

Spartan Geographer



Photo by Jacqueline Hawthorne

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Department of Geography,
Environment, and Spatial Sciences
MICHIGAN STATE UNIVERSITY

Sustainability Statement

In 2020, we committed ourselves to reduce the environmental impact of the *Spartan Geographer*. We were pleased that the nearly 2,000 copies of the publication that we mailed to our friends and alumni were printed on 100 percent recycled paper. As we continue to focus on improving our sustainability efforts, and in light of the ongoing budgetary constraints we find ourselves in, we have decided to once again forgo physically printing the *Spartan Geographer* this year. Not only will this action continue to reduce the carbon footprint of this publication significantly, but it will reserve much-needed funds for our most important asset—the next generation of Spartan Geographers.



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Message from the Chair



ASHTON SHORTRIDGE

PROFESSOR AND CHAIR

Dear Spartan Geographers,

Welcome to our 2023 Newsletter and its wide-ranging overview of the past year for the Geography Department! This was my first full year as department chair, and it has been eventful. Tragically, just as we were finalizing this newsletter, the MSU community was traumatized by a mass shooting on campus. Our hearts go out to the victims and their families and friends. While the shooter remained at large for hours, thousands of students—and quite a few faculty and staff—huddled in the darkness, in fear for their lives. The outpouring of well-wishes and support has been such a positive for many of us in the days that have followed. Recovering from the violence that our community experienced requires strengthening our connections and supporting one another. We are working to ensure that MSU Geography contributes to this recovery.

2022 was yet another highly productive year for our department, and we remain one of the top Geography departments in the country in research. Our faculty have investigated issues around the world and right here in Michigan, securing millions of dollars in grants to support these investigations, publishing many articles, and presenting work at national and international conferences. Our faculty's research success is made possible through the efforts of our graduate students, academic staff, and support staff, who contribute in scholarship and in keeping our research programs humming along.

Geography remains a small but highly rewarding field with great professional opportunities in business, government, and academia. Please help get the word out to high schoolers and young adults about what Geography can offer them! Our undergraduate student numbers remain consistent, at around 100, with many, many more who discover Geography and choose to minor in our various offerings. Our graduate student program, one of the most diverse in the nation, has new energy thanks to the lessening impacts of the global pandemic. MSU Geography's online GIS certificate program is another integral part of the department. This past year we were very busy creating new online courses in spatial data visualization and analytics, and we expect to roll out a new certificate program later this year. I appreciate the opportunity MSU Geography has to help students across Michigan and around the world advance their careers through online geospatial education.

“Recovering from the violence that our community experienced requires strengthening our connections and supporting one another. We are working to ensure that MSU Geography contributes to this recovery.”

Two department icons retired in the fall: Professor Joe Darden and Business Manager Claudia Brown. Dr. Darden spent his entire fifty-plus years at MSU teaching and doing research in urban geography with an emphasis on the measurement and impact of racial segregation. Claudia Brown managed our staff and balanced our books for over fifteen years. I wish them happiness and fulfillment in their new endeavors. Both stop by occasionally, so MSU Geography is never too far away! Amber Waldburger, who previously worked for the Residential College of Arts and Humanities (RCAH) right next door in Snyder-Phillips, has stepped in as Business Manager and has gotten up to speed quickly. This year was a landmark for Dr. Kyla Dahlin, who was promoted from Assistant Professor to Associate Professor. This promotion, the most critical in any academic's career, was well deserved. Kyla is a rising research star who is also among the very best teachers and mentors in our department. Congratulations to Dr. Dahlin!

After a two-year pandemic-induced hiatus, our Geography Awareness Week (GAW) speaking event resumed in November. World-renowned artist Julie Mehretu joined us to talk about her work and the strong geographic and spatial associations that she has investigated through that work over the past several decades. Julie's conversation with us was facilitated by MSU Geographer and former undergraduate advisor Gary Schnakenberg, making for a really exciting evening. It was thrilling to have such a large crowd for one of our events, including quite a few alumni and community members. I hope you will consider coming in November for our next GAW speaker!

It's been quite a year in our department: this newsletter will fill you in on much more than I can cover in this introduction. I appreciate the work that Diane Huhn, our communications specialist, has done to produce this newsletter, and I also wish to thank the rest of the newsletter team, Professor Liz Mack and Becky Young, as well as all of our contributors.

Sincerely,



Ashton Shortridge

Share Your Updates With Us

We hope you find this newsletter informative and interesting. One way you can help keep it that way is to send us news about yourself. Share news about your career, family, or other things with your fellow alumni. Send an email to geo@msu.edu or a letter and we will insert it into the next issue of the newsletter. Thanks for helping make the newsletter even better.





Faculty Focus

ERIN BUNTING

ASSISTANT PROFESSOR



It's hard to believe I have been at MSU for five years. These years have been busy but full of interesting projects and collaborators. Over the years, I've seen my research portfolio expand greatly with funded projects across the globe. Since 2018, I have been fortunate to be funded multiple times by the National Science Foundation (NSF), the National Socio-Environmental Synthesis Center (SESYNC), and the USDA National Institute of Food and Agriculture (NIFA). All these projects center on answering applied research questions around the impacts of climate variability and change on ecosystem health and socio-ecological resilience through big data analysis, time series remote sensing, geospatial statistical development, and modeling. Two such projects are highlighted and summarized below.

Spatial Heat: Heatwaves vary in shape, size, and duration. As part of an NSF-funded grant, I am working with Dr. Keellings at the University of Florida to analyze changes in heatwave spatial

patterns since 1950. Drawing on principles of climatology and landscape ecology, we are using fragmentation metrics to study the area, shape, and duration of heat waves across the U.S. This project is ongoing, but I personally have three manuscripts that are either newly published, under review, or in preparation for submission. The first, entitled "Delineating and characterizing changes in heat wave events across the United States climate regions," was recently published in *Climatic Change*. It highlights the development of a new heat wave metric that combines shape, duration, intensity, and fragmentation into its formulation. The second, which will be submitted imminently to *Frontiers in Remote Sensing*, investigates heat wave persistence across the United States and its relationships with soil moisture and land cover. The third article explores heat wave definitions and presents the results of a survey of weather forecasters and emergency management stakeholders from across the U.S. This survey grew out of the heat-health planner's project workshops facilitated through

the Center for Advanced Public Safety at the University of Alabama. The survey explores perceptions of what constitutes a heat wave and operational definitions of a heat wave. The utility of our work has already been highlighted in the recently published “Spatiotemporal change in the size and shape of heat waves over North America” in *Climatic Change*. This project is still evolving, and we will eventually expand the analysis to other climate extremes.

Ecological Impacts of Conflict: Water and land rights are two of the biggest causes of conflict around the world. The connection between water and civil unrest is well documented. What is missing is an understanding of the foundation of these large-scale conflicts. Are they rooted in smaller-scale conflicts? Are they driven by changing environmental or climate regimes? Or is conflict driven by unique patterns of human-environmental interactions? To date, few studies have analyzed spatial and temporal patterns of conflict occurrence in relation to water scarcity, accessibility, and inequality. A funded grant by the National Socio-Environmental Synthesis Center (SESYNC), which I am leading, looks to address such questions from a socio-ecological perspective. Through this project, we have developed publications in *Science of the Total Environment*, *Sustainability*, and *Water* on conflict and its relationship to climate variability and the impact of interpersonal conflict over water. Three additional publications are currently under review as well.

2023 Trajectories: In the spring of 2022, I was asked to co-edit a special edition of *Frontiers in Remote Sensing*. My coeditors (Drs. Kelley Crews, Jane Southworth, Hannah Herrero) and I agreed to serve on the editorial team if the focus for the issue was on women in remote sensing. This special edition, which has numerous papers either published or under review, is the first to focus on the application of remote sensing by female-led research teams. In tandem with this special edition, the editorial team is putting together three special sessions, a panel, and a mixer at the upcoming American Association of Geographers meeting in Denver (2023).

Further, throughout 2023 a large portion of my research efforts will be related to studying the climate and ecological constraints to wine grape



growth both here in the U.S., Michigan in particular, and across South Africa. During the summer of 2023, the research team I am a part of will spend just over a month around Cape Town, South Africa, working with the wine guilds to study the impacts of climate change on this economically critical industry for the country. As part of this work, social surveys on risk perceptions will take place, remote sensing fieldwork will be conducted to ground truth time series image products, and local climate data will be collected. For the first time ever, we will conduct our field surveys using ESRI's enterprise system and Survey123 to work with growers to pinpoint particular areas across their vineyards that are either under producing or of concern to them.



Faculty Focus

JIQUAN CHEN PROFESSOR

Dr. Jiquan Chen was named one of the 13 Fulbright Global Scholars for 2021. The award is the most competitive among all of the Fulbright programs, as only one to two scholars from each discipline are selected to represent the U.S. in a given year. The Fulbright Program offers grants to study, teach and conduct research for U.S. citizens to go abroad and non-U.S. citizens to come to the United States. The program fosters mutual understanding between the United States and partner nations. Through unique international educational and cultural exchange programs, Fulbright's diverse and dynamic network of scholars, alumni, and global partners share knowledge across communities and improve lives worldwide.

Dr. Chen used the opportunity to promote direct collaborations between MSU and several universities in Europe and Australia and establish additional relationships with labs from other countries to promote MSU's global education programming. He also worked to finalize an ambitious textbook on "Modern Scientific Hypothesis and Experimental Design across Scales."

This text will challenge the Newtonian dogma for conducting science and its application in broadly defined environmental science. If successful, the text could have long-lasting effects in many disciplines of environmental sciences.

From October 18, 2021, through January 15, 2022, Dr. Chen stayed at the Martin Luther University in Germany. While there, he conducted outreach to other labs by giving guest lectures and research seminars and organizing informal round table discussions, including those at the Leibniz Institute of Agricultural Development in Transition Economies (IAMO), the German Centre for Integrative Biodiversity Research (iDiv), the Max Planck Institute for Biogeochemistry in Jena, and the Georg-August University in Goettingen, as well as the Swedish University of Agricultural Sciences. Joint efforts for future collaborations for education and research were discussed and have continued to take shape after his return. During this period, Dr. Chen enjoyed visiting several natural reserves



and heritage sites with colleagues from Halle. He also volunteered to teach Tai Chi to a local group of more than 20 elders.

In the Commonwealth Scientific and Industrial Research Organization (CSIRO) Earth Systems Research Program in Aspendale from October 20 to December 20, 2022, he closely interacted with the leading modelers of the Global Circulation Model while also connecting with the Global Carbon Project in Canberra, the Soils for Sustainable Food Production and Environmental Quality at the University of Melbourne, the Australian Research Council (ARC) Centre of Excellence for Climate Extremes of the University of New South Wales, and the Coastal Wetland Research Center of Macquarie University. A series of seminars on the ecosystem carbon cycle and albedo-induced global warming was delivered. Joint publications and research proposals will continue following this program.



Faculty Focus

LIFENG LUO

PROFESSOR AND DIRECTOR OF ENVIRONMENTAL SCIENCE AND POLICY PROGRAM

Hello, Spartan Geographers! It is hard to believe that we are already in 2023. If I must select a few words to summarize my 2022, these words will be extraordinary, memorable, and life-changing. The year was unusual for me as I spent most of my time working remotely from China while taking care of my mother who was bravely fighting pancreatic cancer. It was also a period when all of China was dealing with sporadic outbreaks of COVID cases with a stringent zero-COVID policy, so there were all kinds of challenges. It is also a year where I had the opportunity to serve the Spartan community in a new capacity.

On the research side, I continued working on two projects that are funded by the National Science Foundation. One of them is in collaboration with Dr. Pang-Ning Tan in Computer Science and Engineering to develop novel algorithms for predicting and characterizing extreme events in large-scale spatio-temporal data. Specifically, our research combines statistical theories for modeling extremes with deep learnings to enable accurate prediction and characterization of extreme events such as hurricanes, heatwaves, droughts, and other destructive natural forces.

The other project is in collaboration with Dr. Yadu Pokhrel in Civil and Environmental Engineering to study water sustainability in the southwestern US under climate change. Although the southwestern US remains one of the most extensively studied regions in terms of the hydrologic impacts of climate change, large uncertainties remain regarding the extent of the projected declines in water resources. The goal of this project is to systematically examine water and environmental sustainability in the southwestern US under the dual pressures of climate change and expanding human water use. Although working remotely on the other side of the globe, I maintained regular interactions with the research teams, and we made steady progress on both projects.

I only taught one course in 2022, which was GEO 303 Severe and Hazardous Weather. It is an elective and had to be taught synchronously online remotely while the university was pushing towards in-person



instruction in spring 2022, but it had a pretty good enrollment. The course wasn't hard to teach, but teaching in front of a computer on Zoom at 2:00 AM local time twice a week for an entire semester was a challenge physically and mentally. I probably won't ever want to do that again if there is an alternative.

In 2022, I applied and was selected as the Director of the Environmental Science and Policy Program (ESPP) after serving as the interim Director for one year. ESPP is an umbrella for environmental research and graduate education at MSU, working together with colleges and departments in a collaborative manner to solve environmental problems. It is an interdisciplinary program housed in the College of Social Science, but we have students from all disciplines in our dual major doctoral degree program, including many from Geography. We had the largest student cohort in 2022 as a result of our active recruiting effort.

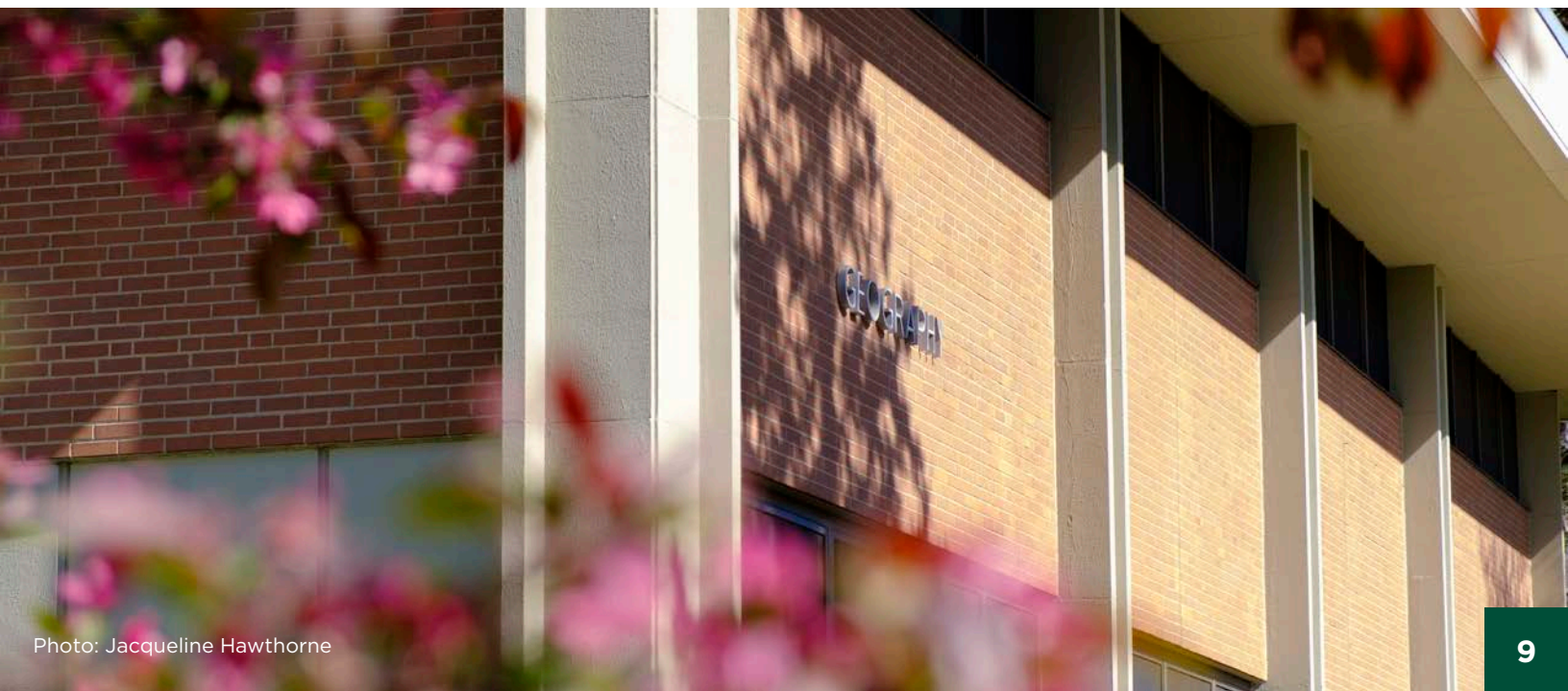
While facing budget cuts across the institution, we made additional funding opportunities available to ESPP students and created new student awards to acknowledge student achievement in research, leadership, and community engagement. We had our first ESPP student research symposium in person in four years, and it was a great success.

My former student Pouyan Hatami who graduated with his Ph.D. in 2021 during the pandemic, started working as a data scientist for Environmental Law and Policy Center in Chicago, given his training and research experience in Geography and Data Science. My student Xin Lan, who started during the pandemic, is making good progress in his research. It was quite funny that we got to meet in person in September 2022 for the first time after working together and meeting at least twice a week for two years!

2022 was a memorable year for my family. My mother passed away in August after a brave fight with pancreatic cancer for 18 months. I went back to China during the winter break in 2021 to look after her and was stuck in China for the next eight months. I was in two major lockdowns during this period, one for about four weeks in Xi'an and the other for about three months in Shanghai. It was quite inconvenient to live in a lockdown when people were barred from going out of their small apartments. But it was also because of these lockdowns I was able to spend some good time with my mother in her final days, and I will forever treasure that.

COVID was largely under control throughout China, with just sporadic flares before the two major lockdowns. There was no major outbreak due to the very strict quarantine policy for international travelers. I had to go through the quarantine process twice in 2021, each time being isolated in a hotel room for two weeks. I have to say that I had firsthand opportunities to experience and observe how US and China handled the pandemic in drastically different ways. I am not a health geographer or a policy expert, but I can see how differences in culture, education, political systems, and other factors play important roles in designing and implementing COVID policies in the two countries. It is a geography problem!

I am a climate scientist, so I'd like to end my update with a few facts about the climate we experienced in 2022. The year 2022 will be remembered as the third consecutive La Niña year. The rare triple-dip cooling La Niña means that 2022 was likely to be the fifth or sixth warmest year, with the global mean temperature currently estimated to be about 1.15°C above the 1850-1900 pre-industrial average. But the global hydrological system has been accelerating; there were extraordinarily devastating floods in Pakistan, multi-year droughts in eastern South America, the western USA, and the Horn of Africa intensified further. The dangers of climate change are mounting rapidly, and they could soon overwhelm nature and humanity's ability to adapt. If we need to act to reduce carbon emissions so that we can avoid reaching some of the dangerous climate tipping points, the time is now.



Faculty Focus

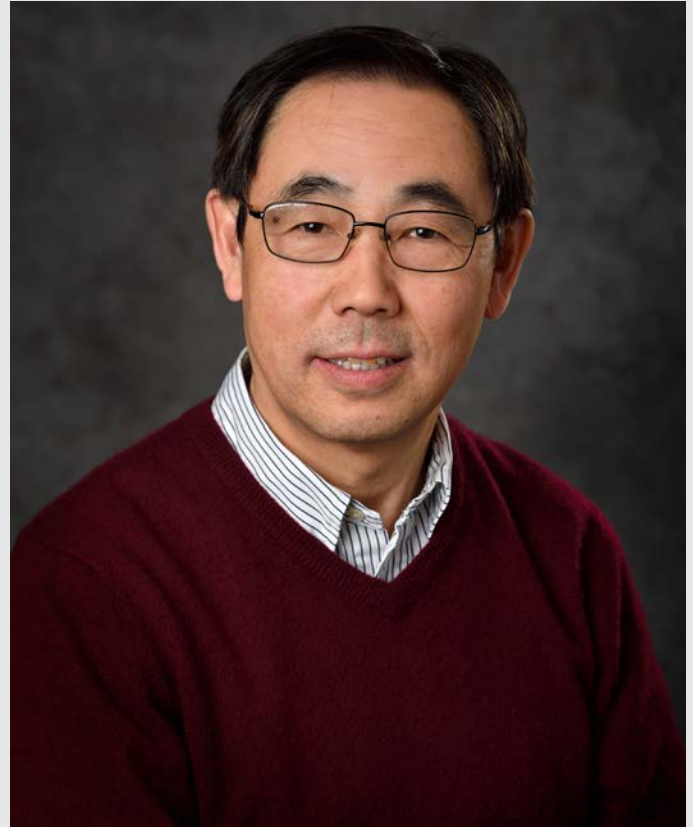
JIAGUO QI PROFESSOR

After 17 years of service with the MSU Center for Global Change and Earth Observations (CGCEO), Dr. Jiaguo Qi officially stepped down from the director's position and returned to the Department of Geography, Environment and Spatial Sciences to focus on research and teaching. Since then, many new and exciting things have happened, and he is once again fully occupied with research, education, and international partnership development.

In 2022, as part of his sabbatical leave, Dr. Qi spent one month in Reno, Nevada, to work with researchers at Great Basin Rangelands Research, a unit of the USDA-Agricultural Research Service (ARS) to wrap up a project funded by the Asian Development Bank (ADB). He completed two manuscripts and a decision support system for ranchers to realistically assess their range conditions for livestock production potentials in the grassland-dominant Akmola region in the northwest of the country as part of a project entitled "Livestock Value Chain Assessment: Assessment of the Resource Base for the Development of the Meat Production Value Chain."

He then spent almost eight months in Asia, particularly on Hainan Island, China to establish the Asia Hub 2.0 initiative in collaboration with Nanjing Agricultural University. During this time, he worked with a group of international scholars and entrepreneurs to further deepen international partnerships and develop joint research proposals and programs. As a result, he led the effort to successfully transition the Asia Hub on the Water-Energy-Food Nexus into Asia Hub 2.0 as a new unit in the International Studies and Programs at MSU, where Dr. Qi serves as the new director of the Asia Hub.

The mission of Asia Hub 2.0 is "reimagining international research and education partnerships in Asia through a network of institutions to solve problems and create opportunities through shared visions, innovation, and responsibilities." The Asia Hub was founded on the belief that a shared vision and partnership drive innovation. By encouraging and enabling partners to share resources and expertise, Asia Hub strengthens the capacity of member institutions and positions them to be more competitive, effective, and successful in their research and education endeavors.



Key activities include:

- Convening Asia Hub partners through various workshops and meetings to build relationships, exchange knowledge, and explore opportunities for collaboration.
- Formalizing institutional partnerships to ensure long-term sustainability.
- Identifying opportunities for funding and connecting partners within the Asia Hub network to co-develop proposals and external grants.
- Serving as an expert resource (a think tank) to help influence research priorities by engaging stakeholders and policymakers.

In addition to establishing Asia Hub 2.0 during his sabbatical, Dr. Qi also led a successful grant funded by the Department of State. Known as the "Hainan-Michigan Campus-Community Nexus for Climate Change: Global Exchange to Enhance Intercultural Understanding (CCNCC)," the project is designed to engage students at both MSU and Hainan University campuses to promote intercultural understanding of climate change in Michigan and Hainan Island.



Envisioning the future, Dr. Qi is looking forward to continuing to grow the Asia Hub platform and develop innovative ways of international partnership to co-generate science-based information and

knowledge to address global sustainability challenges, through research, education, and outreach activities.



Welcome

STEPHEN PRZYBYLINSKI

ASSISTANT PROFESSOR

Hello Spartan Geographers! I am a new assistant professor in the Geography department who began teaching fall term 2022. I am an urban-political geographer whose research broadly examines the development and possible resolutions of socio-spatial inequities related to (1) shelter/housing, particularly at the municipal level, and (2) the politics of ecological change. Though I have been with the department for less than a year, my past year has nevertheless been a busy one.

Before coming to East Lansing this past August, I was finishing a two-year post doc position at Uppsala University in Sweden. There I was one of many working on an EU-Horizon 2020 grant called JustNorth (JN). The overall goal of JN is to develop tools to assess past and future developments in the Arctic through more ethical and just relations. My two years in Uppsala perfectly overlapped with the height of the COVID pandemic, which unfortunately limited the experience a bit. Although I did not conduct fieldwork when I was there, my working group of social scientists nonetheless were productive. Among many reports and collaborations with physical geographers and legal/policy teams, our group developed an analytical guidebook to help researchers examining ecological injustices. The guidebook is meant to walk qualitative researchers through the process of description, assessment and evaluation of socio-spatial inequities. The culmination of my work in Sweden, however, is still brewing. With my colleague in Uppsala, I have been editing a volume for social scientists interested in justice theories as they apply to framing environmental issues. The book—*Theorising Justice: A Primer for Social Scientists*—will be out on Bristol University Press by October 2023 (hopefully).

The second project that has consumed much of my time over the past year is my research with unhoused communities in Portland, Oregon. There I have worked with multiple houseless encampments who are sanctioned by city government to manage their own affairs on municipal properties. This ethnographic research examines the benefits and constraints of self-managed houseless encampments and assesses the significance of such “progressive” shelter solutions toward



mitigating the unsheltered houseless population. I take a critical perspective on the role of property in developing and maintaining self-managing encampment communities, showing how this type of well-intentioned liberal politics constrain movements for housing justice while appearing to advance them. At this moment, I am very much in the throes of writing up this research in monograph form and have recently received a contract from the University of Georgia Press to publish in their great Geographies of Justice and Social Transformation series.

Of course, in reality, much of my time this past half year has been spent prepping/teaching for my courses at MSU. In the fall, I taught Geography of Europe and People and Environment through ISS. Though exhausting, teaching also has been rewarding. I have had the opportunity to meet a few of our undergraduate and graduate geography majors, whose interests and passion for the discipline remind me of why I love it so much too. I am eager to meet more as the spring term continues. Please say hi if you see me around!

AMBER WALDBURGER

BUSINESS MANAGER

Hello! I am so happy to join the Geography family here at MSU! I started in late September after serving in the Dean's Office of the Residential College in the Arts & Humanities for the last four years. I also spent some time working in the Controller's Office before that, so I bring with me a wide variety of administrative experience – everything from faculty affairs to financial reporting. Super exciting stuff, I know. When I'm not carrying out the thrilling work of human resources and budgeting, I am likely to be found on my bike, traipsing through the woods with my Girl Scout troop, BMX racing with my son, sewing some elaborate dress my daughter will wear reluctantly just once, or teaching everyone I meet how to hula hoop.

While my experience with Geography is not disciplined, I am quite keen on geographic explorations. I grew up in Northern Nevada, hiking and biking, and snowboarding through the Sierras. I attended the University of Oregon, then lived on the coast for a bit before returning to the mountains. I've slowly made my way east since then—from California to Nevada to South Dakota and finally to Michigan. We had kids in California, Oregon, Utah, and Montana along the way, and now we're happily settled in, raising a family of Spartans and visiting my husband's home country of Switzerland whenever we can fit it in.



In Memorium

MICHAEL CHUBB

PROFESSOR EMERITUS

Michael Chubb, MSU Professor Emeritus of Geography, passed away peacefully on November 14, 2022. He was born in Eastbourne, England, on December 10, 1931 to Denis and Kathleen Chubb. Graduating in 1950 from Chichester High School, Sussex, Michael received a four-year West Sussex county scholarship to the Faculty of Forestry, University of Toronto, Ontario, Canada. While there, he trained for two summers at the Canadian School of Military Engineering, Chilliwack, British Columbia; and participated in a Ford Foundation environmental study tour of India and Pakistan.

After graduating in 1955 he joined the Conservation Authorities Branch of the Ontario government and spent eight years supervising river valley programs in eastern Ontario. He also had a radio talk show on Sunday mornings.

In 1963 he moved to Michigan and joined the Department of Resource Development at MSU as a masters' degree candidate. He received his M.S. in 1964 and as an Assistant Professor was in charge of the Recreation Research and Planning Unit, Department of Park and Recreations Resources. There he assisted in federal studies of recreation participation, conducted city, state, and national park and recreation surveys, taught courses in related areas, and worked for a year on a statewide boating participation survey. He used this data for a statewide computer simulation model of boating participation and his Ph.D. dissertation. In 1967 he received his Ph.D. and became a faculty member in the MSU Department of Geography specializing in recreation resource planning, aerial photography/remote sensing, and Europe.

He also was a consultant for several states, cities, and counties in the United States and Canada and conducted recreation studies for the U.S. Forest Service and two power companies. In 1981, Michael published a major recreation administration textbook "One Third of Our Time". He served on several boards, including an appointment by the governor as Dunes National Lakeshore advisory committee. Michael was a strong supporter of policies to counteract global warming and a lifetime recycler.



Surviving is his wife of 32 years, Cathy; his daughter, Saralee Chubb of Juneau, Alaska; daughter-in-law, Mary Karas and grandson, Nathaniel Chubb of Berkley, MI; brother-in-law, Phillip Witchell of Laingsburg, MI; and brother and sister-in-law, Peter and Sally Chubb of Cambridgeshire, England. Also surviving in England are two nieces, three grand nephews, two grand nieces and various Seymour family relatives. Michael was preceded in death by his son, Jason Chubb; parents, Denis and Kathleen Chubb; and mother-in-law and father-in-law, Clarence and Dorothy Witchell. A gathering of family, friends, and colleagues took place on Saturday, November 26, 2022 at Cadgewith Farms in Lansing, Michigan. Michael was a kind, humble, and gentle soul and will be missed by all who knew him.



Honors & Awards

JOE DARDEN

VAN CLEEF MEMORIAL MEDAL

The American Geographical Society (AGS) selected Dr. Joe T. Darden as the 7th recipient of the Van Cleef Memorial Medal for his distinguished work “in the field of urban geography.” The prize was presented on Friday, November 18, 2022, during the Society’s annual Fall Symposium at Columbia University. AGS Vice President and Chair of the Honors and Awards Committee, Dr. Deborah Popper, noted, “Joe Darden shook up the field of urban geography. From 2022, it’s hard to imagine courses on American cities where race was not a central issue. Joe Darden changed the way we teach about and understand cities and the forces that have shaped them.”

The Van Cleef Memorial Medal was established in 1970 through a gift from Dr. Eugene Van Cleef, Professor Emeritus of Geography at the Ohio State University, who contributed the fund in memory of his wife, Frieda. In 1923 Dr. Van Cleef gave the first course in urban geography at an American university and, in 1937, published the first book on urban themes by an American geographer. The award is conferred on scholars who have done outstanding original work in the field of urban geography, preferably, though not necessarily, in applied rather than theoretical aspects. The medal was designed by Joseph DiLorenzo.

Dr. Joe T. Darden is a Professor Emeritus in the Department of Geography, Environment, and Spatial Sciences. His research interests include residential segregation and socioeconomic inequality by neighborhood socioeconomic characteristics in Metropolitan areas. Dr. Darden has authored, co-authored/edited eight books. His ninth book, *Detroit After Bankruptcy*, will be published by Policy Press in 2023. He has earned numerous awards and earned international recognition for his work as a geographer. These awards include the MSU Distinguished Faculty Award (1984); the Fulbright Scholar Award, Department of Geography, University of Toronto (1997); and the American Association of Geographers (AAG) Lifetime Achievement Award (2019). He was the former Dean of Urban Affairs Programs at MSU from 1984 to 1997.



AGS AWARDS CEREMONY

JOE DARDEN

For those not able to attend in person, we are pleased to share a recording of the 2022 American Geographical Society Honors & Awards Ceremony during which Dr. Joe Darden was awarded the Van Cleef Memorial Medal. Click [here](#) to view. (Courtesy of the American Geographical Society)

DAVID ROY

HIGHLY CITED RESEARCHER

Congratulations to Dr. David Roy with the Geography Department and the Center for Global Change and Earth Observations on being listed as one of the most highly cited researchers in the world. This is the fourth year consecutive year that Dr. Roy has received this distinction. The Highly Cited Researchers List compiled by Clarivate Analytics identifies individuals from across the globe who have demonstrated significant and broad influence in their chosen field or fields of research over the past decade.

According to the report, this list is drawn from the highly cited papers that rank in the top 1% by citations for field and publication year in Clarivate's Web of Science citation index. Of the world's population of scientists and social scientists, highly cited researchers are 1 in 1000, with 6938 highly cited researchers worldwide in 2022.



ELIZABETH MACK

WILLIAM R. "RANDY" BOGGESS AWARD

Congratulations to Dr. Elizabeth Mack on winning the William R. "Randy" Boggess Award for the best paper of the year published in the *Journal of the American Water Resources Association (JAWRA)*. The article entitled "An Experiment in Making Water Affordable: Philadelphia's Tiered Assistance Program (TAP)" appeared in the March 2020 issue of the journal.

The Boggess Award was established by the American Water Resources Association (AWRA) in 1973 to honor the author of the best paper published in the *Journal of the American Water Resources Association* during the previous year. The award was established to honor William R. "Randy" Boggess, a charter member of AWRA, one of the first directors, a past president of the association, a former editor, and an individual who has made significant contributions to the *Journal of the American Water Resources Association*.



GUO CHEN

MSU LILLY FELLOW

Guo Chen was selected as a Lilly Fellow. The Lilly Teaching Fellows Program is intended to advance MSU's continuing efforts to support excellence in teaching and learning. The Lilly program has supported fellows to become future faculty leaders and inspired a broad range of faculty to pursue excellence in teaching. The goal is to develop academic leaders who will guide the University into the near future with regard to learning, teaching, and educational programming. Dr. Chen is using this opportunity to explore "Teaching for Difference: A Creative and Inclusive Module for Teaching/Learning" to foster creativity expressed in different ways from diverse students and faculty in a mutually supportive environment.



Honors & Awards

VEDA HAWKINS

DEAN'S DIVERSITY, EQUITY, AND INCLUSIVE EXCELLENCE STAFF AWARD

Congratulations to Geography Ph.D. student and Assistant Dean of Academic and Student Affairs with the MSU College of Social Science on receiving the Dean's Diversity, Equity, and Inclusive Excellence Staff Award. Each year, the College recognizes outstanding members of the College of Social Science Community who have made a difference. This award recognizes a staff member who plays a leadership role in advancing diversity, equity, and inclusion by demonstrating activities that may include serving underrepresented populations, developing or implementing innovative programs that enhance participation and opportunity, or enhancing the ability and effectiveness of the College to be an inclusive and welcoming environment.

In addition to her important work with the College of Social Science, Veda is also working towards a Ph.D. in Geography. Her area of concentration is cultural and political geography. Her focus is spatial casteism and the intersection race, education, and economic mobility of African Americans in Michigan.



CHRIS BAISH

SSSA PEDOLOGY DIVISION AWARD

Congratulations to Ph.D. student Christopher Baish on earning the 2022 Pedology Division Award from the Soil Science Society of America (SSSA). The award is presented annually to a single candidate nominated for an outstanding contribution to the field of pedology, or the study of the origin and formation of soils, within the last three years.

Baish was nominated for this prestigious award, open to division members in any career stage, by his Ph.D. Advisor, University Distinguished Professor and SSSA Fellow Dr. Randy Schaetzl. In particular, Schaetzl cited Baish for his research on glossic features genesis in soils of northern Michigan. The award committee declared that contributions from this work represent significant advances in the development of methods and techniques that open the door to a better understanding of pedological mechanisms. The article, entitled "New insights into the origin and evolution of glossic features in coarse-textured soils in northern lower Michigan (USA)," was published in Volume 85 (2021) of the *Soil Science Society of America Journal*.

In conjunction with the award, Baish was invited to present the work at the "Advancing Pedology Colloquium" at the joint International Annual Meeting of the American Society of Agronomy, the Crop Science Society of America, and the SSSA.



KEVIN MCKEEHAN

USGS MENDENHALL POSTDOCTORAL FELLOWSHIP

After successfully defending his doctoral dissertation in late May, Dr. Kevin McKeehan has started the next chapter of his professional research career with a coveted postdoctoral fellowship with the U.S. Geological Survey (USGS). Named in honor of Walter C. Mendenhall, a pioneer in the fields of Geology and Hydrology and the 5th Director of the USGS, the Mendenhall Research Fellowship Program provides Fellows with meaningful experiences designed to enhance their scientific stature and credentials.

During this fellowship, McKeehan is working to leverage the latest digital elevation models and machine learning applications to better understand how to model and track trends in dune morphology to more accurately monitor, measure, map, and predict changes to dune fields over time. This research is particularly important in filling several gaps in the current field of knowledge regarding how dunes change ecogeomorphologically over space and time. The work could also help establish procedures for mapping dunes that the USGS could follow for years to come.

McKeehan will be appointed to the USGS for two years and receive full salary and benefits. His primary appointment will be at the Center for Excellence for Geospatial Information Science (CEGIS) located in Rolla, Missouri.



GABRIELA SHIRKEY

COUNCIL OF GRADUATE STUDENTS DISCIPLINARY LEADERSHIP AWARD

Congratulations to Ph.D. candidate Gabriela Shirkey on being awarded a 2022-23 Council of Graduate Students (COGS) Disciplinary Leadership Award. This award was created for individuals who demonstrate leadership in their respective disciplines at the local, state, regional, national, or international levels. This description certainly fits Gabriela. She juggles research topics at the intersection of ecosystem function, renewable energy, and socio-ecological systems. As a fellow of MSU's Environmental Science and Policy Program (ESPP) and the National Science Foundation's Graduate Research Program, she aims to increase the understanding of how human activity impacts ecosystem processes in agricultural landscapes. Additionally, Gabriela organizes early career events for MSU's Supporting Women in Geography Chapter (SWIG) as well as for FLUXNET, a global network of scientists interested in land-atmosphere interactions.



Honors & Awards

ANA RIVERA-RIVERA

MARY LOUISE GEPHART DONNELL FELLOWSHIP
RAND GRADUATE STUDENT SUMMER ASSOCIATE FELLOWSHIP
JULIAN SAMORA ENDOWED SCHOLARSHIP

Congratulations to Ph.D. Candidate Ana Rivera-Rivera for earning several fellowships and scholarships this year. First on this impressive list of recent accomplishments is the Mary Louise Gephart Donnell Fellowship. This fellowship is open to MSU graduate students in good standing studying or researching a discipline related to human environment and design. Ana was also awarded the Julian Samora Endowed Scholarship. This scholarship, named in honor of Dr. Julian Samora, supports two students (one Graduate and one Undergraduate) engaged in scholarly activities focused on Latino/as in Midwestern communities. Additionally, Ana received a RAND Graduate Student Summer Associate Fellowship. RAND's Summer Associate Program introduces outstanding graduate students to RAND, an institution that conducts research on a wide range of national security problems and domestic and international social policy issues.



MEHMET EROĞLU

SHAO CHANG LEE BEST PAPER COMPETITION

Congratulations to Ph.D. student Mehmet Eroğlu on receiving an Honorable Mention award in the 2022 Shao Chang Lee Best Paper Competition for a graduate student paper. The competition is sponsored by the Asian Studies Center at MSU. Mehmet joined the Geography Ph.D. program in the Fall of 2021 as a Fulbright Scholar. Prior to arriving at MSU, he received his B.S. in Geomatics Engineering in 2018, and an M.S. in Science, Technology, and Society at Istanbul Technical University in 2020. His winning paper is entitled “The effects of neoliberalism in Turkey on the city of Zonguldak, Turkey’s historic center for hard coal extraction.”



NICHOLAS J. CATANZARO

MSU BOARD OF TRUSTEES' AWARD FOR ACADEMIC EXCELLENCE

Congratulations to Nicholas J. Catanzaro on receiving an MSU Board of Trustees' Award for Academic Excellence, recognizing his achievement of the highest scholastic average one can receive, a 4.0 GPA. Nicholas graduated in May and was a member of the Honors College. In addition to being recognized at the spring commencement, he received \$1,000 from the university for his accomplishments.



2022 GEO-GTU Awards

The Department of Geography, Environment, and Spatial Sciences
PRESENTS

2022 GEO AWARD RECIPIENTS

Recognizing Student Academic Achievement



Donald Akanga



Nick Catanzaro



Jiang Chang



Jessica Davis



Mehmet Eroğlu



Riley Gugel



Ethan Kalchik



Herve Kashongwe



Josh Pepper

The Department of Geography, Environment, and Spatial Sciences at Michigan State University offers a hearty congratulations to all of our 2022 GEO Award recipients recognizing student academic achievement.

College of Social Science - Outstanding Senior in GEO | Nick Catanzaro

Nick Catanzaro graduated with a degree in Environmental Geography and a minor in Cognitive Science. Nick's interest in Geography comes from wanting to explore human-environment interactions and learn about geographic information systems. His favorite geography memory is doing field research with Dr. Theuerkauf in his GEO 871 seminar. The pumpkin ice cream they enjoyed afterward wasn't too bad either! Nick's favorite instructor was Kyle Redican, from whom he learned many foundational skills that helped him get internships and research experience. After graduation Nick planned to go aboard the R/V Thompson as an AUV Sentry technician surveying ocean ridges off the coast of Northern California with Woods Hole Oceanographic Institute. Then he will be working with NOAA's Great Lakes Environmental Research Laboratory and traveling as much as possible.

Marjorie and Lawrence Sommers Geography Graduate Fellowship for International Research & Travel | Herve Kashongwe

The Marjorie and Lawrence Sommers Geography Graduate Fellowship is awarded annually for Master's or Ph.D. students to support international research and travel within the next 12 months. Herve Kashongwe is a Ph.D. candidate in the department. His research seeks to quantify aboveground biomass in regrowing natural forests using a combination of recent NASA Global Ecosystem Dynamics Investigation (GEDI) satellite data, a Landsat global forest change product, and forest inventory information. Herve believes the award will contribute to the success of his research by defraying some of the fieldwork expenses to the MNRP reserve.

Daniel Jacobson Memorial Scholarship in Cultural Geography | Ethan Kalchik

The Daniel Jacobson Scholarship is awarded to an outstanding student at the Junior level, majoring in Human Geography or Economic Geography, and especially interested in the cultural geographies of Native Americans, other marginalized groups, and geography education. Ethan Kalchik is an undergraduate student in the college. He is honored to receive the Daniel Jacobson Memorial Scholarship. Geography has been a passion of Ethan's for a long time, and he is so proud to be associated with Daniel Jacobson and all he has done for the field of geography.

2022 GEO-GTU Awards

James Potchen Awards in Geography for Graduate and Undergraduate Students (Undergraduate and Graduate Student of the Year) | Jiang Chang And Josh Pepper

The E. James Potchen Award was established in 2008 by Harm de Blij to fund yearly cash awards for one outstanding graduate and one undergraduate student who has demonstrated exceptional leadership and service to the Department of Geography, Environment, and Spatial Sciences. The students will have shown remarkable professionalism and leadership skills in activities within both the department and the campus community. Jiang Chang is a Ph.D. student in the department. Jiang is deeply honored to receive the E. James Potchen Award and would like to thank the estate, the award committee, his advisor Dr. Igor Vojnovic and his entire GEO family.

Josh Pepper is currently a senior in the college. He is very grateful to have received this award and would like to personally thank the Harm de Blij estate that funds the award. He feels extremely fortunate to have worked with GEO students and faculty that have helped him pursue his interests. Josh plans on using this scholarship to fund his living expenses for the next school year.

Owen Gregg Endowment for Global Climate Change Research | Mehmet Eroğlu

The Owen Gregg Endowment was established in 2012 to support global climate change science research in the MSU Department of Geography. Undergraduate majors or graduate students in Geography pursuing studies that make significant progress toward understanding climate change, its causes, and impacts are eligible to apply. Mehmet Eroğlu is a Ph.D. student in the department. He is honored to be selected for the Owen Gregg Global Climate Change Research Award. Mehmet is exploring how coal phase-out policies, which are becoming increasingly popular in Europe and North America to reduce greenhouse gas emissions, affect historical coal mining cities spatially, economically, and socially. He will utilize this award to further his fieldwork.

The de Blij Geography Scholars | Jessica Davis

Instituted in 2013 by Harm de Blij and supported by other major donors, the de Blij Scholars awards scholarships to promising first-year students who choose to major in Geography at Michigan State University. Jessica Davis is an undergraduate student in the college. She feels sincere gratitude for receiving the de Blij Scholar Award. Jessica will use the scholarship to fund her tuition for her undergraduate major in Environmental Geography.

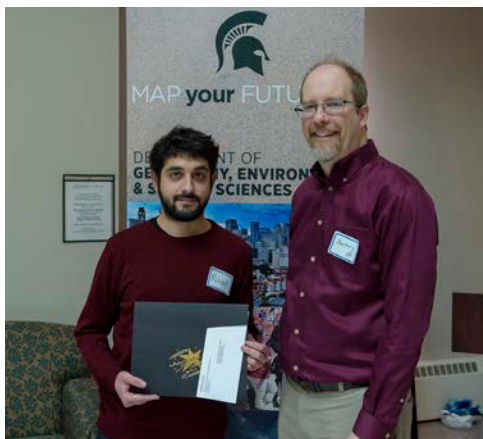
Michael A. Graff Dissertation Completion Award | Donald Akanga

Donald Akanga is a Ph.D. candidate in the college. He is very excited to receive the Michael A. Graff Dissertation Completion Award. His research examines interconnections between land cover changes, climate variability, and livelihoods in the Greater Mau Forest Complex (GMFC), Kenya. Having recently defended his dissertation proposal, Donald is preparing for fieldwork this summer. This award will go a long way in supporting the fieldwork component of his research.

Harold A. "Duke" Winters Scholarship | Riley Gugel

Riley Gugel will be graduating this semester and has accepted a contractor position with the Natural Resources Conservation Service (NRCS). He plans to continue his education and research after spending some time in the public sector. Riley is very honored to receive the Winters Award and grateful to continue the legacy of Dr. Winters through research on Michigan's glacial history and novel mapping technologies.

Congratulations to all of our recipients and thank you to all who have contributed to the various Geography Department funds and scholarships. Your support helps to enhance our programs and benefit our students. Please click [here](#) if you are interested in donating to a fund or scholarship to help support our current and future Spartan Geographers.



Photos: Jacqueline Hawthorne

Graduate News



CATHERINE BROWN

While pursuing my bachelor's degree at the University of Kentucky (Go Cats!), I studied both social and natural sciences, eventually obtaining a degree in Geography with a minor in Biology. This combination has proved useful as I continue to develop an understanding of how where we live impacts our health. Since joining the Geography department here at State (Go Green!) in the Fall of 2021, my interests have evolved as I am exposed to new ideas, concepts, and thought processes on a daily basis.

My experience thus far has transformed my research, which presently focuses on how changing urban environments affect mental health. Thanks to working with Dr. Amber Pearson, I have had countless opportunities to explore what it means to be a researcher and a professional in academia. During just my first year as a grad student, I had the chance to contribute to multiple research projects, attend major conferences, and work in the field collecting various forms of data. These experiences, especially the time spent doing fieldwork, have not only advanced my professional development but have also furthered my personal perspective. I am eager to see what lies ahead!



VEDA HAWKINS

As a first-generation college student and the insurmountable challenges that I experienced throughout my education and career, I appreciate and revel in all the accomplishments of my cohort members in MSU Advancing Geography through Diversity Program (AGTDP) who have completed their program. The education path of Black students is near and dear to my heart, which is why my research examines the significance of residential segregation and socioeconomic positioning of Black students' neighborhoods and high schools and the impact on the completion of an undergraduate degree.

I juggle the world of working full-time as the Interim Assistant Dean of Academic and Student Affairs for the College of Social Science at MSU and being a graduate student in the department of Geography, Environment and Spatial Science. As I reflect on the work I do and the completion of my dissertation, I am thankful for my Advisor, Dr. Evered, and all of my committee members for their support and flexibility as I pursue my career and goal of completing my Ph.D. In my role as Assistant Dean, I can have a direct impact on the questions that I pose in my research, and I am thankful to be in this position. Additionally, I am fortunate to have the opportunity to teach an Integrative Studies Freshman Seminar course in France this summer: Space and Place in Paris. I am looking forward to sparking the interest of Geography in students and getting to explore Paris.



HERVE KASHONGWE

To become a leader in forest conservation in the Democratic Republic of the Congo (DRC), one requires a cultivated, in-depth understanding of the obstacles facing scientific networks and their collaborations with stakeholders and an advanced mentorship network with research training. My past leadership experience in the DRC provided me with the insight needed to identify areas for program improvement. Now, I aim to advance my research expertise and broaden my mentor network by obtaining a Ph.D. in Geography at Michigan State University (MSU). For my Ph.D. dissertation, I am quantifying aboveground biomass (AGB) in regrowing natural forests using a combination of the recent active and passive remote sensing data and forest inventory data in the Mai Ndombe forests of DRC. Upon completion, I will return to the DRC, my home country, with strengthened Geographic Information Science (GIS), Remote Sensing

(RS), and leadership skills and scientific networks to overcome the technical and communication issues that hinder forest conservation efforts.



NATHANIEL PENROD

Since coming to MSU in the fall of 2021, I have worked on a wide variety of coastal research projects. A highlight from last year was collaborating with the National Park Service (NPS) to create habitat suitability models to improve their invasive zebra mussel monitoring efforts at Apostle Islands National Lakeshore and Isle Royale National Park. By pinpointing areas with suitable conditions for zebra mussel colonization, we doubled the efficiency of fieldwork operations, which allowed the NPS to expand its monitoring site network to manage any future infestations more effectively.

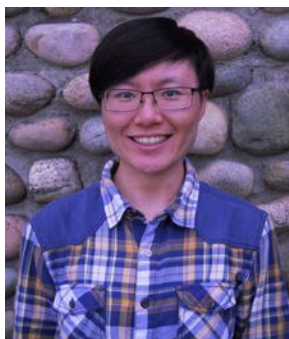
For my master's thesis, I am adding to and analyzing a 34-year time series of eastern Lake Michigan sandy beach topography profiles. My fieldwork involved a few trips to the coast to collect topography and bathymetry data using RTK-GPS and a sonar system strapped to a kayak. Key goals of this research are to describe how and why sediments move between subaerial and subaqueous beach zones and to improve our understanding of how fluctuating lake levels and changing storm frequencies may shape Great Lakes coasts in the decades to come.



ANA RIVERA-RIVERA

As a 5th year Ph.D. student, I would like to reflect on the last three COVID years and how they have impacted my studies and life. In February 2020, we discussed, in Dr. Grady's GEO 873 class, a virus with the potential to become a pandemic. Little did we know what was ahead of us at that time. A month after, during Dr. Winkler's GEO 865 midterm exam, we received a text message that the University was closing due to COVID. I spent the Spring semester of 2021 studying quantitative methods from home. I was challenged from many angles during this time, as I was also diagnosed with an autoimmune disorder. But these challenges inspired me to work as a research coach at MSU's Summer Research Opportunities Program to guide underrepresented minorities wanting to pursue a graduate degree. As I finish my program, I continue studying Latinx extreme heat exposure, thanks to the Julian Samora Endowment Fellowship. I also continue mapping Arctic

communities with the RAND Corporation, which started as a summer internship and is now extended another year, and spatially identify populations at risk of climate and health impacts with the World Bank. As it is almost time to graduate, I can only think that I have been able to get by in this program with a little help from my many GEO friends, faculty, and committee members.



RUI ZHANG

I'm a Ph.D. candidate working with Dr. Ligmann-Zielinska on computational simulations of Coupled Human and Natural Systems (CHANS). As a dual major student in MSU's Environmental Science and Policy Program, I aim to apply system modeling to understand dynamics and complexity in CHANS, and provide insights to inform environmental planning and policymaking. My current research uses Agent-based Modeling combined with spatial analysis to explore the interactions between agricultural behaviors in the Lake Erie Basin and the severity of Harmful Algal Blooms in Lake Erie while examining how environmental policy as an external factor will affect the dynamics in the system. Additionally, I am honored to have served our Supporting Women In Geography (SWIG) group from 2019 to 2022 as the Treasurer.

Graduate Degrees Conferred

William (B.J.) Baule, Ph.D., (Dr. Jeffrey Andresen), “Climatic Variability and Change in the Midwestern United States: Implications for Nitrogen Leaching in Agricultural Systems.”

Michelle Bullock, M.S., (Dr. Kyle Evered), “Mapping aid efforts in East Pakistan after the Great Cyclone of 1970.”

Meg Castro, M.S., (Dr. Ethan Theuerkauf), “Documenting the geomorphic impacts of high lake level on freshwater coastal wetlands using topobathymetric surveys: A case study from Saginaw Bay in Lake Huron.”

Jiang Chang, Ph.D., (Dr. Igor Vojnovic), “The Underprivileged and Displacement: Gentrification in Hong Kong, 1986 to 2016.”

Myung Sik Cho, Ph.D., (Dr. David Roy), “Characterizing Multi-Scaled Impacts of Hydro-Dams on Ecosystems and Society in Southeast Asia.”

Jen Fry, Ph.D., (Dr. Kyle Evered), “Black, Set, Spike: An Analysis of the Racial Experiences of Black Female Volleyball Players in Europe.”

Brittany Hartley, M.S., (Dr. Ethan Theuerkauf), “Temporal linkages between nearshore bathymetry, shore ice morphology, and geomorphic change along a cold-climate coastline.”

Cheyenne Lei, Ph.D., (Dr. Jiquan Chen), “The Analysis of Albedo on Bioenergy Crops: Assessment for Climate and Global Warming Impact.”

Cordelia Martin-Ikpe, Ph.D., (Dr. Joe Darden), “Separate and Unequal: A Spatially Comprehensive Analysis of Black-white Hypertension Disparities across the U. S.”

Kevin McKeehan, Ph.D., (Dr. Alan Arbogast), “The Geography and Recent Activity of Lake Michigan’s Coastal Sand Dunes.”

Laura Medwid, Ph.D., (Dr. Elizabeth Mack), “Water Access as An Environmental Justice Issue: How Race and Income is Associated with Water Access across Space.”

Lucas Rabins, M.S., (Dr. Ethan Theuerkauf), “Using Existing Infrastructure as Ground Control to Support Citizen Science Coastal UAS Monitoring Programs.”

Kyle Redican, Ph.D., (Dr. Ashton Shortridge), “Knowledge Spillovers and Safe Drinking Water Act Compliance.”

Joey Seitz, M.S., (Dr. Shiyuan (Sharon) Zhong), “Observations of atmospheric turbulence during a low-intensity surface fire.”

Yachen Xie, Ph.D., (Dr. Jiaguo Qi), “The Water-Energy-Food nexus assessments of carbon neutral efforts.”

WELCOME OUR NEWEST SPARTAN GEOGRAPHY ALUMNI!



SPRING & SUMMER GRADUATES:

Jeremy Barnby | BS Geographic Information Science

Josh Brown | BS Economic Geography

Alec Castiglione | BS Geographic Information Science

Dalton Castle | BS Economic Geography

Nick Catanzaro | BS Environmental Geography + Minor in Geographic Information Sciences

Melissa Checo | BS Geographic Information Science

Carolyn Faulkner | BS Environmental Geography

Michael Fleming | Minor in Geography

Oliver Foster | BS Economic Geography + Minor in Geographic Information Science

Danielle Fox | Minor in Geographic Information Science

Beth Grost | BS Environmental Geography

Riley Gugel | BS Environmental Geography

Nicole Hurdy | Minor in Geography

Patrick Klein | Minor in Geographic Information Science

Chloe Kubacki | BS Economic Geography

Jinpeng Liu | BS Economic Geography + Minor in Geographic Information Science

Rachel Matejewski | Minor in Geographic Information Science

AvaMarie Mendoza | BS Environmental Geography

Shawn Murray | BS Environmental Geography

Guy Procopio | BA Human Geography + Minor in Geographic Information Science

Yancy Wingard | BS Economic Geography

Tao Zhong | BS Economic Geography + Minor in Geographic Information Science

FALL GRADUATES:

Isabel Bauer | BS Environmental Geography

Adrian Graden | BS Economic Geography

Yuan He | BA Human Geography + Minor in Geographic Information Science

Mason Kistler | BS Economic Geography

Kelly MacDonald | Minor in Geographic Information Science

Maddie Pilat | BS Environmental Geography

Keenan Schaub | BS Economic Geography

Peter Sloten | BA Human Geography

onGEO Connection

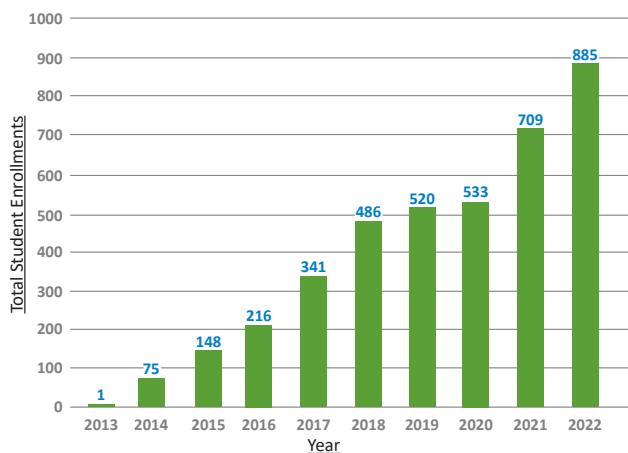
onGEO-PROFESSIONAL

BY: BETH WEISENBORN

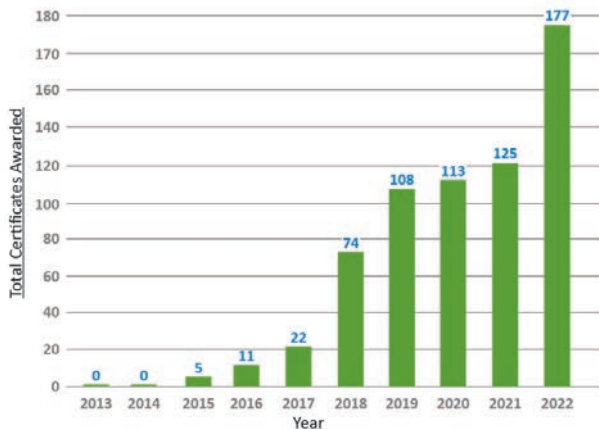
Impressive Growth of Our Professional Program

In 2022 we continued along our growth trend, experiencing increases in the number of student enrollments in our Professional courses and the number of Professional Certificates in GIS awarded. As student and certificate numbers grew, so did the number of courses we offer and the number of seats available for students. By the end of the year, our program had 3,914 total student enrollments and 635 Professional Certificates awarded since our program began in 2013. Looking ahead, 2023 should be pretty exciting for onGEO as new courses, and a Professional Certificate are in the pipeline.

onGEO Professional
Total Student Enrollments by Year



onGEO Professional
Professional Certificates Awarded by Year



New Professional Certificate in 2023

A new **Professional Certificate in Geospatial Data Analytics & Visualization** will be launched by onGEO later this year. This Certificate has been designed to meet the needs of business teams, government agencies, and professionals across many fields who are interested in developing their abilities in spatial data analysis and geovisualization. It requires the completion of four core courses:

- Cartography (CART)
- Geovisualization: Temporal and Interactive Mapping (GTIM)
- Spatial Statistics (SPST) *Coming soon
- Python & ArcPy Geoprocessing (PAPG) *Coming soon

The prerequisite for pursuing the new Professional Certificate in Geospatial Data Analytics & Visualization is the Geographic Information Systems (GIS) course offered by onGEO.

Brand New Course on Geovisualization



We started 2023 excited to offer one of our newest courses: [Geovisualization: Temporal and Interactive Mapping](#)! Written by Dr. Kyle Redican, MSU-GEO Alum & Director of the Spatial Analysis Laboratory at the University of Richmond, this course was designed to meet the geospatial visualization needs of many different GIS professionals by introducing students to ArcGIS Pro, ArcGIS Online (AGOL), RStudio, and GitHub. Students put this new knowledge to use by also building an online portfolio (as an ArcGIS StoryMap) of their course projects, including data dashboards, flow maps and animations, and web maps.

Collaborative Development with RS&GIS

Also launched in January 2023 was [Drones in the Fields: Open-source Solutions for Data Collection, Processing, and Analysis](#), the product of a collaborative partnership between onGEO and the RS&GIS research group through MSU's Project GREEN (AgBioResearch). This course was designed for those who wish to use drones as a mapping platform, teaching industry professionals how to collect, process, analyze, and visualize drone imagery using open-source software. Mapping with drones is useful across the fields of agriculture, engineering and construction, natural resource management, and many more. Moreover, the ability to do so using low-cost or free software opens opportunities to individuals and small organizations. If you are involved in the Michigan agriculture industry, you may qualify to take this course (or our FAA-Part 107 Drone Test Prep & Beyond course) for free. Apply: bit.ly/MSUDroneAg

Launch of Digital Image Processing



Another one of our new fully online professional courses is [Digital Image Processing](#), which launched in the spring of 2022. Written by Dr. David Lusch (Professor Emeritus in MSU-GEO and MSU-RS&GIS), this course was designed to meet the digital imagery exploitation and analysis needs of a wide variety of GIS and remote-sensing personnel. The course focuses on the extraction of land cover/use information from two commonly available image types: 4-band aerial orthoimagery and Landsat satellite imagery. Students have the opportunity to learn these skills through a series of online labs using ArcGIS Pro and get extra practice trying the labs in Google Earth Engine.

ESRI UC 2022

In July, Dr. Yi Shi attended the ESRI User Conference held in San Diego, California. The conference put a strong emphasis on collaboration to tackle pressing world problems, such as climate change. Highlights from the conference include ArcGIS GeoAnalytics Engine, ArcGIS Knowledge, ArcGIS Maps SDK for game engines, and ArcGIS IPS for indoor location services. A presentation given by an ESRI performance engineer on how to run efficient on-premise servers was particularly beneficial to the onGEO group in terms of how we can better manage the servers used for our courses.

Where to Find Us

Our Professional Certificate and Specialization Courses are advertised in GIS User Groups in Michigan and beyond and across social media platforms ([LinkedIn - onGEOatMSU group](#), [Instagram - MSU.Geography](#), and [Twitter - @onGEOatMSU](#)). Be on the lookout for our posts, and feel free to share widely!

onGEO-UNDERGRADUATE

Launch of GEO331v: The Geography of Canada



Credit: Daniel Joseph Petty (Pexels.com)

In the spring of 2023, onGEO welcomed a new addition to its suite of online courses, [GEO331v: The Geography of Canada](#). While it has only been three years since our last undergraduate course launched, what a three years it has been! One of the biggest challenges onGEO developers are faced with today is the changing expectations following a period of online-only learning amid a global pandemic. As universities rushed to move to an online

learning model, many formerly in-person lectures transformed into a mix of recorded lectures, zoom meetings, posted lecture notes and assigned readings, and with that, students' experience in instructional design grew. When we envisioned GEO331 for online delivery, that experience, and the expectations that accompanied it, weighed heavily on our minds and influenced the type of product we wanted to create.

The availability of new templates created by MSU's Instructional Technology and Development Team has made it easier than ever to incorporate videos, images, text, and learning tools into a D2L (online) course. Students enrolled in the inaugural semester of GEO331 online will experience video lectures with responsive sizing, key concepts, and lecture notes presented in expandable accordion features, and key terms on interactive flashcards, each with a clean, modern look and all thanks to MSU's team of instructional designers.

Instructional design aside, as a geographer, nothing is more exciting than the content. For that, we have the contribution of a former MSU faculty member and resident Canadian, Dr. Catherine Yansa, to thank. Countless hours were spent listening to Dr. Yansa's recorded lectures on her native country and countless more sifting through pictures, videos, and articles, all to create the course's thematic and regional lectures. No matter the subfield of

geography that most interests you, the course includes something for everyone. From tidal ranges in the Bay of Fundy to kitchen parties in Newfoundland and Labrador, from Haudenosaunee traditions to the history of ice hockey, students will learn that and more in The Geography of Canada, online.

D2L Fusion 2022

This year Juliegh Bookout represented MSU onGEO at the annual D2L (Desire2Learn) Conference held in Boston, Massachusetts. For those who don't know, D2L is the learning management system that has been used to deliver online courses at MSU since 2012. Their annual conference is well attended and includes two full days of presentations, panels, and product demonstrations and also provides an opportunity to make connections with other users and spend time with members of the MSU Instructional Technology and Development Team. This is Juliegh's second time attending the conference and she is always impressed by the enthusiasm of D2L's founder and CEO John Baker and Teaching & Learning Advocate Barry Dahl. That energy carries through the conference and she leaves with a refreshed sense of excitement and intention for instructional design that she can bring to onGEO courses.

SAVE THE DATE



**GEO-GTU
ANNUAL
SPRING
RECEPTION**

**April 21, 2023
3:00-4:30 PM
Ag Hall Atrium**



Professional Certificate in GIS

From **onGEO@MSU**

Professional Certificate in GIS

Are you looking to learn valuable skills and expand your internship and career options? Michigan State University's **Department of Geography, Environment, and Spatial Sciences** offers a fully online, non-credit professional certificate in the ever-expanding field of **Geographic Information Systems (GIS)**.

Be part of the growing industry

Geospatial technology is a growing industry. According to the U.S. Bureau of Labor Statistics:

- ▶ People with GIS skills have excellent job prospects
- ▶ GIS, cartography, and photogrammetry jobs are expected to grow by 29% through 2024
- ▶ GIS professionals earn more than twice the U.S. median annual income

Potential internship and job opportunities

Did you know that geospatial technologies are widely used in many industries, including academic departments and research institutes on campuses nationwide? Earning a Professional Certificate in GIS could open the door to many opportunities in fields such as academics, business, transportation, public health, and natural resource and environmental management, and give you the edge you need to land the internship or job you desire!

MAP **your** FUTURE 

For more information visit us online at [onGEO.msu.edu](https://ongeo.msu.edu) or email us at [onGEO@msu.edu](mailto:ongeo@msu.edu)

The professional certificate consists of four core non-credit, online courses

- ▶ Introduction to Geospatial Technology (IGT)
- ▶ Geographic Information Systems (GIS)
- ▶ Remote Sensing (RS)
- ▶ Cartography (CART)

Need to earn academic credit?

No problem. We also offer enrollment in undergraduate (for credit) versions of our certificate courses to all students (Undergraduate, Graduate, and Lifelong Ed) attending Michigan State University. Let us know if you would like to take the courses for credit – we can help you determine the best path for you.

Where do I start?

Getting registered for our professional certificate courses is simple. Classes begin every seven weeks throughout the year. Check out the start dates on our website and connect with us.

Get started today! Visit our website

>> professional.ongeo.msu.edu

Contact Info

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Department of Geography,
Environment, and Spatial Sciences
MICHIGAN STATE UNIVERSITY

Celebrating 50 years at RS&GIS

BY: ERIN BUNTING

In 2022 RS&GIS celebrated its 50th anniversary! In honor of this milestone, we wanted to highlight our history and key figures, while also celebrating our successes during the past year. RS&GIS started in 1972 as the NASA-funded Remote Sensing Project. At the time, we focused on remote sensing of land use solely and developed definitions and key methods for such classification. In subsequent years, we became a center at MSU and were known as the Center for Remote Sensing and then the Center for Remote Sensing and GIS. During a 2003 reorganization, RS&GIS became a part of the Department of Geography, Environment, and Spatial Sciences as a soft money research and outreach group. In this new role, we worked, and continue to work, on a wide variety of geospatial projects with a broad clientele, including academic institutions, government agencies (local to federal), the private sector, and NGOs. RS&GIS would not have been able to thrive for 50 years without several key people, including Bill Enslin, Dennis Hudson, Dave Lusch, Tamsyn Mihalus, Robert Goodwin, and numerous staff no longer with RS&GIS.

Bill Enslin: Bill was one of the first members of what is now called RS&GIS, working for the organization for over 30 years. He was a pioneer in the GIS industry, primarily through his development of C-MAP, one of the first GIS programs available to municipalities and counties, as well as the Michigan Map Image Viewer program. It is impossible to fully describe Bill's impact on RS&GIS and the GIS industry in general. Sadly, Bill passed in 2006, but we will always remember both his professional and personal impact on RS&GIS.

Dennis Hudson: Dennis was one of the big three at RS&GIS for 30 years, along with Dave Lusch and Bill. His passion was remote sensing and image interpretation, and he received his Ph.D. during his early years at RS&GIS. Dennis was the primary driver of numerous land cover projects completed at RS&GIS and played a critical advisory role on the

Michigan MIRIS Land Cover/Use program. More than 25 years ago, he founded the Michigan State University Aerial Imagery Archive by organizing hundreds of thousands of historic aerial

photographs from numerous agencies and providing them as a service to the public. The "Archive" as we call it at RS&GIS, has been an integral part of RS&GIS since. Dennis is now living the dream as a retiree and spends lots of time at his cabin near Lake Ann, Michigan.

Dave Lusch: You don't have to look far to find Dave. Though "retired," he is still highly involved within the Department and at RS&GIS. It is difficult to sum up his impact on RS&GIS in less than 30 pages. During the 40 years he spent with RS&GIS, he was heavily involved in both airborne and spaceborne remote sensing, including gypsy moth color-infrared video and land cover investigations in the U.S. and abroad. Perhaps his greatest impact at RS&GIS was his incredible ability to teach complex subjects effectively and his willingness to help anyone at any time. Talk to anyone who has worked with Dave, inside or outside of MSU, and you immediately understand his impact as they tell you all that Dave has taught them.



Tamsyn Mihalus: Tamsyn has been with RS&GIS since the beginning serving as our grants manager and administrative assistant. Those titles only vaguely describe Tamsyn's impact on RS&GIS. She knows all the ins and outs and the history of multiple units, manages contacts galore, and acts as a sounding board for our Director, Erin Bunting. Being a soft money group with numerous projects means that Tamsyn has to manage multiple accounts, financial reports, and training enrollments, all while assisting other staff with travel, contracts, account development, and equipment purchasing. In so many ways, Tamsyn keeps the lights on here at RS&GIS, and her wealth of knowledge on the management of our groups is immense.



Robert Goodwin: Bob has been with RS&GIS for 25 years and serves as our lead geospatial analyst and drone manager. Bob's impact on our group was highlighted in his 2021 Breslin Distinguish Staff Award, given annually to a small group of MSU staff that have had a prominent and long-lasting impact on their units. Bob's dedication to our group and the MSU community is seen consistently in his work as a project manager, mentor, teacher, and project leader. Not many people could do the job Bob has taken on. Bob has not only flourished in his position, but he also consistently goes above and beyond and pushes RS&GIS to do better in all aspects.



RS&GIS in 2022: RS&GIS had a stellar 2022 as we expanded, adjusted back to in-person work, and planned our pathway forward. Our new lead developer, Dylan Hoffner, has prospered in his new role undertaking large new projects and growing the developer team's connection with the larger MSU community. Over the last 4-years, RS&GIS has worked with [MSU Enviroweather](#) to develop their new website and modeling approaches. Dylan is not only the technical lead on this project but the lead mentor for the Enviroweather staff in regard to development. Additionally, Dylan is leading projects with [MiCorps](#), completely redesigning their website and database; MSU Cosmetic Surgery, developing their new content management system; MSU Health Care, providing website support and development; and MSU Extension, design and development of their climate-ready farms' website.

Our analyst team has tackled several large projects over the past year, including a large-scale field data collection effort and the development of new courses for the onGEO program. RS&GIS has partnered with faculty in the MSU computer science and engineering department to study how people's biometric features (gait, height, etc.) can be portrayed in imagery in our new federally-funded grant. In this work, we spent the summer of 2022 working with over 200 paid volunteers to collect ground- and drone-based imagery of moving subjects. In 2023 this effort will, hopefully upon grant renewal, be expanded to 400 volunteers. If you are interested in taking part in future fieldwork efforts, please feel free to reach out to Erin Bunting. Additionally, we have partnered with MSU onGEO for another new class called [Drones in the Field](#) which focuses on processing and analysis of drone data using open-source software. This class builds upon our previously developed [FAA Remote Pilot test prep course](#).

As we look forward, there is so much ahead for 2023. We have a large collaboration with onGeo in the works, a busy fieldwork season, and multiple new projects beginning. If you want to hear anything more about any of our projects, feel free to check out our [website](#) or email Erin Bunting at ebunting@msu.edu. Happy 2023!

Spotlight on Diversity

GEOGRAPHY DIVERSITY, EQUITY AND INCLUSION COMMITTEE

BY: AMBER PEARSON

So far this academic year, the Department Diversity, Equity and Inclusion Committee (Chair: Amber Pearson, College rep: Erin Bunting, Members: Leo Zulu, Mehmet Eroğlu, Raven Mitchell) has been very focused on recruitment for applicants for the College of Social Science Senior Scholars program. Filling these senior positions with underrepresented faculty would strengthen our DEI efforts and hopefully better support incoming graduate students in our Advancing Geography through Diversity program.

We've also set our targets on revisions to annual faculty reviews to include components of DEI in research, teaching, and service. Our intention is to promote participation and growth in these activities and hold ourselves to high standards. Looking forward to the Spring semester, our goals include reaching out to potential graduate students and faculty to recruit while attending the American Association of Geographers (AAG) conference in Denver in March.

We will also be developing a webinar for faculty on DEI opportunities and engagement and meeting with incoming graduate students. We feel that our service on this committee is one of the most important aspects of service in which we each engage. It is meaningful and essential as we move toward a more inclusive and welcoming university!

SUPPORTING WOMEN IN GEOGRAPHY (SWIG) @ MSU

BY: MICHELLE BULLOCK

Hello from SWIG (Supporting Women in Geography). We hope this Newsletter finds you well. This year, new leadership was elected, and we had big shoes to fill! Thank you to all of the great people who have kept SWIG strong and thriving in the Department of Geography, Environment, and Spatial Sciences. We appreciate all you have done and continue to do.

The Fall Semester of 2022 had numerous activities. We hosted a Welcome Coffee Hour to kick off the new school year, welcomed new and returning members, and provided good food and coffee to the department. During Geography Awareness Week, SWIG hosted a tour of the MSU Museum's special exhibit, "1.5° Celsius". To build the capacity of SWIG to reach out to the department and the community, SWIG hosted committee chair elections for the Development and Networking, Community Outreach, and Speaker Series chair positions for the first time since COVID. Members also attended the Fall Registered Student Organization (RSO) Leader Conference, hosted by the Office of Spartan Experiences (formally Student Life) to train RSO leaders to better navigate campus resources such as funding, accounts, event planning and reservations, the Involve@State platform, and conflict resolution.

Next semester SWIG plans to restart the SWIG Zoom Writing group on Thursday mornings, host an Alumni panel/networking event and a speaker, and give back to the community through volunteering.

If you are interested in becoming a member (no fee to join) or want to hear more about upcoming events, please join SWIG [here](#). We use the roster to reach out to members and keep everyone updated on events and opportunities.

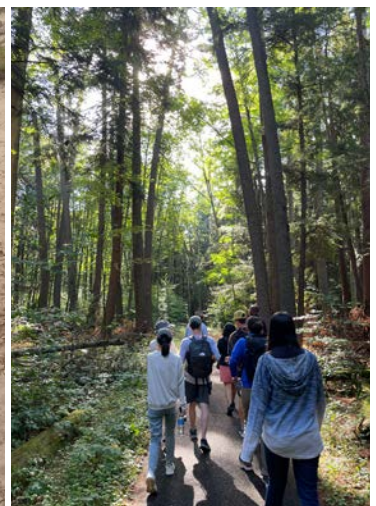
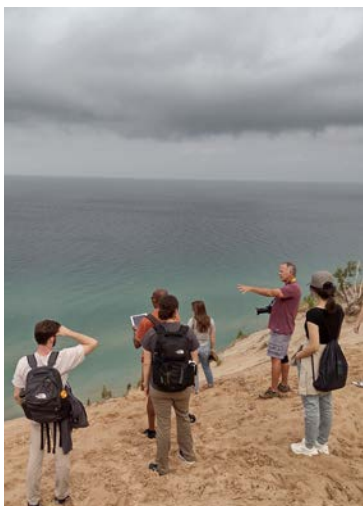
Thank you all for supporting SWIG. On behalf of SWIG's leadership, we wish you all the best in this new year!

GEOCAMP 2022



Left to right: CarLee Stimpfel, Alanna Post, Katie Brown, Anthony Bowman, Nathan Moore, Sahel Izadi, Michelle Bullock, Xiumin Cai, and Yuean Qiu.

GEOCamp 2022 inducted eight new Spartan Geographers and forged new friendships and connections. After checking in at Camp Wa Wa Sum, we hit the Au Sable River for a little tubing and then trekked back to camp for dinner and a delightful evening of socializing. Day 2 kicked off with a visit to Arcadia Dunes at the C.S. Mott Nature Preserve, a beautiful area protected, owned, and managed by the Grand Traverse Regional Land Conservancy. Here we enjoyed scenic vistas and an excellent hands-on lesson about the geomorphic history of coastal sand dunes along Lake Michigan with Dr. Alan Arbogast. From there, we headed to Crystal Mountain for a discussion about the changing climate and the ski industry and then off to West Bay Marina in Traverse City for additional exploration of various economic geography themes. Our final day included a visit to the Civilian Conservation Corps (CCC) Camp at Houghton Lake, a discussion of Nature-Society interactions at Hartwick Pines State Park, and a little lunch along the shore of Higgins Lake before returning to East Lansing. All in all, GEOCamp always provides a great start to graduate life at MSU!



GEOGRAPHY GRADUATE GROUP (TRIPLE G)

BY: KATIE BROWN AND HYUNSEO PARK

Geography Graduate Group (Triple G) members actively participate in many department-wide activities. One significant contribution is organizing the annual colloquium series. In the Fall of 2022, Dr. Pam Jagger kicked off the series with the first in-person colloquium since the pandemic's start. In the following months, we hosted talks by Dr. Allen G. Hunt and Dr. Mia Bennett. With each speaking on their research focus, topics varied from energy access in Africa to the water balance in critical zones and infrastructure in the Arctic. The Spring 2023 series will again feature three talks. We began with a discussion on migration by Dr. Michael Samers in January. Later in the semester, we will hear about Africa-focused nutrition/sustainability from Dr. Bronwen Powell and conclude the series with a presentation on ecological forecasting by Dr. Michael Dietze. All colloquium information, past and present, can be found on the department website. The 2023 colloquium committee, composed of three graduate students, Hyunseo Park, Mehmet Eroglu, and Meicheng Shen, appreciate their faculty mentor, Dr. Elizabeth Mack, the previous committee organizer, Ana Rivera-Rivera, as well as the Communications Manager, Diane Huhn, for their support and guidance.

Beyond the colloquium series, Triple G members assist in various events throughout the year, hoping to highlight the discipline and department. For example, Triple G members spearheaded events during Geography Awareness Week, including tabling at the Union, leading a tour of the MSU Museum, and volunteering for the spotlight Julie Mehretu event. Later in the semester, Triple G members were invited to sit on a panel hosted by the GEO Club. This offered a unique chance for the graduate members to provide insight and advise the undergraduate students outside their professional roles as teaching assistants, research assistants, and instructors. On a larger scale, several graduate students serve on committees and boards within the department and university; a few include DEI (Diversity, Equity, and Inclusion), the GEU (Graduate Employees Union), and Grad Relations. These Triple G members devote additional time to ensure that the department and university never stop evolving. Alongside their academic and altruistic efforts, members of Triple G in the East Lansing area have convened countless social events throughout the semester. Activities, such as the annual potluck, trivia night, football tailgates, or a random happy hour, facilitate an engaged graduate community! We are excited for the coming semester to see what new opportunities may arise as the world continues to acclimate to a new normal.



GEOGRAPHY CLUB

BY: ALBERTO VILLARREAL

The Geography Club is an undergraduate student organization that seeks to advance the field of geography and any general interest in geography at Michigan State University. We offer our members a space to learn, discuss, and build a community of like-minded individuals who are not just geography majors but from all majors.

Over the last year and the course of the past semester, we engaged in several events that aimed to create memories for everyone and spread awareness about the organization. From designing sidewalk chalk art outside the Geography Building to holiday-themed parties, from Kahoot game nights and a Graduate Student panel thanks to the help of Triple G, GEO Club has continued to work and connect with its members on an academic and personal level as well.

Reinvigorated in the Fall of 2020, GEO Club has continued to grow, from the original seven members to our current 40+ members, and is expected to grow as we continue to serve the community. With a fundraising event scheduled for March 2023 and partnerships with other student organizations such as Triple G and SWIG, the future is bright. That being said, if any alumni or former GEO Club alums would be interested in discussing their current careers and how they got there, please reach out to us at rso.geographyclub@msu.edu.



Photos courtesy of MSU Geography Club

Geography Awareness Week

Geography Awareness Week returned with special guest Julie Mehretu



Artist Julie Mehretu and Spartan Geographer and former undergraduate advisor Gary Schnakenberg discuss the intersection of art and geography. Photo: Jacqueline Hawthorne

The Department was excited to bring back our celebration of Geography Awareness Week (GAW) after a two-year hiatus due to the COVID-19 pandemic. Established by a presidential proclamation more than a quarter century ago, GAW is celebrated each third week of November. This public awareness program encourages citizens, young and old, to think and learn about the significance of place and how we affect and are affected by it.

For nearly a decade, we've organized a variety of activities during GAW to not only celebrate our love and excitement for the discipline but also to highlight the numerous career paths offered within the field and demonstrate just how much our daily lives are impacted by people, space, and place.

We kicked off the week-long celebration with our spotlight event, an evening with world-renowned artist and former long-time resident of East Lansing, Julie Mehretu. Through an engaging discussion facilitated by MSU Geographer and former undergraduate advisor Gary Schnakenberg, the program explored the intersection of geography and art.

In addition, MSU Geography students and organizations, including the MSU Geography Club, the Geography Graduate Group, and Supporting Women in Geography, organized events around campus to shine a spotlight on the discipline. Department members also participated in various activities organized by the MSU GIS Users in celebration of GIS Day on November 16, 2023. Spartan Geographer and Chair of the MSU Geography Alumni Advisory Board provided an outstanding keynote address to kick off the festivities, while Erin Bunting, assistant professor and Director of MSU RS&GIS, shared an excellent overview of our Coastlines and People Thematic Area.

We look forward to GAW 2023 and hope you can join us. Stay tuned to our department website and social media channels for more information.



Photos: Jacqueline Hawthorne

Research in Action

Nooni Project aims to reclaim breastfeeding among tribes

BY: ANGIE SANCHEZ AND SUE GRADY

From 2020 through 2022, Ph.D. student Angie Sanchez and Dr. Sue Grady began work on “The Nooni Project,” a grant-funded award from the Michigan Health Endowment Fund. Nooni is an Ojibwe word that means “he or she suckles at the breast.” The goals of the project were to increase access to culturally appropriate breastfeeding support resources in Indigenous communities in Michigan by bringing the Indigenous Lactation Counselor (ILC) training program to six different Indigenous communities in Michigan. This training certified Indigenous community members in foundational lactation education so that they can serve the mothers, infants, and families in their communities.

We completed trainings in the urban communities of Grand Rapids and Detroit and in the tribal communities of Grand Traverse Band, Little Traverse Band, and Bay Mills. We certified over 50 new Indigenous lactation counselors! When one session had to be canceled at the last minute, we quickly changed course and set up a series of webinars for non-Indigenous healthcare providers. The webinars were recorded and posted on the [project website](#) and are available for anyone to view. These webinars cover various topics, such as historical trauma and its effect on Indigenous birthing people and lactation. In addition to the webinars, we created a series of posters that feature Indigenous women and babies with words of encouragement in support of breastfeeding. Several copies of the posters were sent to each of the Michigan tribal healthcare clinics to display in their patient rooms. The posters are also free and available on the website to any organization for printing and displaying in places that serve Indigenous folks. We hope to see improvements in breastfeeding rates over the next few years, which will help to improve the health of Indigenous families in Michigan. Thanks for your interest in our project!



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Empowering Michigan's lakefront communities to proactively manage coastal hazards

BY: ETHAN THEUERKAUF, ELIZABETH MACK, AND ERIN BUNTING



Coastal erosion is a pervasive challenge for communities here in Michigan as well as throughout the Great Lakes region and beyond. Changing water levels, storms, and human development all contribute to erosion, flooding, and associated coastal habitat and infrastructure impacts. Proactively managing these impacts requires up-to-date information on what the coast looks like and why it is changing. Unfortunately, many lakefront communities lack the technical and financial resources to acquire these data and embed them within their decision-making processes. That is where our research team in the Department of Geography, Environment and Spatial Sciences can help.

We have been working for the last few years on a National Science Foundation-funded project to develop and implement a drone-based citizen science coastal change monitoring program in Michigan. The project, known as the Interdisciplinary Citizen-based Coastal Remote Sensing for Adaptive Management (IC-CREAM), empowers coastal communities to make better management decisions by equipping them with data and knowledge about coastal change and hazards.

We started the project in the winter of 2020 with workshops (mostly virtual, given the COVID-19

pandemic) to introduce the six coastal Michigan communities (South Haven, Manistee, Chikaming Township, Iosco County, Manistique, and Marquette) to the project, learn about their coastal hazard concerns and priorities, and recruit a community member to train as a drone pilot. After these workshops, we visited the sites to establish the monitoring areas and train the pilots. From there, the pilots periodically visit the sites and collect aerial imagery of the beach with a drone. They send these images back to us at MSU, where they are processed into mosaiced aerial photos, topographic maps, and other products such as shoreline positions.

Over the past six months, our team has been reconnecting with the communities to share the data collected over the past two years and to explore ways to ensure the data are useful to them for decision-making. These conversations are the start of the next phase of this project, during which we look to strengthen our relationships with coastal communities and help them integrate the latest scientific data into their coastal management decision-making processes. For more information on the project, check out our [web space](#).

Alumni Focus

Alumnus generously supports future Spartan Geographers



Photo courtesy of Tim Caywood

Dr. Harm de Blij, former MSU professor and renowned geographer, was very passionate about creating an opportunity for new students to experience geography and find a path to using their new found geographical knowledge to address the world's challenges. When he instituted the Harm de Blij Scholar Award in 2013, he did so because he was committed to providing support to promising incoming students who choose to major in Geography at Michigan State University.

Although Dr. de Blij passed away in 2014, the Department was excited to learn last year that Geography alumnus and supporter, Tim Caywood, was committed to keeping the legacy of Dr. de Blij alive by making a significant contribution to support his initiative to provide opportunities for new and incoming students to make a difference. Through this generous gift, the Department is thrilled to be able to extend funding to additional recipients of the de Blij Scholars Award Program. In addition, this past November, Tim generously matched every dollar donated to the de Blij Scholar fund during Geography Awareness Week and Giving Tuesday.

We are grateful to Tim and all of our many alumni, friends, and supporters. If you would like to join us in making it easier for bright young minds to discover a path in Geography, please consider donating to the Harm de Blij Scholars Award Program or any of our many funds and scholarships to support Spartan Geographers now and in the future. Please visit p. 49 for more information about how to donate.

HARM DE BLIJ SCHOLARS AWARD PROGRAM RECIPIENTS

2015
CRYSTAL KING

2017
ALEX LAFLER

2020
EMMA HALL
JOSH PEPPER
LEWIS PONTZ
RASHANE THAPA

2021
JESSICA DAVIS

2022
GRACYN FREUND
CORBIN PAULES

Young Alumni Spotlight

Geography alumna wins with pins: Representing Tennessee in an alternative way

BY: ALEXANDER GUSTANSKI

An alumna from the Department of Geography, Environment and Spatial Science recently won a Skills USA statewide graphic design contest. Kyeesha Wilcox, who received her master's in geography from MSU in 2020, cited her time in East Lansing as a significant inspiration for her victory.

After completing her bachelor's in global studies at Middle Tennessee State University, Wilcox, a native of Tennessee, came to MSU to pursue a master's degree. During her graduate studies, she took a class in cartography which served as her introduction to the fusion of geography and design. She also gained experience in the field of quantitative research and visualizing data while working as a research and teaching assistant.

After graduating and returning to her home state, Wilcox searched for a job and noticed that many mapping jobs require a background in graphic design. In response, Wilcox enrolled in a digital graphic design program at the Tennessee College of Applied Technology-Murfreesboro (TCAT). Towards the end of the program, Wilcox designed a pin to compete in a Skills USA graphic design competition, with the prompt of designing a pin to represent Tennessee in an alternative way.

The design ethos of the pin is that it serves as “a conversation starter, a souvenir of personal growth, and a reminder that our training, teaching, and support are building up our state for the better.” The idea of “building up” the state is conveyed through the repeating motif of slanted bricks colored after the state flag.

Every detail of the design was thoughtfully considered. “The pin design has a few geography “Easter eggs.” The outer shape is an octagon meant to alternatively represent the eight states that Tennessee borders. The inner shapes are also slightly slanted to give an abstract representation of the shape of the state,” explained Wilcox.

Wilcox also cited pictorial maps and sports data maps for helping her assign pictures to represent place and used connecting shapes to create the bigger picture--a design concept inspired by her studies at MSU.

Wilcox went on to represent Tennessee at the national level, where her pin design took second place. Wilcox is “in shock” about her victory.

Click [here](#) to learn more about the design elements, inspiration, and the process Wilcox used to create this award-winning piece.



Alumni News



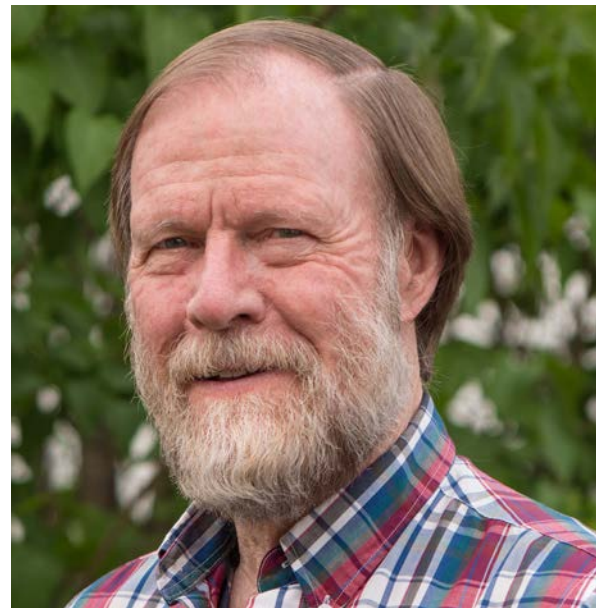
TOM BULTEN ('90 MA)

After graduating with a Master's degree in geography and urban affairs in 2000, I spent many years in the nonprofit sector leading a small community organization and practicing neighborhood development and community building in Grand Rapids, Michigan. For the last three years, I have worked for the City of Grand Rapids Water System, first as an Engineering Assistant and now as a Project Engineer. I am helping to manage the replacement of 26,000 lead water service lines in Grand Rapids. The City has replaced 3000 lines since 2017 and is mandated by the State to replace the remaining 23,000 by 2041. I look forward to helping the department better use GIS to make decisions about asset management, project coordination, and spatial justice.

DANIEL G. COLE ('79, MA)

Since last Spring, I have been president of the Cartography and Geographic Information Society (CaGIS), and in April 2023, I will transition to being the immediate past president. During late June, I participated as one of more than two dozen invitees to the Summit on Locational Information and the Public Interest in Santa Barbara, California, where we collaborated on a joint draft of Geo-Ethics which was published by the AAG in September as "A White Paper on Locational Information and the Public Interest" (see <https://doi.org/10.14433/2017.0113>).

While I was co-chair of the AutoCarto Conference (for slides and videos, see <https://cartogis.org/autocarto/autocarto-2022/program/presentations>), I was not able to attend since my presence in a hospital operating room was required. Back at the Smithsonian, aside from the help from Esri on the publication of several story maps, one other reason that I haven't retired yet is that Jack Dangermond joined our National Museum of Natural History board in June, and so we are now negotiating with Esri on helping us with geo-referencing our collections (since only about 2 million out of 146 million objects and specimens have coordinate locations while the rest have descriptive locations).



R. MICHAEL COUSINS, GISP ('07, BS)

Hello Spartan Geographers! 2022 has been a great year, and I'm looking forward to crushing it in 2023. Personally, my daughters, Olivia & Juliet, are now 6 & 3 and love all things Sparty.

Professionally, I'm the Practice Leader for GIS at OHM Advisors, where I oversee all GIS operations and 13 GIS team members (with a few MSU Geo alums). In 2022, I achieved one of my major goals and became a Partner at OHM Advisors. I'm stoked to be welcomed into the Partner group and looking forward to the future. In 2022, I was also elected the Chair of the MSU Geo Alumni Advisory Board, and I'm looking forward to continuing to work with students, faculty, and our great MSU Geo Alumni. Please be on the lookout for various events this year and beyond. I'm also a Board member of MiCAMP, and the Vice Chair of the Frederick Douglass Academy for Young Men GIS Program located in Detroit, Michigan, that we started several years ago. Getting involved in these organizations is very rewarding, and I'm glad I can give back where I can.

If you are a student (kudos for reading this), get involved with the MSU Geography Club & GTU, any professional organization, and join your local user groups! Connections are key, and they make for easy points with your certifications, like the GISP! Upon graduation, please make sure to also stay connected with our Alumni Advisory Board.

P.S. If you have any ideas or thoughts regarding how we, the MSU Geo Alumni Advisory Board, can get involved, assist you with advice/support, further advance our Alumni outreach, events we can hold throughout the year, etc., PLEASE contact me. Also, please make sure to join our MsuGeo Alumni & Friends groups on [Facebook](#) and [LinkedIn](#), where you can stay connected with what we are doing.

Please link up with me on LinkedIn: <https://www.linkedin.com/in/gis-mike/>



ALBERT FULTON ('19, PH.D.)

I am a proud Spartan geographer who is presently a newly-hired Assistant Professor in the Department of Anthropology at the University at Buffalo, the flagship institution of the State University of New York (SUNY) system. After graduating from MSU Geography, Environment and Spatial Sciences in 2019, I worked as a postdoctoral researcher, followed by stints as a visiting faculty member at the University of North Alabama (Geography), University of Memphis (Earth Sciences), and, most recently, Colgate University (Geography).

I am presently working on setting up the Quaternary Paleoecology Laboratory, which will serve as the "nerve center" for cutting-edge research on past vegetation-climate-culture change in the Great Lakes region. The lab will contain equipment for multiproxy analyses (pollen, charcoal, plant macrofossils, geochemistry, environmental magnetism) of lake, wetland, and floodplain sediment and soil cores. My current research program focuses on understanding prehistoric human responses to long-term climate fluctuations over the past 15,000 years and how changing patterns of vegetation, fire, and landscape stability provided recurring opportunities for cultural innovation, as well as challenges for survival. I'm especially curious to learn if past human responses to climate change can teach us anything about our own current climate predicament! Only time will tell as the secrets hidden in the mud are revealed.



Alumni News

OWEN GREGG, GISP ('64, BA)

Not too much new from this 1964 Geography grad. I still go back and forth from Minnesota to Florida (Clearwater Beach), every year. But that will probably be coming to an end soon. It's becoming increasingly difficult to maintain two homes, especially at my "advanced" age—80! I cannot believe it. I still love MSU (despite our embarrassing football year) and follow the progress of the Owen Gregg Climate Change Research Endowment. It's a tremendously important subject and one I wish now that I could have studied more in-depth when I was a student. Learning not only about the "why" but the worldwide impact of the effects of a warming planet. I feel that MSU can help spearhead the teaching of such knowledge and empower students to get more involved in learning about it. That's the reason Dr. Arbogast and I started this endowment in the first place.

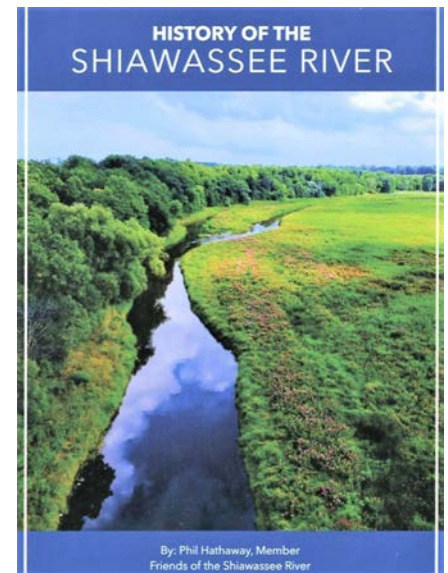
On a personal note, I am now a great-grandfather. Grandson Josh, a North Dakota State senior (pictured with me), is his dad. I wish everyone in the Department of Geography, Environment and Spatial Sciences, a successful and non-Zoom, year.



PHIL HATHAWAY ('70, MA)

The graduate school experience at MSU Geography laid the groundwork for a career that evolved as a first cousin to the discipline—that is, urban planning. After some early work in the field as an associate professor of Geography at Kent State University, the prior connection to Michigan and the field class experiences in my graduate school education drew me back to the familiar state where I have resided since 1975, first as a county planner, then as a community development director for the City of Owosso—it was very much about land use. My avocation specialty was brownfield redevelopment, a rewarding inclination to make abandoned properties, with full infrastructure support in place, useful again. After retirement from the city, the renewable energy field came into play, and some volunteer work on the Shiawassee River, a substantial waterway northeast of East Lansing. Together with clean-ups and association with related non-profits, a National Water Trail and State Water Trail designation followed.

While Covid stalled active association with fellow enthusiasts, I wrote a self-published book—an effort from much research and 45 years of accumulated River knowledge—entitled, History of the Shiawassee River. Geography fans of place-based narratives will gain an appreciation for a liberal arts (and some hydrology and glacial geology) education and what it might accomplish in a topic framed within a river's history. While I do not market the book much, except locally, it is sold at the [Friends of the Shiawassee River website](#) for river fans as its structure may be achievable elsewhere, to wit, some unpublished research on the Cuyahoga River and, to a lesser extent the Muskingum River, both in Ohio, while "professing" at Kent State. So a tip of the hat to MSU professors Sommers, Harmon (an eventual friend), Brunschweiler, Borgstrom, Jacobson, Boxer, Wheeler, and Kimball (Natural Resources), to name a few, for a more than adequate foundation to ply my trade. There are few regrets from that time, mostly affectionate reflection.

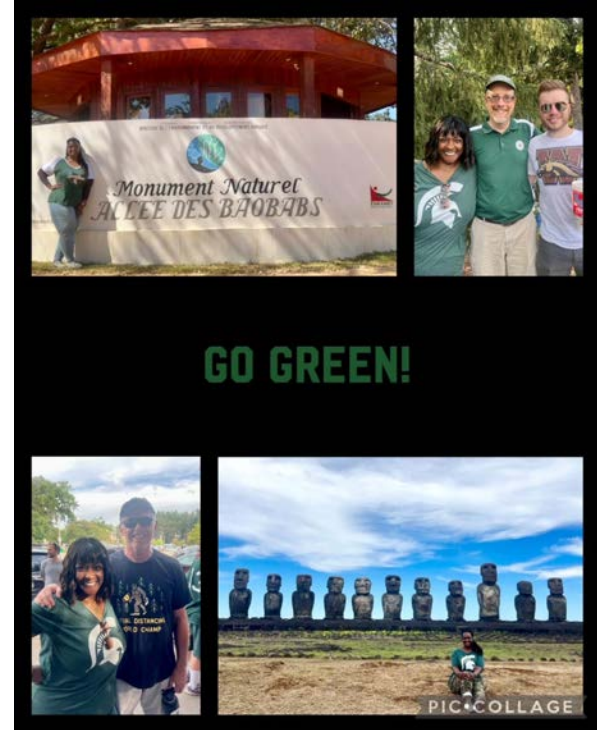


DEE JORDAN ('20, PH.D.)

Dee Jordan, MSU Geography Ph.D. alum, is a Dean's Postdoctoral Research Fellow at Harvard Medical School in the Department of Global Health and Social Medicine. As a postdoc, she co-created and co-facilitated the first Responsible Conduct for Research course on diversity, equity, and inclusion (DEI) for Harvard Medical School postdocs.

Dr. Jordan is also a candidate for a Master of Public Health in the Global Health Program at Harvard T. H. Chan School of Public Health, where she is also an Equity, Diversity, and Inclusion Fellow and received a certificate in Global Health Infectious Diseases from the Department of Immunology and Infectious Diseases.

In 2022 Dee was awarded a Burroughs Wellcome Fund Postdoctoral Diversity and Enrichment Program early independence fellowship. As a Council-member for the American Geographical Society (AGS), Dee developed the [Celebrating Black Geographers Anthology](#) hosted online by the AGS. The third installation of the anthology was released on February 1, 2023.



AARON KAMOSKE ('21, PH.D.)

Since 2020, I've had the pleasure of working at the USDA Forest Service (USFS). As the National Adaptive Management Analyst for the USFS, I serve as a lead scientist and analyst on teams responding to Agency-wide priorities such as conserving mature and old-growth forests, monitoring fuels treatment effectiveness, and providing scientifically sound information to land managers to adaptively manage and monitor our National Forests and Grasslands. While I don't get to work in the woods with a giant slingshot as often as I did at Michigan State, I still spend a lot of time finding ways to map ecosystem dynamics with remote sensing, statistical models, and geospatial technologies. I currently live in the Twin Cities of Minnesota with my wife Morgan and our cat Kirby, where we enjoy the snowy winters, cross-country skiing, abundant lakes, and getting outside in the solitude of the Northwoods.



Alumni News

DAVE E. KROMM ('64 MS, '67 PH.D.)

Greetings from Kansas! Bobbie and I had a good 2022, and we hope you enjoyed the same. Our big trip was to Durham, North Carolina, for the high school graduation of our grandson Alec. The event was held in Cameron Indoor Stadium at Duke University. Alec is now a freshman at Appalachian State University in Boone, North Carolina. Our other grandchildren include Grace, who is a doctoral student in neurology at Cambridge University; Emma, who is a third-year law student at Yale; and Ella, an undergraduate at Wellesley College. Ella was at Trinity College, Dublin, as a study abroad student for the fall term. Our North Carolina family came home for Thanksgiving, and our Boston family came to celebrate Christmas with us. Both of our two future grandsons-in-law visited Kansas for the first time.



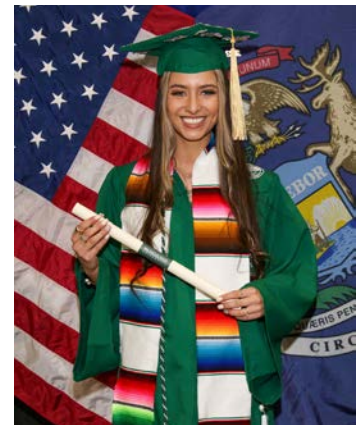
This year we look forward to the high school graduation of our grandson Matthew in Boston and the wedding of our granddaughter Emma in Vermont.

TRILBY MACDONALD ('10 BA)

I recently moved to Ypsilanti from Ann Arbor, where I work as a journalist for the Ann Arbor Observer and as a freelance grant writer for nonprofits. As a journalist, I have enjoyed writing on a diverse range of topics, but my focus is on agriculture, housing, and the nonprofit sector. As a grant writer, I raise private, corporate, and government grants for environmental and social service organizations. I have two gorgeous happy kids, Silas, 11, and Roxy, 7, and I enjoy the arts, gardening, and transforming my lawn into habitat for native plants and animals.

AVAMARIE MENDOZA ('22 BA)

Dear fellow Geography alumni, I am proud to say I finished my degree this past May 2022 and am so excited for what is ahead of me! Choosing to go into the field of Environmental Geography has opened many doors for me that I would never have thought of. Additionally, I started my own business, CluttrdMNDCreations, in late August and have since received an AutoCAD certification. I plan to continue my education this coming year by receiving a Master's degree in Landscape Architecture. My hope for the future is to join the workforce for the state of Michigan and be involved with creating greenpaces.



CHARLES RADER ('95 PH.D.)

Charles Rader retired from the University of Wisconsin-River Falls (professor emeritus) at the end of the 2020 academic year, where he taught GIS, geography, and international studies for 27 years. He served as a department chair for 13 years and coordinated and led education abroad experiences for students. He has since served as the President of the Board and Interim Executive Director of the Kinnickinnic River Land Trust in River Falls and has been working on land and water conservation, sustainability, and adaptation to climate change with the organization. He has recently stepped back to his board role only and is looking forward to spending more time canoeing, hiking, and photographing while waiting for Nancy to retire from the State of Minnesota so that they can travel more.

KEVIN MARK ROOKER ('94 BA)

I taught Geography and US History at Carrollton High School in Saginaw after graduating from MSU in 1994.

I was elected to the Saginaw Board of Education in November 2022 and currently sit on the Saginaw Historic District Commission, Saginaw Economic Development Corporation Board of Directors, the Saginaw Depot Preservation Corporation Board of Directors, and the Triangle Parks Neighborhood Association, which is part of the Cathedral District Neighborhood Association. I was an adjunct professor of theater at Saginaw Valley State University until a few years ago. My hobbies are photography, which I did professionally in the '80s and '90s, and historic building restorations, one being the Charles Lee Mansion on Washington Avenue. A major 26-year project I have finally finished is an 1893 Queen Anne Victorian located in the Cathedral District, The Wolfarth House.

I retired in 2021, which has allowed me to focus on projects that help Saginaw and my fellow citizens. I cannot imagine just sitting around. I have always been busy and involved and am looking at making an impact on my city, neighborhood, and community at large.



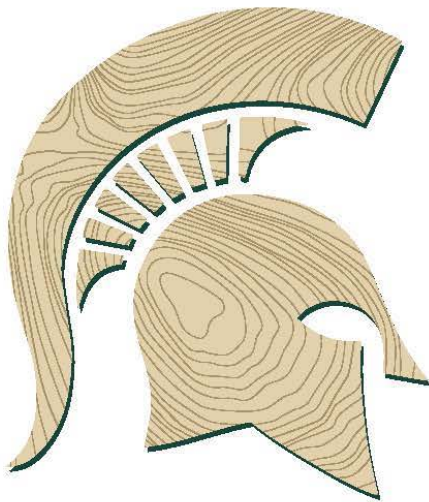
CHRISTINE SARIKAS ('12 BS)

I recently moved from Chicago to the Bay Area and accepted a new position as the Education Programs Manager at Indigo Ag. Indigo is an agriculture tech company that works with farmers to promote sustainable agriculture. These activities generate carbon credits, which are then sold to businesses aiming to reduce their carbon footprint. My work involves many skills I learned as a geography student, including GIS and remote sensing analysis. My first project is a video series called Carbon College that educates farmers and agronomists on sustainable farming practices like cover cropping and reduced tillage. I filmed on-site on farms in the Midwest and the South, hearing from farmers looking to do their part for climate change.



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Contributions

THANK YOU

To all who contributed to the various Geography Department funds and scholarships. We are making continued efforts to increase our departmental contributions to enhance our programs and benefit students. Please consider donating to one of the funds listed below.

Please specify desired fund and make checks payable to *Michigan State University*.

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Department of Geography,
Environment, and Spatial Sciences
Geography Building
673 Auditorium Rd, Rm 116
East Lansing, MI 48824

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geo.msu.edu/about/donate.html

E. James Potchen Awards in Geography for Graduate and Undergraduate Students

Established in 2008 by Harm de Blij to fund yearly cash awards for outstanding graduate and undergraduate students based on GPA, progress towards degrees, and other quality indicators such as fieldwork and research.

Geography at MSU Fund

Established in 2001 to promote the MSU Department of Geography, including related advertising, fundraising, travel, and similar expenses.

Geographic Field Experience Fund

Established in 2001 to fund student field experiences, including field trips, primary data collection, course-related field experience, transportation, and lodging expenses.

Geographic Literacy Fund

Established by Harm de Blij, this fund promotes the field of geography to students.

GTU/Geography Endowment Fund

Established in 1999 by Robert and Dorothy Thomas to fund geography-related student activities.

Harold A. "Duke" Winters Scholarship

To support graduate study in geography at MSU.

Ian Matley Memorial Fund

Established to bring guest speakers to campus to enrich the geographic education of students and faculty.

Jay R. Harman Undergraduate Scholarship in Geography

To support undergraduate study in geography at MSU.

Marjorie & Lawrence Sommers Geography Graduate Fellowship for International Research and Travel

A graduate fellowship to be awarded yearly for masters or PhD students to support international research and travel.

Michael A. Graff Dissertation Completion Award

Established by Michael Graff to provide doctoral students with additional resources for travel, data collection, materials, supplies and equipment to complete research for dissertation projects.

Owen Gregg Endowment for Global Climate Change Research

Established in 2012 to support global climate change science research in the Department of Geography.

The de Blij Geography Scholars Endowment

Established in 2013 as a scholarship to be awarded to incoming freshmen who choose to major in geography.

Spartan Geographer

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Geography Building
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