

# DEPARTMENT OF GEOGRAPHY & GEOGRAPHIC INFORMATION SCIENCE

## Alumna Establishes Department's Largest Ever Endowment

By Jessica Bursztynsky, College of LAS

**Candace Penn Frame** (BS, '72) always assumed she would go into teaching. The central Illinois native even went on to get her teaching certificate from Illinois State University following her bachelor's degree, but her love of geography never softened.

Frame was working as a research assistant in Kentucky until she saw an opening at the U.S. government's Defense Mapping Agency, now known as the National Geospatial-Intelligence Agency (NGA), which gathers intelligence for policymakers, the military, first responders, and analysts. She applied and got the job at NGA's Washington, D.C. headquarters.

"I thought it was perfect – everything I wanted to do. I loved it, and I felt like it was such important work," she said.

Now retired, Frame and her husband **James** (BA, '73, general curriculum; BS, '86, Business, University of Louisville) have established a fund that will significantly advance our department's academic mission.

"The department has gotten a lot bigger now and expanded its scope, and it's doing some great things," said Frame. "I've always

had a lot of admiration and respect for the university and its great academic reputation, so if I could help make GGIS and the University of Illinois a real center of excellence and help them become more innovative and creative in their research, that would be very satisfying."

"Geographic information science is changing the world. So many important issues, such as national security, climate change and environmental management, health care, responding to natural disasters, crime prevention, and transportation and infrastructure planning rely on geography and geographic information science (GGIS)."

Department Head Shaowen Wang acknowledged this as the largest gift in the department's history. "The gift is our first major endowment, and will help cement our national leadership in geographic scholarship, education, and research," said Wang.

CONTINUED ON PAGE 3



Candace and James Frame

## New Pacific Northwest field course explores geomorphology, landscape evolution, and watershed management

**From Mountains to the Sea: Watershed Science and Management in the Coastal Pacific Northwest**, our department's first field course in many years, provided students with a unique opportunity to explore stunning geomorphological landscapes, learn state-of-the-art field techniques, and consider the applications of these techniques to hazard assessment, landscape management, and infrastructure planning.

Professors **Piotr Cienciala** and **Jim Best** co-taught the two-week course, hosted by Quest University – a new campus in British Columbia perched on a mountaintop with sweeping views across the Squamish Valley toward Howe Sound, a picturesque fjord on the rugged coast.

They led a diverse group of nine undergraduates and graduate students, integrating field excursions with background lectures, discussions, and presentations that detailed the area's geomorphology. They also introduced approaches to field research and data

collection including ground-based LiDAR (Light Detection and Ranging), Ground Penetrating Radar (GPR), electromagnetic flow measurements, and structure-from-motion photogrammetry.

Cienciala and Best engaged local experts and educators to help develop the course and give our students a first-hand look at a variety of career paths in environmental science. Andrew Nelson of Northwest Hydraulic Consultants and Edith Tobe, executive director of the Squamish River Watershed Society shared their perspectives on watershed management issues; and professor John Clague of Simon Fraser University in Burnaby, British Columbia, generously shared his deep knowledge of the dynamic local landscape.

CONTINUED ON PAGE 4

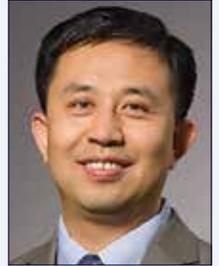


Dr. Piotr Cienciala and geology major McKailey Sabaj use ground-based LiDAR to map deposits of the 2010 Mt. Meager landslide.

# From the Department Head

Greetings:

I feel very grateful and honored as I reflect on my first year as department head. Geography & GIS (GGIS) at Illinois is flourishing, thanks to the incredibly generous support from our dedicated alumni. Just this year, alumna Candace Penn Frame (BS, '72) and her husband James Frame (BA, '73, general curriculum) made a major donation, the largest gift in our department's history. I have had the tremendous pleasure to interact with Candy and Jim throughout the year, and greatly appreciate their passionate vision to ensure that GGIS at Illinois remains a center of excellence for creative and innovative geographic work. We are eternally grateful to Candy and Jim for their generosity!



Many pressing scientific and societal challenges today require cutting-edge geographic and geographic information science approaches, and we are adapting our academic programs to respond to such critical needs. For example, we have restructured our undergraduate curriculum and now offer bachelor of science degree concentrations in GIS and geoscience, while still offering a bachelor of arts option in human and general geography. We also partnered with the Department of Computer Science to establish CS + GGIS, a new interdisciplinary bachelor of science degree offered by the College of Liberal Arts & Sciences. My hearty congratulations and kudos to Dr. Julie Cidell, who has recently been promoted to professor, and worked tirelessly to make these improvements to our undergraduate program during her nine-year tenure as director of undergraduate studies. I know that Dr. Trevor Birkenholtz will build on these successes as he takes over this crucial role.

Our graduates continue to land impressive jobs. Our faculty are making game-changing contributions to their respective fields while receiving important accolades for those achievements, many of which you can read about in this issue. As I share all of this wonderful news with you, I would also love to hear about your continued success and accomplishments. Please feel free to get in touch with me via email: [shaowen@illinois.edu](mailto:shaowen@illinois.edu) or by phone at (217) 333-7608. You are also welcome to visit us at the historic Natural History Building, the new home to our 21st century research and teaching facilities.

Best regards,

-**Shaowen Wang**

## From Dr. Julie Cidell

I came to Geography & GIS from the California State University system, which places a heavy emphasis on undergraduate teaching. So, I felt well-prepared when the opportunity arose here to advise our undergrads majors. I have greatly enjoyed getting to know our students in the classroom and during individual advising appointments over the past nine years as undergraduate advisor and then director of undergraduate studies.



Geography majors, however, can be hard to find! For one thing, most freshmen (and even sophomores) don't know that geography exists as a major until they take one of our intro courses. At that point, they might choose to switch to geography or add it as a second major but some students were finding it difficult to complete all the requirements in under four years.

I decided to address this issue by streamlining our curriculum and degree requirements, right around the time we changed our department name from "Geography" to "Geography & Geographic Information Science" (Fall 2012). I also made a push to recruit more majors – hosting short info sessions, attending campus events, and crunching some "small data" to better understand where our majors were coming from. As this required additional time and effort, I requested an official title upgrade and our faculty were more than happy to approve.

It has been wonderful working so closely with our students and faculty as director of undergraduate studies, and I also got to collaborate with other campus units on behalf of the department. New this fall, I am thrilled to introduce our degree in Computer Science + Geography & GIS (CS + GGIS). Part of a suite of new "CS + X" degrees that blend computer science with a variety of LAS subjects, CS + GGIS will enable geography students to gain more technical skills than they might otherwise, and will also give computer science students a deeper understanding of space, place, and why "spatial is special."

I am proud to report that our major doubled in size during my time as director of undergraduate studies! Hopefully, this growth will continue with our updated curriculum, an increased focus on geospatial technology, and our new home in the Natural History Building.

### FALL 2018

#### Department of Geography & Geographic Information Science School of Earth, Society and Environment

College of Liberal Arts &  
Sciences, University of Illinois  
at Urbana-Champaign

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## Dr. Marc Armstrong receives alumni achievement award



The second annual Geography & GIS Alumni Achievement Award is presented to **Dr. Marc P. Armstrong** (PhD, '88), a geographer who specializes in GIS and has done pioneering work in computational geography. Marc has made seminal contributions to the development of high-performance computing methods for geographic problem solving; including new representations, methods and

algorithms, benchmark evaluations of solution qualities, and a variety of geographic applications. He reflected on the history of GIS innovations at Illinois during his presentation at our Fall 2013 iGIScience Symposium.

Marc has led a distinguished scholarly career, publishing over 100 academic papers, and coauthoring/coediting several monographs. He was North American editor of the *International Journal of Geographical Information Science*, and has served on the editorial board of several prominent GIS journals. Marc's

current research examines the mobile computing revolution, privacy concerns related to the collection and use of geospatial data, and how mobile geographic information technologies can improve geographic education.

Along with his scholarship, Marc has proven himself a gifted (and flexible) administrator. He is currently professor in the Department of Geographical and Sustainability Sciences at The University of Iowa, as well as associate dean for research and infrastructure. He was Chair of Iowa's Department of Geography from 2000-2012, after which he served as interim chair of the Departments of Asian and Slavic Languages and Literatures, Communication Studies, and Cinema and Comparative Literature, to name a few! Marc was also named a University of Iowa College of Liberal Arts and Sciences Collegiate Fellow in 2005. ✨

### *Frame Endowment, continued*

This estate gift will have four purposes: to endow the Henry Penn (BS, 1910, civil engineering) and Candace Penn Frame Professorship in Geography & Geographic Information Science, named in honor of her grandfather.

It will also support the Candace Penn Frame Graduate Student Fellowship in Geography & Geographic Information Science, which Frame hopes will guide the recipients toward careers in national security or intelligence.

Next, the gift will support the Candace Penn Frame Illinois Excellence Young Faculty Award in Geography & Geographic Information Science.

Finally, the gift will establish the Candace Penn and James Robert Frame Student Services Fund in Geography & Geographic Information Science, to provide our students with tuition assistance, research and conference travel grants, equipment needs, and other related educational expenses.

Frame always found satisfaction in her career and hopes she can help instill that feeling in future Illinois geography & GIS alumni. "I just felt like I was really doing something that the military and intelligence community needed and it was useful," she said, "and I think Illinois students would find it equally satisfying."

Candy and Jim are members of the University of Illinois Foundation and The President's Council. Jim also serves as Vice Chairman of the Illinois Music Advancement Executive Council at Illinois. ✨

## Geography field course, continued

Field days were based in both the Squamish and Pemberton valleys, drained by the Squamish and Lillooet Rivers respectively. The group examined Squamish Valley's Holocene evolution, from volcanic eruptions under thick ice sheets and ice-contact lava flows to construction of alluvial fans and the deposits of large landslides and debris flows under deglaciating conditions. Edith Tobe led the group on a tour of ongoing watershed and habitat restoration projects; emphasizing the importance of understanding landscape history and processes, and especially how poor land use practices can lead to ecosystem degradation.

In the Pemberton Valley, the group observed the products and effects of the 2010 Mt. Meager Landslide, one of the largest ever recorded, that introduced a massive quantity of sediment into the upper ends of the valley. The class studied and debated the landslide's deposits and the subsequent geomorphic changes within the Lillooet River corridor. They also considered implications for channel management such as changing flood risk, channel aggradation and levee construction, and sediment yield into Lillooet Lake.

The interdisciplinary nature of the field course allowed students to apply lessons to a variety of educational and professional goals. "I hadn't studied physical geography or geology before, so conducting this field research taught me valuable skills and showed a different perspective on complex human geography questions by focusing on geomorphology," said geography & GIS/economics double major Asif Ali.

"This course taught me to appreciate the amount of work and logistical processes involved in acquiring, managing, and processing remote sensing datasets. I will forever remember the picturesque field sites that we had the privilege of working in,



*Students Matt Blaser, Jacob Hesslau, and McKailey Sabaj employ Ground Penetrating Radar to examine the subsurface structure of deposits from the 2010 Mt. Meager Landslide, Pemberton Valley.*

especially considering we were the first to use such awesome field technologies in these areas," said geography & GIS major and Roepke research scholar Matt Blaser.

The group produced a range of excellent ideas, interpretations, and data, which they presented to each other at the end of the course. Students also wrote individual reports concerning landscape evolution and contemporary environmental management. Geology major McKailey Sabaj found the field course extremely beneficial as she considers a career in environmental geoscience. "I had a great time on the trip and was able to connect my previous knowledge of geomorphology with a new landscape. Thanks for the experience!" ✨



*Students conduct particle size analysis on sediments of the Lillooet River in the Pemberton valley's late afternoon sun. Photo by Jim Best.*

# AAG recognizes professor Kwan's geographic creativity

By Matt Cohn

**P**rofessor Mei-Po Kwan received the American Association of Geographers (AAG)'s Stanley Brunn Award for Creativity in Geography, at the 2018 AAG Annual Meeting in New Orleans. This award honors individuals who establish new methods and vocabulary for geographic research and cultivate a deeper understanding of human/environment relations at local or global scales.

Kwan bridges the gap between top-down geographic research and the unique behaviors and needs of individuals, especially those in underserved and disadvantaged urban communities. Among her many innovations, she has pioneered the use of geo-narratives – a qualitative method in which research volunteers' daily activity diaries are combined with their GPS-based coordinates to reveal how and why they navigate their everyday environments.

Kwan's research has found that peoples' daily routes reflect their economic and social constraints, and often point to larger-scale inequalities in urban development. For instance, a research volunteer may not have the time to buy fresh produce at a grocery store or visit the doctor's office if they become ill, even when these goods and services are located near their home or workplace.

"Geographic research and visualization has always been based on data, but sometimes what you cannot see or visualize is actually more important to the research question that you are asking. GPS only tracks where people go, but where they don't go can be even more important," said Kwan.

For a current research project based in Chicago's Humboldt Park neighborhood, Kwan and her doctoral students provided resident volunteers with GPS tracking devices, sound level monitors, pollutant sensors, and daily activity diaries to assess



*AAG President Derek Alderman and Prof. Kwan at the AAG Awards Luncheon April 14, 2018 in New Orleans. Photo courtesy of AAG.*

how differences in their surroundings can lead to different health outcomes.

"It's easy to just look at their movements using GPS devices, but we also want to know how they feel about the environment, and how their feelings affect their behavior and ultimately their health. As a geographer, I am trying to link all of these factors," Kwan said.

Kwan and her students are gathering and analyzing this data to illustrate how the built environment often shapes people's opportunities and hardships. This research is changing how we think about urban planning and public health, and is also encouraging the next generation of geographic researchers to be creative and critical of existing methods.

"I believe that the data collection process is life-changing for my volunteers, and also for my graduate students. It has definitely changed their perspective. They can see problems other people face, and also that this work can eventually improve the quality of a community, and the wellbeing of its citizens," said Kwan.

Kwan's doctoral student **Lirong Kou** reflected on her experience, both as a confidant for the Chicago research project volunteers and more generally as a research collaborator with her advisor.

"It is essential for field geographers to care more about our research subjects, to be more aware of their everyday lives, and to understand more about the contextualized information within the data," Kou said. "Now, when I create maps, I know it's not just about the dots and locations on the map, but that they represent a collection of individuals and their own subjectivity, feelings, and emotions."

Kwan is just the sixth recipient of the annual AAG Stanley Brunn Award for Creativity in Geography. Previous awardees include renowned urbanist David Harvey; and Michael Goodchild, a lifelong geography educator and researcher who coined the term "Geographic Information Science." ✨

# Bruce Rhoads honored for geographic research and education

## Lifetime designation as AAG Fellow *By Matt Cohn*



The American Association of Geographers (AAG) has recognized Professor **Bruce Rhoads** for his outstanding contributions to geographic research and education with a lifetime designation as an AAG Fellow.

The inaugural AAG Fellows class consists of 20 geography educators and

professionals, chosen for their dedication to teaching and mentorship, groundbreaking research, and outreach that communicates the importance and value of geography to the public.

Rhoads is a renowned leader in the field of fluvial geomorphology – the study of how streams and rivers form and change over time. He is currently a senior investigator for the National Science Foundation-funded Critical Zone Observatory in Intensively Managed Landscapes (CZO-IML), which is examining how land management practices are affecting Midwest watersheds.

The critical zone is Earth's outer skin, reaching from the bottom layer of soil below the root zone up through the top of the tree canopy. Industrial-scale agriculture has made the American Midwest one of the most intensively managed landscapes on earth, which has significantly changed how water and soil exchange and transport life-supporting nutrients.

Rhoads, along with his colleagues and graduate students, are observing these critical zone processes to address fundamental scientific questions: How healthy are the Midwest's streams, rivers, and farmlands? What are the long-term effects of our push for increased agricultural productivity?

Just as small streams flow into great rivers, Bruce Rhoads inspires his students and colleagues to explore their passion for the natural world and contribute to the larger body of geographic research and education.

**Quinn Lewis** (MS, '14, PhD, '18) is grateful to Rhoads for stoking his interest in the earth's processes by posing challenging research questions.

"I've always looked up to Bruce as an advisor, academically and beyond," said Lewis. "Part of being a successful advisor is knowing when to guide and push, and when to let the student spread their wings. He did an excellent job of letting me be myself, while pushing me to improve as an academic."

In 2015, they published a paper based on their comparison study of human-induced and natural changes across river systems. Earlier this year, Lewis began working as a postdoctoral fellow at the Indiana University Department of Earth and Atmospheric Sciences.

"Also, as a geographer, Bruce is truly an inspiration. He has

shown throughout his career that the work of a geographer can stand side-by-side with the work of engineers, geologists, and natural scientists."

### **Jessica Zinger LeRoy**

(MS, '11, PhD, '16), research hydrologist at the Illinois Water Science Center in Urbana, appreciates how Rhoads leads his students to establish their own connections to the natural world, with firm roots in the scientific method.

"The beginning stages of my doctoral field research with Bruce coincided with the 2012 drought, and I remember when we took two kayaks down to my field site on the Wabash River. We kayaked slowly, stopping occasionally to point something out to each other. It was so different from how we usually worked at these big field sites, with motorized boats and high-tech instrumentation. He taught me that even though fancy equipment is useful and sometimes necessary, it is equally important to slow down enough to really look at a site and observe with just your eyes," said Zinger LeRoy.

**Kory Konsoer** (PhD, '16), assistant professor of geography at Louisiana State University, values the strong practical training and insights he gained while studying and exploring with Rhoads.

"I've spent many hours in the field with Bruce conducting research, and I always walked away learning something new about troubleshooting equipment, thinking outside the box, and striving for the highest quality data. He always works through challenging situations, finds teachable moments even in setbacks, and has a continued passion and curiosity for understanding physical systems," said Konsoer.

Rhoads is dedicated to preparing his students and colleagues alike for successful careers in geographic education and research. Assistant professor **Piotr Cienciala** joined the department in 2015, and studies the effects of land use and climate change on vegetation and fish habitats in rivers.

"From the day I arrived at Illinois, Bruce has really helped me navigate the new job," said Cienciala. "I'm grateful for his guidance on the tenure and promotion process, the art of grant writing, and setting priorities in my scholarly activity." ✨



*Bruce Rhoads used a drone to capture this image of standing water in farm fields after flooding along the Kaskaskia River (left) and Two-Mile Slough (right), near the Champaign-Douglas (Illinois) County border.*

# FACULTY PROMOTION



**Dr. Julie Cidell** has been promoted to full professor. She joined the department in 2007 as an assistant professor, and served as our undergraduate advisor and director of undergraduate studies. Julie oversaw foundational improvements to our undergraduate program, including the addition of a bachelor of science degree in Geography & GIS, the new CS + GIS degree, and a GIS

Certificate for non-majors.

During that time, Julie served in key leadership roles for the American Association of Geographers (AAG): on *The Professional Geographer* editorial board since 2011, and as Treasurer and Executive Councilor from 2016-18. Julie has also published two recent books: *Transport, Mobility, and the Production of Urban Space* (2015) co-edited with David Prytherch, and *Imagining Sustainability: Urban Environmental Governance in Chicago and Melbourne* (2017). ✨

# FACULTY AWARDS AND HONORS



Professor **Jim Best** received the European Geosciences Union's Jean Baptiste Lamarck Medal, at the 2018 annual meeting in Vienna. The Lamarck Medal recognizes scientists who have made exceptional contributions to stratigraphy, sedimentology, or paleontology.



Professor **Jesse Ribot** received a 2018-19 Guggenheim Foundation fellowship. During this time, he plans complete "Climate of Anxiety," a book project that integrates his long career of field research in the Sahel with his theoretical work on climate-related vulnerability. *Note: Jesse Ribot left the University of Illinois this fall, accepting a faculty position at American University in Washington, D.C.*



Professor **Murugesu Sivapalan** and longtime collaborator Professor **Günter Blöschl** (Vienna University of Technology) were joint winners of the eighth biennial Prince Sultan Bin Abdulaziz International Prize for Water (PSIPW), which rewards innovative and creative methods of addressing global water scarcity.



Professor **David Wilson** was named a Unit for Criticism & Interpretive Theory 2018-20 Senior Faculty Fellow. This fellowship will support the completion of his book: *Toward a Refined Racial Economy Perspective: Gentrification and Political Resistance in Chicago's South Side Blues Clubs*. ✨

# EMERITUS FACULTY UPDATES



**Tom Bassett** received the AAG Cultural and Political Ecology (CAPE) specialty group's 2018 Robert McC Netting Award, which recognizes distinguished research and professional activities that bridge geography and anthropology. Bassett will present the Netting Plenary Lecture at the 2019 AAG Annual Meeting. In the meantime, Tom is continuing his fieldwork in Côte d'Ivoire, West Africa.

**Bruce Hannon** serves as president and director of Land Conservation Fund (LCF), which opened the Bruce Hannon Levee Trail to the public last summer. The trail is located on Allerton Road just west of Monticello, where Hannon and fellow LCF volunteers are planting thousands of native trees and removing invasive species to maintain the trail and encourage stewardship of the Sangamon River corridor.

**John Jakle** and former Champaign mayor **Dannel McCollum** (MS, '94) co-authored *The Ohio: The Historic River in Vintage Postcard Art, 1900-1950*, published by the Kent State



*Postcard courtesy of John Jakle*

University Press in October 2017. The book is a collection of 169 scenic postcards, tracing the Ohio River from Pittsburgh, PA to its confluence with the Mississippi River near Cairo, Illinois. In the 1990s, John led efforts to have the Ohio River declared a National Historical Corridor under a new National Park Service program. *The Ohio* builds on that work, and celebrates the urban and rural landscapes that make the Ohio River a national treasure. ✨

# GRADUATE STUDENT PROFILE

## A Voice for Healthcare Access

By Matt Cohn



**A**rrianna Planey studies how vulnerable and underserved populations fight for access to resources and representation. As a health geographer, she is creating nationwide maps to illustrate one of America's biggest challenges – unequal access to healthcare services.

Arrianna earned a bachelor's degree in history from the University of California-Berkeley and an a master's degree in political science from the University of Chicago. She finds that geography allows her to connect all of these disciplines by applying spatial concepts to social and political issues.

"My undergraduate and master's thesis projects concerned place-based issues; from anti-Apartheid activism to statelessness in post-colonial Kenya. In my work on migrants, stateless communities, and later, resettled refugees, I was always thinking about space, place, and the distribution of resources. Geography offers all of the methodological tools necessary to look at health care access in the context of a health system and health policy."

Arrianna's doctoral research, advised by Professor **Sara McLafferty**, uses spatial analysis and GIS techniques to understand how disability, class, and race determine access to audiology (hearing) services. Her initial results show that audiologists tend to cluster their practices in densely populated, higher-income metropolitan areas with younger populations, and that Medicaid covers hearing services in only 28 states. These spatial and economic factors work against people with hearing loss in rural and/or low-income communities, who often lack access to nearby clinics or public transportation.

In fact, Arrianna's own experiences with hearing and vision loss, and coursework in the Illinois clinical audiology doctoral program make her uniquely aware of how difficult it can be to seek out and receive necessary medical treatment and services. Even when individuals with hearing loss find an audiologist, they may face communication issues that hinder effective treatment and erode their trust in doctors, and healthcare in general. These issues may then exacerbate the accessibility limitations posed by lack of insurance coverage for audiology services and limited geographical availability.

Last fall, Arrianna was selected to join the Robert Wood Johnson Foundation's Health Policy Research Scholars (HPRS) Program, a diverse community of scholars dedicated to understanding and improving healthcare in America. The program provides four years of doctoral fellowship support, along with planned research and professional development activities focused on sharing research findings with policymakers and healthcare providers and consumers. Arrianna is the first geography student in the HPRS program, joining students from fields including public health, sociology, economics, and social work.

"Ultimately, I hope to make a case for health policy that ensures access and supports the overall well-being of elderly and disabled people." ✨

# GRADUATE STUDENT AWARDS & HONORS



**Aida Guhlincozzi** was awarded a National Science Foundation (NSF) Graduate Research Fellowship. Her dissertation project focuses on identifying spatial mismatch in healthcare accessibility for Latinx people in the Chicago suburbs, by examining Latinx healthcare needs related to ethnicity, and language and space-time constraints. Advisor: **Dr. Sara McLafferty** ✨



**Melissa Heil** received the department's 2018-19 Charles S. Alexander Graduate Fellowship for Women in Geography. Advisor: **Dr. David Wilson** ✨



**Yoo Min Park** won the John Odland Award (First Prize) in the AAG 2018 Spatial Analysis and Modeling (SAM) Specialty Group Student Paper Competition for her paper "Spatiotemporal Analysis of Multi-Contextual Segregation in Urban Areas." Advisor: **Dr. Mei-Po Kwan** ✨



This fall, **Pronoy Rai** (PhD, 2018) started as a tenure-track assistant professor in the Department of International and Global Studies at Portland State University in Portland, Oregon. Advisor: **Dr. Trevor Birkenholtz** ✨



**Rebecca Shakespeare** received a National Science Foundation (NSF) Dissertation Research Award for her project "Housing Costs and the Residential Mobility of Middle-Income Renters." Advisor: **Dr. Mei-Po Kwan** ✨



**Ryan Stock** received a 2017-18 Fulbright-Hays Doctoral Dissertation Research Abroad fellowship to conduct fieldwork on the social impacts of solar park development in Gujarat, India through a political ecology framework. This year, he was awarded the department's Marion G. Russell Graduate Fellowship in Geography. Advisor: **Dr. Trevor Birkenholtz** ✨



**Jue Wang** received a 2018 Student Research Fellowship from the AAG Applied Geography Specialty Group, for his research project "Utilizing context-based crystal-growth activity space for spatial-temporal assessment of individual environmental exposure based on GPS tracking, GIS, and geo-tagged tweets." He also took second prize in the AAG 2018 Geographic Information Science and Systems Student Paper Competition for his paper "An innovative context-based crystal-growth activity space method for environmental exposure assessment based on GPS tracking and GIS." Advisor: **Dr. Mei-Po Kwan** ✨



**Fikriyah "Fik" Winata** won the Illinois GIS Association (ILGISA) 2018 Student Scholarship Award. She is also the first recipient of the Urban and Regional Information Systems Association (URISA) Young Professional Scholarship. Advisors: **Drs. Sara McLafferty and Marilyn O'Hara Ruiz** ✨



**Li Xu** won First Prize in the John Deere SMART Co-Creation Series Hackathon 2017. Li's work in the hackathon applied deep learning models and computer vision algorithms to identify downed or fallen corn and wheat crops due to wind or other factors, and the direction in which these crops fell. Advisor: **Dr. Mei-Po Kwan** ✨



**Dandong Yin** won first prize in the AAG 2018 Robert Raskin Student Competition, presented by the AAG CyberInfrastructure Specialty Group (CISG), for his paper "A novel network partition algorithm for scalable agent-based modeling of mass evacuation." Advisor: **Dr. Shaowen Wang** ✨



**Rea Zaimi** was selected as a 2018-19 Illinois Program for Research in the Humanities (IPRH) Fellow. The 2018-19 program theme is Race Work – faculty and student fellows will examine how race structures social, political, economic, and cultural life. Advisor: **Dr. Jesse Ribot** ✨

# NEW GRADUATE STUDENTS



**Mei-Huan Chen** is interested in resource governance, especially water management and adaptation issues in rural and mountain communities. She earned a bachelor's degree in urban planning from National Cheng Kung University and a master's degree in building and planning from National Taiwan University.

Advisor: **Dr. Trevor Birkenholtz** ✨



**Junghwan "Jung" Kim** is studying ways to mitigate the Uncertain Geographic Context Problem (UGCoP) in order to help transportation planners create policies that meet citizens' unique travel behavior and needs. In

addition to his studies, Jung has worked as a transportation planning modeler with the Champaign County Regional Planning Commission since 2017. He earned a bachelor's degree in urban planning and engineering from Yonsei University, South Korea and a master of urban planning (MUP) from the University of Illinois at Urbana-Champaign.

Advisor: **Dr. Mei-Po Kwan** ✨



**Xijing Li** is interested in transportation infrastructure and its impact on regional development, as well as environmental and social issues in urban areas. He earned his bachelor's degree in resource and environment and regional planning from Peking University, and two master degrees in GIS from the Chinese University of Hong Kong.

Advisor: **Dr. Mei-Po Kwan** ✨



**Fangzheng Lu's** doctoral research interests include GIS, remote sensing, and high-performance computing. He earned a bachelor's degree in computer science from the University of Hong Kong.

Advisor: **Dr. Shaowen Wang** ✨



**Emily Mamer** earned her bachelor's degree in environmental science from St. John's University in New York, where she focused on marine and coastal areas. She will conduct her master's research on rivers in the Pacific Northwest.

Advisor: **Dr. Piotr Cienciala** ✨



**Erica Massey** is a master's student in the Space, Society, & Environment concentration. She earned a bachelor's degree in geography with a focus in resource and environmental studies from Texas State University. Her current

research interests include social attitudes towards environmental conservation, political ecology, and urban sustainability.

Advisor: **Dr. Julie Cidell** ✨



**Wataru Morioka** plans to conduct spatiotemporal and GIS analysis to evaluate people's living environment such as accessibility to shopping facilities and other public amenities, with the goal of enhancing public life. He earned a bachelor's

degree in cultural and creative studies from Aoyama Gakuin University and his master's degree in environmental science from the University of Tokyo.

Advisor: **Dr. Mei-Po Kwan** ✨



**Nina Roberts** is a doctoral student focusing on the political and economic origins, causes, and effects of gentrification – particularly when connected with tourism. She examines these phenomena through the lens of critical theory to

better understand their impact on indigenous peoples and other marginalized populations, both regionally and globally. Nina comes to the program with a bachelor's degree in geography and master's degree in geography and environmental studies from Northeastern Illinois University, and a Certificate in the Liberal Arts from the University of Chicago.

Advisor: **Dr. David Wilson** ✨



**Sadia Sabrina** earned a bachelor's degree in environmental sciences from Asian University for Women, in Bangladesh. She will conduct her master's research on mixing in stream and river confluences in the Rivers,

Watersheds, and Landscape Dynamics program.

Advisor: **Dr. Bruce Rhoads** ✨



**Amanda Vander Kelen** earned a bachelor's degree in French and geography, GIS certificate, and a master's degree in geography and environmental studies from Northeastern Illinois University. Her master's thesis examined residents'

attitudes of feral cat management in Chicago, IL. Amanda's doctoral research interests include human and non-human animal geographies in an urban environment; and gender, age, race, and sexual identity within gentrification.

Advisor: **Dr. David Wilson** ✨



**Fikriyah Winata** earned a bachelor's degree in geography from the University of Indonesia, and just graduated with a Professional Science Master's (PSM) in GIS from our department. Prior to her master's, Fik worked as a GIS Specialist with

Environmental Systems Research Institute (ESRI) Indonesia.

Her interest in health geography, specifically vector-borne diseases, brought her to work at the Midwest Center of Excellence in Vector-Borne Disease as she pursues her PhD.

Co-advisors: **Drs. Sara McLafferty and Marilyn O'Hara Ruiz** ✨



**Zijun Yang** earned a bachelor's degree in geography & GIS from Sun Yat-Sen University in China, and a master's degree in environmental informatics from the University of Michigan-Ann Arbor. His current research interests include remote

sensing and GIS, with a focus on data fusion and its application to agricultural remote sensing.

Advisor: **Dr. Chunyuan Diao** ✨

# PROFESSIONAL SCIENCE MASTER'S IN GIS

## Welcome Class of 2019!



From left - front row: Wenhao Gu, Yang Qiu, Busra Cakal, Nurmakhan Ziyadin, Tom Moon. Back row Zizhao Ge, Tianshun Deng, Malik Moulton, and Zhesong Wu.

## PSM in GIS Advisor

Dr. Shakil Bin Kashem



## CLASS OF 2018 SUMMER INTERNSHIPS



### Tong "Thom" Gong

Dow AgroSciences

*Data science intern*

Data management, processing and visualization based on geospatial models ✨



### Nattapon "Nathan" Jaroenchai

CyberGIS Center for Advanced Digital and Spatial Studies

*Website coordinator*

Front and back-end web development, CyberGIS identity design and application documentation ✨



### Nurlan Khamzin

Champaign County Regional Planning Commission

*GIS & data analysis intern*

Web database development in Python, GIS mapping and geoprocessing for urban planning ✨



### Aaron King

Scholarly Commons, Main Library

*GIS consultant*

Helped students and faculty solve a variety of GIS-related research problems ✨



### Kaixian Yang

Illinois State Water Survey, Prairie Research Institute

*GIS intern*

Created GIS building footprints using LiDAR data, cleaned and classified data ✨



### Yatong "Yuki" Zhang

Institute of Remote Sensing Technology, Henan Aero Geophysical Survey and Remote Sensing Center

*GIS intern*

Interpreted remote sensing imagery and established platform for ArcGIS application development ✨



### Guimin "August" Zhu

Agriculture Division of DowDuPont

*GIS intern*

Multi-source crop data pipelines; development of pest management mapbook tool ✨

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