,* MA thesis:
"Maintaining Portland's progressive dystopia: crisis, carcerality, and the real estate state"

**Students who entered our PhD program this fall*

Doctor of Philosophy (PhD)

Austin Davis
"Geoexpression: A Theoretical Framework for Understanding Geographic Process Concurrency"

Wataru Morioka
"Network Dual K Function: Exact Statistical Methods for Analyzing Co-location on Street Networks"



A screenshot from JLL's Blackbird platform illustrating the square footage of office buildings in the Chicago Loop.

ALUMNA SPOTLIGHT

Shannon Happ (BS '12)

Shannon Happ (BS '12, Earth systems, environment, and society; geography) *is a director in Jones Lang LaSalle (JLL) Real Estate's research organization based in Chicago. She serves as the GIS subject matter expert on national site selection and large transaction work and provides tools and recommendations to drive real estate decisions among client's C-suite. Shannon leads a team of 20+ GIS analysts who provide expertise in geospatial analytics, data visualization, and business intelligence tools. She is also involved in the development of JLL's proprietary data visualization tool, Blackbird. Shannon has 11 years of commercial real estate experience, with nine of those at JLL. She has experience working alongside JLL's office, industrial, healthcare, and retail brokerage communities in major markets around the globe.*

What attracted you to the field of geography, and what is your favorite geographic concept?
I was first drawn to the field of geography when Google Earth gained widespread popularity in 2005. It was fascinating to explore the world and see land surfaces, landmarks, and city layouts from my computer. I did not have the means to explore these locations in-person, but Google Earth gave me the opportunity to discover the world's complex landscapes. It took me time to realize that I could translate this interest in geography into a career path. I learned a lot of important geographic concepts at Illinois but my favorite is the notion of space. It is fascinating to discover how societies organize and manage the spaces they live in. The environmental, social, and political consequences of these spaces influence the communities we live in.

What role does geography play in your current work?
You have likely heard the phrase "location, location, location" in the context of real estate. This is not just a cliché phrase, but a concept that continues to ring true in the industry. In my current role at JLL, one of the largest commercial real estate firms, we examine a variety of different factors when evaluating a potential property for a tenant or investor. We need to understand the surrounding demographics, available labor pool, nearby amenities, accessibility, and environmental factors to make informed recommendations to our clients. The most accurate and efficient way to analyze all this information is through GIS and data visualization. The success of a property is directly linked to its geography, and as such, I think about geography daily in my role.

What is your fondest memory as a student?
I was a part of the inaugural class of the School of Earth, Society & Environment's field expedition course to Costa Rica, which was an incredible experience. We learned about the environmental and sustainability challenges facing Costa Rica in the classroom before embarking on the trip over spring break. We explored national parks, volcanoes, thermal springs, banana farms, and much more. It was a fantastic way to apply the teachings in the classroom to the real world and build strong relationships among my peers and advisors. ■

ALUMNI PERSPECTIVE

Eric Shook MS '10, PhD '13

What first attracted you to the field of geography?
I like to think that I became a geographer in two days. I was studying computer science at the University of Iowa and working in information technology services (ITS) with Shaowen Wang when he invited me to be a PhD student at the U of I... in geography. My partner and I discussed the invitation that evening and agreed to visit campus that weekend. He then informed me that he needed my decision by the next day, so we decided to go for it! Now I enjoy viewing the world through a computer. My research focus is geospatial computing, combining geospatial and computational science.

What geographic concepts and regions did you study at Illinois?
As a computationally focused geographic information scientist (GIScientist), I spent much quality time typing away in my computer chair. I joked with fellow students that my computer chair was my field study site. I was fortunate to contribute to numerous research projects that spanned the globe, from the scale of a city to countries or continents. Most of my learning and focus aimed to help me better translate the world's complexities into the restricted confines of the two numbers that computers understand, 1s and 0s. My most memorable research experiences were at the whiteboards on the third floor of Davenport Hall, having robust discussions with fellow lab members. I love solving problems and those discussions helped me grow as a scholar. The discourse and debate helped me understand differing perspectives and to see new avenues to attack problems. Looking back, those were formative (and enjoyable) moments and I am fortunate to continue collaborating with several former lab mates.

What are your current research interests and projects?
In many ways, my research interests have remained the same. I still view the world through a computer and am always looking to improve the view. I focus a lot on education and training in geospatial computing, aiming to lower barriers to access and make complex technologies more approachable. I co-lead education and workforce development for an NSF-supported institute called I-GUIDE. I am building the GeoCommons at the University of Minnesota. It is "a place for space" and a collaborative hub for geospatial research, education, and public engagement.

> *We are excited to see how GeoCommons can break down the traditional silos around research, education, and public engagement using geography, spatial thinking, and geospatial technologies as catalysts.*

I am the director, and we are opening the facility in Fall 2023. I am excited at the possibilities of combining GeoAI, Extended Reality, and Digital Twins, because as technologies they give us a different view of the world. ■

Specializing in GIS, remote sensing, and human-water systems

Jida Wang
Associate professor

How did you decide to become a geographer?
I am a physical geographer interested in the hydrosphere and its interactions with human societies. Like many others, my academic trajectory was non-linear. The path to becoming a geographer involved years of multidisciplinary training, introspection, and exploration with a core passion for understanding diverse natural environments and their roles as both habitats and resources for humans.

I started with a bachelor's degree in environmental economics and management, then a master's degree in environmental and resource engineering. Through these trainings, I also became increasingly fascinated by rapidly advancing Earth-observing satellite systems and their potential for addressing large-scale environmental issues. As my analytical skills sharpened, I began to seek a more integrated, inclusive, and multi-scale platform that allowed my interests to converge, and geography was such a discipline. So, I decided to pursue a PhD and have evolved into a geographer.

What is your most memorable field research experience?
During the summer of 2010, I joined a one-month NSF-funded field campaign to study thermokarst lakes in the Alaska North Slope. At that time, I was a second-year PhD student struggling to map thaw lake basins using radar imagery. Although I had dwelled in the remote sensing lab for months, my perception of thermokarst remained fuzzy and abstract. On the way to the campaign site, our airplane crossed the beautiful Brooks Range and started to descend to Utqiagvik, the northernmost human settlement in the United States.

Thousands of ice-covered (in June!) thermokarst lakes appeared on the horizon across the vast stretch of the Arctic Coastal Plain, and I began to grasp the true scale of thermokarst landscapes and their immeasurable significance to the carbon cycle. During the following weeks, I worked with the science crew to investigate thaw lake shorelines, bathymetry, and other geomorphic and thermal controls. Despite the strenuous physical fieldwork, the joy of curiosity kept me motivated and happy every day. Being able to study this complex and dynamic landscape in situ was an incredible enlightenment unparallel to any lab experiments.

Besides fieldwork achievements, this experience left me with many adventurous memories and unique cultural enrichments. My encounter with two grizzly bears in the wilderness was just one example. During our campaign in Atqasuk, an Inuit village 60 miles south to Utqiagvik, I also made friends with a few local kids and had an initial engagement with the Indigenous lifestyle, language, and culture.

What are your current research interests and directions?
My current research niche is surface water dynamics, particularly in lentic (i.e., slowly moving or hydrologically stationary) ecosystems including lakes, reservoirs, and wetlands. These physical components store the greatest mass of liquid freshwater on Earth and sequester a disproportional amount of organic and inorganic carbon.

I study how these water stores function as "sentinels, regulators, and integrators" of climate change, and how lakes of different types interact with the fluvial systems, the cryosphere, the carbon cycle, and human-water managements.

I conduct such studies through multi-sensor satellite remote sensing, in situ measurements, hydrological modeling, and machine learning. I am also a member of the current science team of the Surface Water and Ocean Topography satellite mission. I work with my collaborators to improve prior hydrological data and leverage the roles of lakes and reservoirs to assist in river discharge estimation. Meanwhile, I am constantly engaged in research projects that aim at improving the representation of human water managements in terrestrial hydrology, the monitoring of lake water budget and quality, and the understanding of fluvial-lacustrine continuum. ■

Fieldwork site on Alaska's Arctic Coastal Plain in summer 2010. Photo: Jida Wang

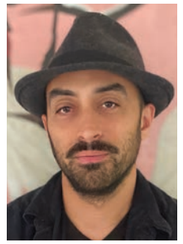
Muhammad Umar (PhD '17)
Teaching assistant professor

How did you decide to become a geographer?
My journey towards becoming a geographer was shaped by an innate curiosity about the Earth's natural processes and a profound fascination with the interactions between landforms and water bodies. It was during my early years spent exploring the outdoors and observing the mesmerizing behavior of rivers that I realized my true passion lay in understanding the dynamic interplay of sediment and water within these intricate ecosystems. The way rivers carve their paths, transport sediments, and evolve over time captivated my imagination and led me to embark on a dedicated path as a physical geographer. This journey has allowed me to delve into the complexities of rivers and sediment dynamics, uncovering the secrets held by these dynamic natural systems and contributing to our broader understanding of Earth's geological wonders.

What is your favorite geographic topic or concept to teach?
My favorite geographic topic to teach lies within the realm of monitoring and modeling Earth's surface processes through the powerful tools of remote sensing, geographic information systems (GIS), and the transformative capabilities of machine learning. The ability to capture, analyze, and interpret vast amounts of spatial data, coupled with AI-driven algorithms, opens up unprecedented opportunities for understanding the dynamics of our planet's ever-changing landscapes. Guiding students through the process of harnessing satellite imagery, LiDAR data, and advanced GIS techniques, and then infusing these with the predictive power of machine learning, enables us to uncover deeper insights into phenomena such as land cover changes, urban growth, natural hazards, and environmental shifts.

This multidimensional approach not only empowers students to explore the world from a new perspective but also equips them with skills vital for addressing contemporary environmental challenges in an increasingly interconnected and data-rich world. ■

FACULTY AWARDS & HONORS



Nikolai Alvarado was awarded Campus Research Board funding to conduct field work in Costa Rica for the next year. His proposal, entitled "South-South Migrants, Social Justice, and the Shaping of Urban Democracies: Investigating Alternative Forms of Migrant Inclusion in Informal Settlements," is being supported through UIUC's Funding Initiative for Multiracial Democracy program, which provides support for research that critically engages scholarly and public debates on multiracial democracy in any area of the world. Alvarado also received support from the Office of the Vice Chancellor for Research & Innovation Scholars' Travel Fund to attend the Ninth International Conference of Critical Geographies in Mexico City (October 23-29) to present "Urban Infrastructures and Migrant Citizenships: Notes Towards Actually Existing Migrant-State Relations in the Urban Peripheries."

Julie Cidell and PhD student **José Acosta-Cordóva**, along with two faculty from the University of Illinois at Chicago, recently received a nearly $1 million grant from the U.S. Environmental Protection Agency under their Science to Achieve Results program. Their project — "Electrification, Emissions, Exposure, and Equity: Community-Driven Scenarios for Freight Vehicle Electrification" — will investigate the potential for electrifying freight vehicles in the Chicago area and determine the environmental and health benefits of different possible scenarios for switching to electric trucks. Their work will largely take place in Little Village, an environmental justice community on the Southwest Side of Chicago, and they will work closely with the Little Village Environmental Justice Organization (LVEJO) to carry out their research.

Chunyuan Diao received the University Consortium for Geographic Information Science (UCGIS) Early-Mid Career Research Award, which 'celebrates an outstanding research record of innovative ideas or methods that lead to research impacts on the theory and/or practice of GIScience or geographic information technology.'

Marynia Kolak's Healthy Regions & Policies Lab was recently awarded a $1.4 million grant from the Robert Wood Johnson Foundation over the next two years to work on a new project to advance health equity with improved social determinant of health (SDOH) data discovery and community practice tools for health researchers, policymakers, and community organizations. Kolak notes that "this project will work to demystify application design thinking crucial to developing web applications centered on neighborhood health. Our main goal will be to develop, fortify, and advance an open ecosystem for communities that makes developing web applications with SDOH data for health equity more accessible, enjoyable, and empowering."

Mark Lara secured two grants to support research projects in his Spatial Ecology Lab (mjlara.web.illinois.edu): from the National Science Foundation's Office of Polar Programs (as lead PI) entitled "Micro to Macro-scale Hot-spot and Hot-moment dynamics in Arctic Tundra Ecosystems" ($1.8 million); and from NASA (as the sole PI) entitled "ABoVE-Ground Characterization of Plant Species Succession in Retrogressive Thaw Slumps Using Imaging Spectroscopy" ($400K).

2023 AAG Fellow: David Wilson

David Wilson was selected as a 2023 Fellow of the American Association of Geographers (AAG) in recognition of his distinguished scholarship, teaching, and mentoring of geography students and junior faculty colleagues.

From the AAG award announcement: "Wilson's research has focused on urban redevelopment, political economy, governance dynamics, and race in Rust Belt cities of the global north, particularly in Chicago, Flint, Glasgow, and Cleveland. He both studies these cities and has become closely tied to them, particularly their blues music scene. He is a giving scholar, with an open-door policy for all. He is also devoted to the promotion of diversity and inclusion at the University of Illinois and in the field of geography in general."

In February, Wilson presented his research project "Chicago's Gentrifying South Side: Blues Clubs and Political Resistance," during the UIUC Center for Advanced Study's Food for Thought series. He is also a 2023-24 Fellow at the Käte Hamburger Center for Apocalyptic and Post-Apocalyptic Studies (CAPAS) at Heidelberg University in Germany, where he is working on a project entitled "Fear Redevelopment and Apocalyptic Urbanism."

Dr. Rhoads at the site of a new research project looking at soil erosion and its impact on waterways. Photo: Fred Zwicky

River Runner

Professor Bruce Rhoads on the importance of rivers, studying the delivery of sediment, and establishing values

AS TOLD TO MARY TIMMONS, U OF I ALUMNI ASSOCIATION

I am a geomorphologist by training. I study how rivers are natural agents of erosion and deposition on our planet. Earth is unique because of its large amount of surface water. Seventy percent of this planet is ocean. Rivers do more to change the terrestrial surface than wind, ice or coastal wave action. Our rivers are vital to how our planet works.

Humans have radically changed rivers and streams throughout [North America]; they straightened them and, in many cases, removed the natural vegetation cover. Now, farming goes right up to the edge of many streams. The runoff is much greater. The rivers are transporting more water and sediment, which leads to more flooding. Flooding can occur almost anywhere. In terms of loss of life and property, it is the number one natural hazard on the planet.

One of the things we are trying to understand is how sediment is being delivered to streams from the surrounding landscape. There may be places sediment is coming from in great quantities and other parts of the landscape that aren't contributing very much. The conventional wisdom is that most of the sediment is coming from farm fields. But [there's evidence that] a large amount of it is coming from the streams and rivers themselves through streambank erosion.

I've learned that science only goes so far because there's only right or wrong if you value something or don't value something. I use an example that's kind of shocking to my students. I say, "Okay, a factory dumps pollution into a stream and it kills a bunch of fish. Is that good or bad?" And of course, their immediate reaction (as for most of us) is, "Oh, that's bad. It's killing a lot of fish!" And I say, "Yeah. But what if it's your factory and you're making a huge amount of money and you don't care about fish, you just care about money?" Science can inform value systems. But value systems are set by the social/political/economic debates we have amongst each other within society.

The farming community in this part of the country is much more attuned to environmental versus economic dimensions than they were 30-some years ago. Environmental education played an important role in that change. It's important to show connectivity, that what you do at one place may seem insignificant but can have broad, long-term ramifications. ■

This interview originally appeared in the Summer 2023 Illinois Alumni Magazine

GRADUATE STUDENT SPOTLIGHT

Marina Moscoso Arabía

Marina Moscoso Arabía is a third-year PhD student working with Dr. Nikolai Alvarado. She is a recipient of this year's UIUC Humanities Research Institute Interseminars Graduate Fellowship. In 2021 she received the Community Foundation of Puerto Rico's Rafael and Celestina Cordero Award to 35 Builders of Hope in recognition of her activism promoting a bottom-up approach to managing abandoned properties in the country. Prior to her graduate studies, Marina received a Ford Foundation grant in 2019 as co-founder and co-director of the Center for Habitat Reconstruction; and was recognized by the ArtPlace America National Creative Placemaking Fund in 2016 as co-founder and coordinator of Casa Taft 169, a grassroots initiative to repurpose a nuisance property in San Juan, Puerto Rico.

I have always been fascinated by our ability as humans to transform spaces, which motivated me from a very young age to travel and live in cities around the world and eventually to begin studying the impacts of urbanization processes on the planet. After many years of advocating for new housing policies in Puerto Rico, I came to Illinois eager to dive into urban studies. I have been very lucky to meet fellow PhD student Andrea Pimentel Rivera and professor Nikolai Alvarado, whose advice and collaboration are helping me develop my critical and interdisciplinary work. Studying human geography has renewed my interest in urban environments, reignited an old enthusiasm for ethnographic research, and greatly expanded my academic and professional network.

My primary research interest is the squatting movement in Puerto Rico and the challenges of promoting housing policies that leverage and maximize the existing infrastructure.

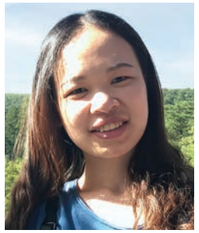
My research draws on years of direct involvement with local efforts to occupy and repurpose abandoned properties, hence part of my dissertation will be an activist's autoethnography using a critical and feminist lens.

I am not an outsider in my research — I have participated and even led some of the occupation initiatives that took place in Puerto Rico in recent years. I am a member of the community in which my research focuses and ultimately feel compelled to contribute something relevant given this unique opportunity to share insights and theorize about very personal experiences that are rarely represented in academic research.

Inspired in part by my mentor Dr. Alvarado's "Migration and the City" course, I plan to examine how native Dominicans have impacted Puerto Rico's squatting movement. Ideally, my research will also account for the influences of the Puerto Rican and Dominican diaspora in the U.S., particularly in New York City, on the history of such movement. In fact, I recently visited the Dominican Republic to present some of my findings and receive feedback during a congress on Latin American and Caribbean Geography, held in the capital Santo Domingo. Building on that, I hope to explore the archives of the Dominican Studies Institute and the Center for Puerto Rican Studies at CUNY. My ultimate goal is to contribute to a better understanding of "informal" urbanization in Puerto Rico and challenges of the so-called "battle for paradise." ■

Marina in 2016, giving a public 'master class' in at Casa Taft 169 on how to acquire nuisance properties in Puerto Rico after a new law was enacted.

GRADUATE STUDENT AWARDS & HONORS



PhD student **Tianci Guo** (advisor: **Chunyuan Diao**) won third place in the Remote Sensing Specialty Group Student Honors Paper Competition for her paper entitled "Towards scalable field-level crop yield estimation through integration of crop model and deep learning."

Alumnus **Wataru Morioka (PhD, '23)** received third prize in the Spatial Analysis and Modeling Specialty Group Student Paper Competition at the 2023 AAG Annual Meeting for his paper "Spatially-weighted Network Dual K function: Model Development and Application to Healthy and Unhealthy Food Environment."

PhD student **Lauren Weber** (advisor: **Julie Cidell**) won the AAG Urban Geography Specialty Group's Graduate Student Paper Award for her paper entitled "Maintaining Portland's progressive dystopia: crisis, carcerality, and the real estate state."

PhD student **Zijun Yang** (advisor: **Chunyuan Diao**) is one of two inaugural recipients of the Planet Fellowship, which supports PhD students at Taylor Geospatial Institute-affiliated institutions whose research utilizes Planet Labs data. Zijun's dissertation project is tentatively titled: "Near real-time crop yield forecasting for assessing the effects of excessive precipitation at field level."

PhD student **Yilun Zhao** (advisor: **Chunyuan Diao**) received this year's Messina Stanley Graduate Scholarship in Health or Environmental Geography for her outstanding achievements. They include a NASA Future Investigators in NASA Earth and Space Science and Technology (FINESST) fellowship and a student paper award from the AAG Remote Sensing Specialty Group for the paper "Monitoring Multi-level Forest Phenology with Time Series Satellite Imagery." Yilun has also appeared several times on the campus list of teachers ranked as excellent by their students.

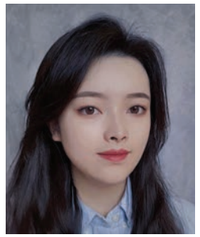
PhD student **Tasneem Haq Meem** (advisor: **Bruce Rhoads**) was selected as a semifinalist in the UIUC Graduate College's annual Image of Research exhibition for her entry entitled "Dynamics of Mixing at River Confluences.'" Tasneem notes that "Confluences occur where water and sediment from two or more rivers join, and mixing is initiated at an interface where flows meet within a confluence. This mixing interface is often visible in aerial images when incoming flows have contrasting colors related to differences in materials (sediment/organic debris) transported by the rivers."

NEW GRADUATE STUDENTS

Catherine Discenza has a BS in geography with a specialization in medical geography and global health from the University of Florida. Their research interests lie at the intersection of place, health, and identity, with particular interest in how urban development patterns interact with health and identity factors.
Advisor: Marynia Kolak

Kei Kato transferred from Arizona State University after completing two years of PhD study in geography. His research examines the interrelationships between urbanization in the United States, settler colonialism, and multiculturalism.
Kei has a master's degree in geography from Ohio University and a bachelor's degree in cultural anthropology from International Christian University in Tokyo, Japan.
Advisor: David Wilson

Gyudae Kim has a BS in environmental economics and an MS in geographic information science from UIUC. He is interested in political geography, contemporary cultural conflicts, and territorial disputes from a cultural and geographic perspective.
Advisor: Brian Jefferson

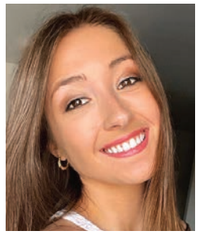


Yilin Lyu has a BS in geography from the University of Minnesota Twin Cities and an MS in GIS from Temple University. She is focused on identifying how spatial, social, and structural determinants impact community health by using geospatial techniques. Yilin also explores the relationships between people's mobility within cities, including health-care-seeking behaviors, and resource accessibility.
Advisor: Marynia Kolak

Célio Moura has a BS in architecture and urbanism and MA in urban development from the Federal University of Pernambuco. He has been researching fishing communities from Recife (Brazil) for eight years, focusing on participatory urban planning and the empowerment of collective identities. His future research interests include the social impacts of urban protected areas and the deterritorialization processes of traditional settlements.
Advisor: Nikolai Alvarado

Sayak Roy has a MA in geography from the Delhi School of Economics, University of Delhi, India, and an M.Phil in Urban Studies from the African Centre for Cities (ACC), University of Cape Town, South Africa. His research focuses on urban lived experiences, informality, and urban everyday and night geographies from the perspectives of southern urban theory.
Advisor: Brian Jefferson

Ileana Sanchez has a BA in human geography with a minor in sociology from Sam Houston State University. She is interested in political and urban geography; power structures of cities and their ability to affect distribution of community resources; capitalist geography; and tourism and economic geography. Ileana is originally from San Antonio, Texas and credits her interest in higher education and policy to her time as a community organizer in Dallas.
Co-advisors: David Wilson and Sian Butcher



Katharine Wiley has a BS in geology from Lafayette College and an MS in geology from University of Delaware. She is interested in GIS and fluvial geomorphology.
Advisor: Bruce Rhoads

Zhijie "ZJ" Zhou has a BS in atmospheric and oceanic sciences from University of California, Los Angeles, an MA in urban spatial analytics from University of Pennsylvania, and a master of environmental policy from Duke/Duke Kunshan University. He is interested in spatial analysis, biodiversity conservation, and the impacts associated with land use changes.
Advisor: Chunyuan Diao

Office administrator Matt Cohn receives LAS Staff Award

Geography and geographic information science office administrator **Matt Cohn (BA, creative writing and psychology, '03)** received a 2022-23 College of Liberal Arts & Sciences Staff Award and was honored with six other college award recipients during a ceremony hosted by Venetria K. Patton, the Harry E. Preble Dean of the College of LAS, at the I Hotel on March 9th.

"This year's award recipients do so much to empower our students, support their colleagues, and drive the success of our college and I'm proud to have such kind, dedicated, and passionate people as part of our LAS community and to recognize their important contributions," said Patton. LAS Awards Committee member Dr. Gary Wszalek read the following statement at the ceremony as Dean Patton presented Matt with the award:

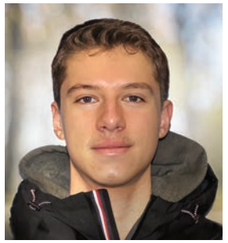
"As an office administrator, Matt performs and supports a wide range of critical activities for the department, including faculty and staff searches, oversight of facilities, communication and website tasks, and supporting the director of graduate studies in all aspects of the GGIS master's and PhD programs. Department head Shaowen Wang wrote that 'Matt takes it upon himself to provide exceptional support and service to faculty, staff, and students.' Colleagues praised both his encyclopedic knowledge and his warm, caring attitude. Multiple people commented on his patience, thoughtfulness, and friendliness, with one calling him 'the best staff I've ever interacted with.'"

As the primary contact for the department's graduate programs, he works to make students feel welcome, heard, and supported. Several graduate students wrote that "Matt has helped so many of us with our professional lives and made our journey here in the department easier with his approachable and helpful attitude."

College of LAS Dean Venetria Patton and Matt at the 2022-23 LAS Awards reception

Matt joined the department (back when it was known as "Geography") in 2012 as an office support associate and has been with GGIS through a name change, four department heads, and two building moves. "I am honored to receive this award and grateful for such supportive faculty, student, and staff colleagues," said Cohn. ■

Roepke Undergraduate Research Scholars *continued*



Stefan Ilic, *continued*

At the beginning of my research, I was mostly collecting census data at the tract level for Champaign County and using it to create new geospatial variables, such as calculating the percentage of the foreign-born population per census tract and calculating the economic hardship index per census tract. Data wrangling and cleaning necessitated that I become more familiar with programs like Microsoft Excel. I also used the statistical programming language known as R, which allowed me to visualize the new data that I created through its various packages and libraries that were made specifically for mapping shapefiles and other geospatial data formats.

The latter half of my research experience entailed creating metadata that accurately reflected how the data was processed, where the data originated, and what the variables within the data mean. I created the metadata using a document editor, but the challenging part was following the correct template and structure. Apart from creating metadata, the kinds of techniques that I used while working on the project were not entirely different from those used in some of the classes that I have taken, but applying those techniques to a particular goal as part of a research lab, as well as incorporating new skills in metadata creation, gave me a new perspective into the world of geospatial research.

Amer Islam, *continued*

Additionally, Saadi produced an automated system through Google Earth Engine to identify and classify vegetation, sand, and water in order to quantify the extent and temporal growth of sand mining. I was tasked with producing shapefiles following rivers with major sand mining activity, which would assist in geographically separating sand used for construction from sand used for agriculture.

After our initial investigations with remote sensing, we traveled together to Bangladesh, and I was able to produce a rough estimate of sand and gravel consumption using a combination of on-the-ground interviews and available literature. These produced numbers which hinted at the true scale of the operations that we were viewing. Connecting the information from interviews to the literature really made it feel like I was pursuing a holistic view. The interviews helped me understand the human geographical aspect, while the literature reinforced the quantitative side of things.

The experience inspired my senior thesis, which I wrote the following semester. Forming a thesis through literature investigation was very fulfilling, and I definitely plan to move forward with this type of work. The human geographical aspect was very insightful and something that I aim to include in future endeavors. ■

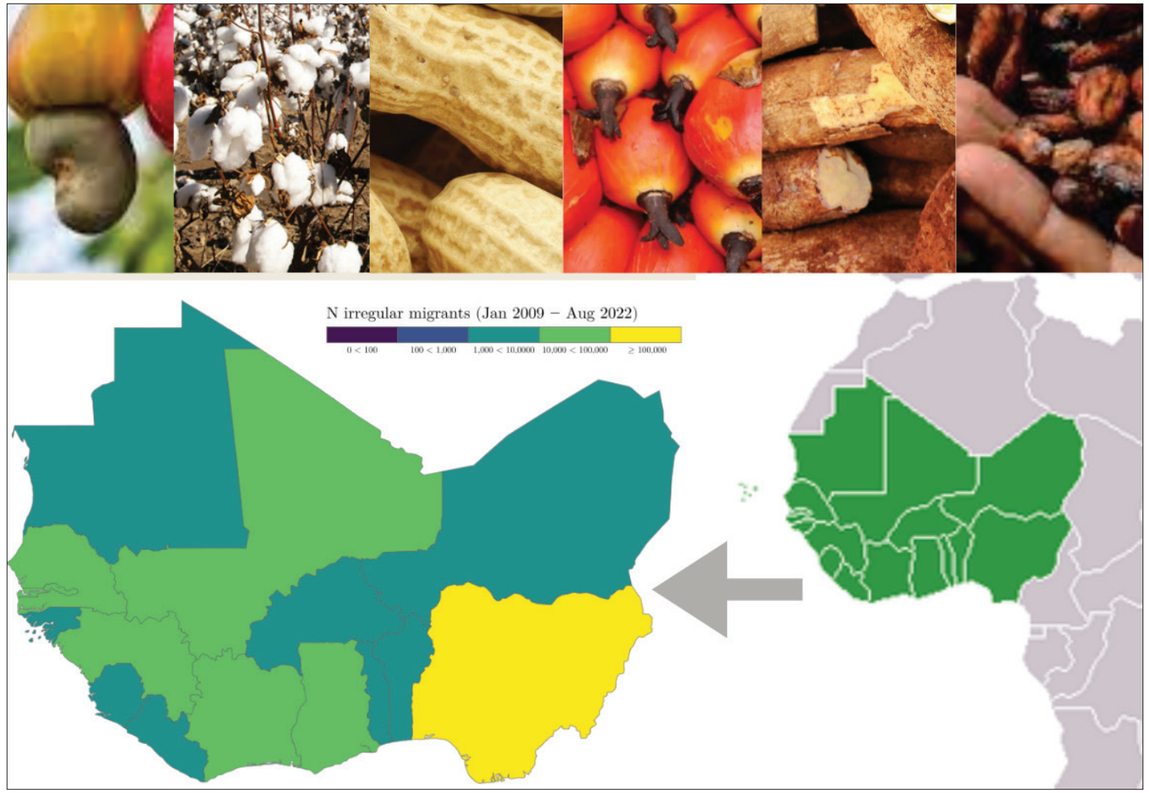


Illustration and map from Ishaan's final poster project entitled "Exploring the Influence of Cash Crop Productivity on Migration in West Africa."

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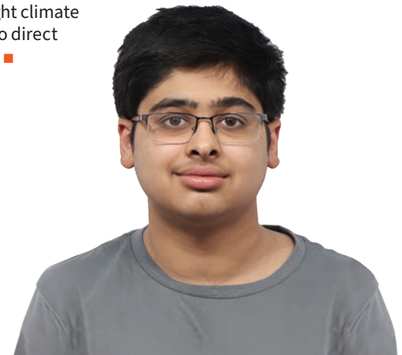
Computer Science + GGIS major participates in Columbia Climate School summer research program

BY ISHAAN BHARGAVA

This summer, I had the opportunity to join the National Science Foundation (NSF) Research Experiences for Undergraduates: Beyond Basic Science – Connecting Climate to Communities program at the Columbia Climate School in New York City. During the 10-week program, I worked under Dr. Fabien Cottier and Dr. Alex de Sherbinin at the Center for International Earth Science Information Network on a Department of Defense-funded project regarding Climate-Induced Migration in West Africa and Central America. I was focused on identifying the drivers of migration in West Africa and Central America and developing a predictive model of migration flows out of the two regions.

I attended multiple workshops on graduate school topics, the work being done at the Climate School, and fieldwork in areas such as drones and GIS by experts in their respective fields. At the end of the program, I was able to create and present a research poster to the Climate School's faculty and my fellow students. It was a great experience as I got to network with experts and peers with similar interests and work on an impactful project that brought climate science research to direct community users. ■



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