

Spartan Geographer

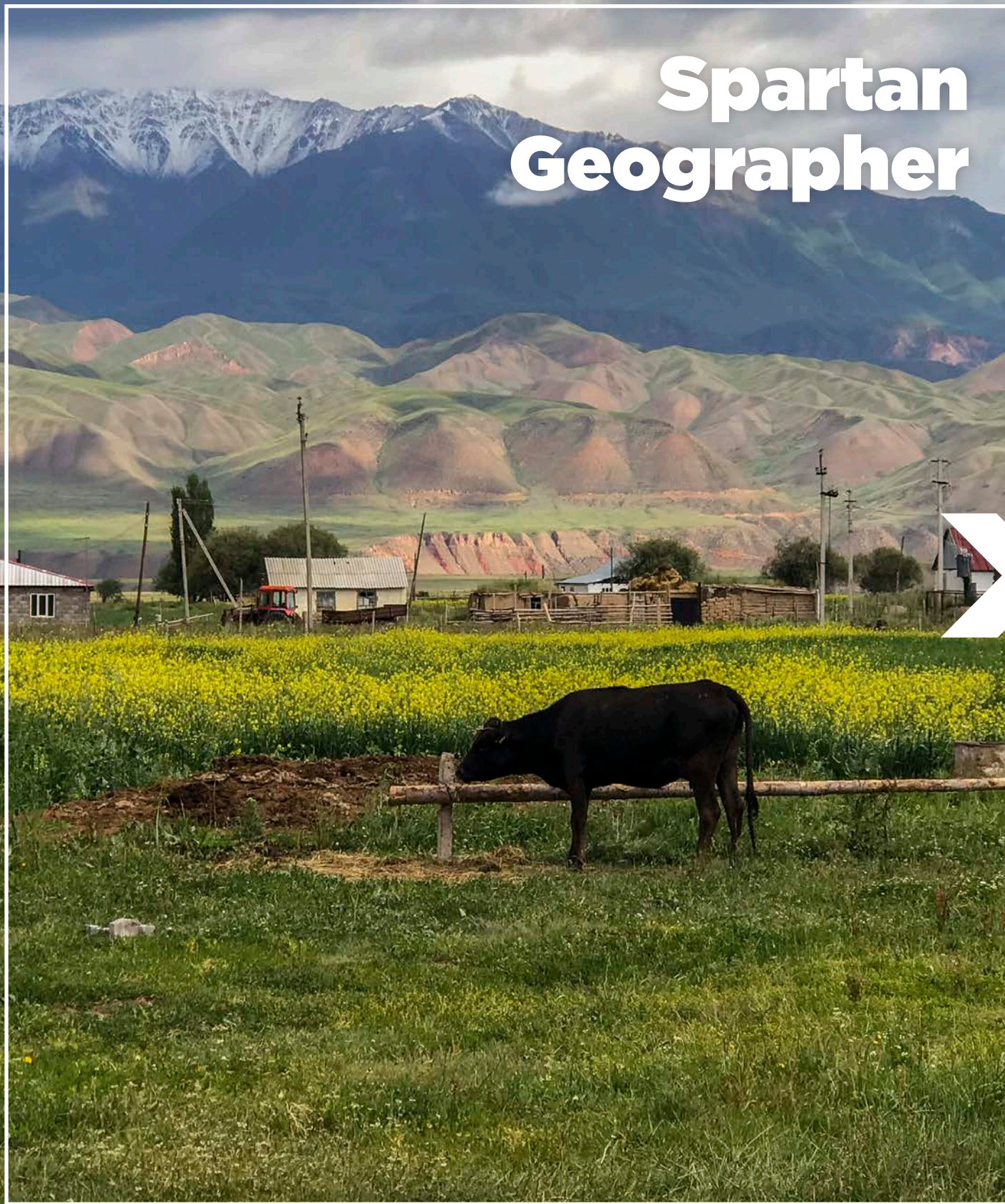


Photo by Elizabeth Mack



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

Hello Spartan Geographers!

I am excited to bring you our 2022 Newsletter and update you about the past year for the Geography Department. For the first time in a long, long while, this introduction is not being written by Professor Alan Arbogast, who stepped down as department chair after nine years. Alan is taking a well-deserved sabbatical and is working on what should be the definitive book about Michigan's famous coastal sand dunes. Details for obtaining your copy will certainly be available by next year's newsletter!

The past year has been one of hope, uncertainty, and challenge in the department, as it has across the university and around the world. Spring semester at MSU (isn't it interesting that we have no winter semester here in balmy East Lansing?) began very quietly on campus—nearly all students, staff, and faculty worked remotely, with all of our classes online due to the COVID pandemic. By the one-year anniversary of our emergency work from home order, activity did start ramping up at MSU and the Pavilion on south campus became the largest COVID vaccination site in mid-Michigan. Still, that was no substitute for the energy and excitement that we experience when Spartans are working and learning together on campus. There is nothing like the blend of social communities our campus fosters. At the end of the semester, we congratulated our 2021 MSU Geography graduates and looked forward to the summer.

For some of our faculty and students, summer was more “normal,” as field research and travel recommenced. On this cover of this issue of the *Spartan Geographer*, you can check out a striking landscape in Kyrgyzstan, where MSU geographers traveled to investigate links between climate change and agricultural sustainability in this beautiful but threatened region. Others simply enjoyed the long warm summer days here in Michigan—we appreciated them more than ever after a year of COVID.

I stepped in as department chair in August, just in time to try to help everyone navigate the excitement, trepidation, and challenge of our first semester back on campus since early 2020. Our new graduate student cohort got to participate in GEOCamp before the semester started—a three-day experience in department orientation, social connection, and field geography in northern Michigan based out of a great site on the AuSable River near Grayling. Simultaneously, students filled Snyder-Phillips, the big dorm next to the Geography building, and spilled across campus.

While learning and teaching while wearing masks was a new experience, being back in the classroom after online teaching felt great. At the same time, it was clear that we weren't “back to normal,” but were instead creating a new normal: some courses

Relations, whether social, cultural, historical, or professional, bind us together, and geography comprises the powerful mediating force in those bindings.

remained online, many in-person courses offered an online option for students who couldn't attend in-person, and many students and professors split time between the campus and working from home, as we had discovered that we could work effectively (sometimes more effectively!) off-campus. Work-life has changed, and I suspect we may not go back to an "everyone on campus all the time" model.

One change that could well be permanent is the way we hold our colloquium series. These are academic talks given several times each semester and traditionally involved a talk to a fairly small group of professors and graduate students. Since the pandemic, these have instead been delivered online, and we have invited all of our Spartan Geographers to attend. It's been a great way for alumni, friends, and others to participate in the intellectual life of the department. If you haven't yet, I encourage you to join us for a colloquium!

Despite the challenges of the pandemic, our department scholarship continues to thrive. Our faculty publish and bring in grants at high rates to support their research, and that productivity means that we remain a top-five Geography department nationwide in research. Further, our faculty regularly receive university and national recognition for their work. I am very proud to highlight in particular Professor Randy Schaeztl's Hannah Distinguished Professor award in 2021 for his career-long achievements in the field and in the classroom. Geographers pride themselves on multifaceted excellence, and Dr. Schaeztl epitomizes that. I must also recognize the critical roles our hard-working staff play: they show up every day to do the things that enable our students and faculty to advance knowledge and transform lives.

The composition of Spartan Geographers is ever-changing. Each year we welcome new students and majors and wish our graduates and retirees well. Our undergraduate student numbers remain consistent, at around 100, with many, many more who discover Geography and choose to minor in our various offerings. Geography remains a small field with great people and big opportunities. Please help get the word out to high schoolers and young adults about what Geography can offer them! Our online certificate program is an integral part of the department, and this past year the numbers in that program have exploded, from around 100 a year ago to around 200 today. I am

thrilled to see so many people joining us online and appreciate the opportunity to help them advance their careers through geospatial education.

We said goodbye to Professor Catherine Yansa at the end of last summer, who decided to seek out new opportunities and challenges outside MSU after seventeen years doing plant geography here. We wish her well and will miss her thoughtful perspectives and good humor. This coming summer Professor Joe Darden retires—he has enjoyed the longest career at MSU of any geographer, having started here as a brand new professor in 1972. I can't imagine that his record will ever be beaten. Dr. Darden's impact on urban geography scholarship is profound, especially due to his work on racial segregation, and he has educated generations of students. He also will leave an important legacy with MSU Geography's nationally recognized, and nation-leading, graduate diversity program. Longtime business manager and office supervisor Claudia Brown is also retiring later this year. She has guided us through good and bad times financially, handled the trickiest personnel issues, and epitomized "Spartans Will" by making it to the building nearly every single workday during the pandemic.

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. Diane Huhn, our communications specialist, has done an awesome job organizing and designing this newsletter, and I also wish to thank the rest of the newsletter team, Professor Liz Mack and Becky Young. I'll finish with Waldo Tobler's First Law of Geography, which he coined as something of a joke over fifty years ago, but which has been embraced by our discipline: ***everything is related to everything else, but near things are more related than distant things.*** Relations, whether social, cultural, historical, or professional, bind us together, and geography comprises the powerful mediating force in those bindings. Pandemic-induced social distancing has driven us apart geographically, and it is up to us to put in the hard work to rebuild those relations. As department chair, I am committed to that great challenge. Please reach out to connect at any time!

Sincerely,



Ashton Shortridge

Reflections

CLAUDIA BROWN

BUSINESS MANAGER

Keeping the Lights On

Greetings to all MSU Geographers near and far! I hope that you are enjoying the newest edition of the *Spartan Geographer*. It's one of the entities that has not changed much since I came to GEO in 2007.

These years have gone fast—it is already time for me to write my retirement article. I am planning to retire in September 2022, after 15 years in the MSU Geography Department. In my career, I had mostly worked in purchasing. I started at Denison University (8 years) in Granville, Ohio, as a purchasing expediter and then purchasing agent. Next, I was hired at Miami University (11.5 years) in Oxford, Ohio, to be a procurement manager specializing in purchasing computers and scientific equipment (but I also bid a lot of odd items, like nine sousaphones for the marching band). I was hired away by the Miami Zoology Department (3 years) to be the director of laboratories, which was the most like my job in the Geography Department.

Tom and I moved to East Lansing when he took a job at the Michigan Department of Transportation (MDOT) in 2001 after earning his Master's degree in Geography at Miami U. I became the purchasing supervisor at Ingham Intermediate School District (5.5 years) and was "downsized" in July, 2007. Lucky for me, that summer, Marilyn Bria retired, and I was hired here at MSU. I think mentioning Tom's Geography degree in my application did the trick!

Life around the Geography Building has really changed since the Coronavirus pandemic (COVID-19) arrived. Everyone left in March 2020, but after a few months, I came back to the building. People stop in from time to time, but mostly I see graduate students here working in a very quiet place. Oh, and Dr. Randy Schaeztl is here every day, of course. The staff returned for the fall term but left again for three weeks during "the surge." As I write this, everyone should be back on January 31.

Thanks to my three chairpersons—Drs. Dick Groop, Alan Arbogast, and Ashton Shortridge. Your support and confidence have meant the world to me. Many thanks to all the support staff while I've been here:



Sharon Ruggles, Tamsyn Mihalus, Judy Reginek, Becky Young, Ana O'Donnell, Joni Burns, Wilson Ndovie, Jim Brown, and Matt Evans. Everyone works hard. I have loved working with the faculty and many graduate students in my time here. The College of Social Science Dean's office staff has been very supportive.

In 2017, when I needed to have open heart surgery just as my husband was experiencing three extensive eye surgeries, Dr. Liz Mack rallied everyone around us, and faculty, staff, and graduate students provided evening meals for us—cooked by Geographers and hand delivered to our house—for almost two months. I can hardly describe how that made us feel--what an incredible blessing that was to both of us to have that daily visit and delicious food!

Thank you, everyone, for this wonderful place to work—I have enjoyed it. I hope that the Department can get back together and be the collegial place that it once was if this terrible scourge of COVID will ever subside. "God bless us, every one." —Tiny Tim (Charles Dickens).

Faculty Focus

JEFFREY ANDRESEN PROFESSOR

Jeff Andresen continues at MSU Geography in his three-way appointment involving research, outreach, and teaching. The broad focus of his research is the influence of weather and climate on agriculture, especially within Michigan and the Great Lakes Region. Jeff is part of a multi-institution team recently awarded a new 3-year grant from the National Institute of Food and Agriculture (NIFA) and the Agriculture and Food Research Initiative (AFRI), both under the United States Department of Agriculture (USDA). The team is charged with developing shared roadmaps of climate-informed strategies in traditional row, integrated livestock, and specialty cropping systems to enhance training and outreach throughout the Midwest. The project will amplify perspectives of Black and Indigenous communities, focus on Extension training opportunities in the areas of climate adaptation and carbon sequestration, and develop a climate curriculum for 4-H youth programming. Jeff also continues work on another USDA-funded project, “Developing and promoting water-, nutrient-, and climate-smart technologies to help agricultural systems adapt to climate and societal changes.” This project considers the development of new technologies to improve agricultural productivity in the Midwest, given recent trends towards a wetter and warmer climate.

As State Climatologist for Michigan and as an Extension Specialist with MSU Extension, Jeff is responsible for providing weather- and climate-related information and professional expertise to the university and the general public. Jeff was recently presented the Outstanding Extension Specialist of the Year award by MSU Extension for his extension and outreach programming. He continues to serve as Director of the Michigan State University-based Enviroweather system, which provides detailed weather-based information to users to support agricultural pest, production, and natural resource management-related decision-making based on a mesonetwork of 101 automated weather stations across Michigan and Wisconsin. In 2021, Enviroweather introduced a new user interface that includes several new products and applications, improved personal mobile device performance, and a dashboard feature to monitor weather conditions at sites of interest. A key partner in the development of the new interface is MSU Geography’s Center for Remote Sensing and GIS. The system is available for free public access at enviroweather.msu.edu.

Jeff also serves as co-PI in the NOAA-sponsored Great Lakes Integrated Sciences Assessment (GLISA), a partnership between Michigan State University and the University of Michigan and one of 11 NOAA regional science assessment centers. In late 2021, GLISA was awarded \$5.4



million from the National Oceanic and Atmospheric Administration to continue their study of climate change and variability risks in the larger Great Lakes region for the next five years. The two overarching goals of GLISA are to contribute to the long-term sustainability of the region in the face of a changing climate and to facilitate informed decision-making backed by scientific knowledge.

In 2021, Jeff accepted an invitation to be a contributing author in the upcoming Fifth National Climate Assessment (NCA5), due to be released in 2023. The NCA5 is a congressionally-mandated activity of the U.S. Global Change Research Program charged with the regular analysis of the impacts of global change in the United States. Jeff’s primary role in the project will be assessment of the projected impacts of climate change on agriculture in the Midwestern USA.

Jeff teaches his GEO 402 agricultural climatology course and a world regional climatology course GEO 302 “Climates of the World”. He currently serves as advisor to Ph.D. student William “B.J.” Baule. B.J.’s thesis research considers the influence of historical and projected future climate on corn production in the Midwestern USA, particularly the leaching of nitrogen fertilizer. Former M.S. Student Diane Wang (co-advised with Dr. Sharon Zhong) successfully completed her program in 2021, studying the frequency and severity of spring freeze events on tree fruit production in the Great Lakes region. She is now a research assistant and Ph.D. Candidate in the Department of Civil and Environmental Engineering at the University of California, Davis.

Best Wishes for a Happy, Healthy, Prosperous, and Productive 2022 and Go Green!

SUE GRADY

ASSOCIATE PROFESSOR

Greetings from our Health and Medical Geography Lab. This year was busy with research on COVID-19, environmental health projects, as well as ongoing studies on maternal health, adverse birth outcomes and infant mortality. Colleagues Arika Ligmann-Zielinska and Raechel Portelli and I received an award from the College of Social Science to investigate SARS-Cov-2 transmission in the United States. This funding generated two research papers on lessons learned in the first ten weeks of the pandemic (24-May to 26-July 2020) prior to the rise in natural and vaccine-induced herd immunity to inform future public health and health care responses to SARS-CoV variants. The first paper focused on COVID-19 deaths in nursing homes, where a majority of deaths among older people occurred early in the pandemic. Nursing homes have an enormous responsibility to protect elderly residents from SARS-CoV infections, and we hope that our recommendations will inform nursing homes to remain safe in the future.

The second paper conducted a spatio-temporal analysis of risk factors for COVID-19 diffusion across the United States. We showed that from epi-centers in the Northeast and Midwest, COVID-19 diffused across the South to the Southwest and into the Northwest. The paper is intended to further encourage timely communication of lessons learned between regional Health and Human Services offices to prevent SARS-CoV variant diffusion in the future.

In regards to environmental health projects, Qiong Zhang and Amanda Kreuze graduated with their Ph.D.'s this year! Dr. Zhang's research was on haze pollution in her hometown, Xianyang City, China, and its effect on maternal and infant health. Dr. Kreuze's research utilized an indicator developed by the U.S. EPA to investigate pollutant effects on maternal and infant health in Michigan. Both studies have advanced research on low-birth-weight, preterm birth and lethal congenital defects.

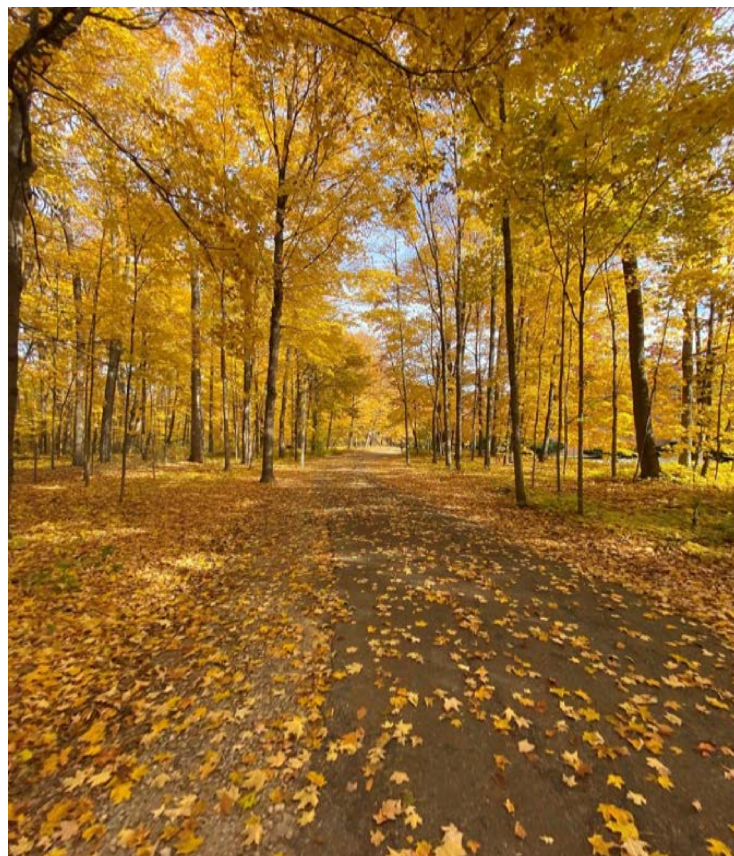
I am also working with Angie Sanchez, a Ph.D. student who came to us with the vision to improve breastfeeding among Indigenous mothers in Michigan. We received a grant from the Michigan Health Endowment Fund to implement breastfeeding training in six tribal communities that will begin next month! Angie's goal is to bring back the lost practice of breastfeeding to improve the health and wellbeing of Indigenous mothers, infants and families.

I would also like to acknowledge the excellent work of Ana Rivera, a Ph.D. Candidate focusing on urban heat and population vulnerability and health in Monterrey, Mexico, and Nicole Dear, a Ph.D. student who is new to our lab and is off to an amazing start advancing research on racial residential segregation and racial

disparities in health. These excellent students are dedicated to advancing the field of health and medical geography.

On the teaching front... to enhance wellbeing during the drudgery of the COVID-19 pandemic, I asked the students in my classes to practice a little Spartan Spirit by taking pictures for Fall and Winter Campus Photo Contests! It got everyone outside, great talent emerged, and the beauty of the photos gave us joy!

On the service front...as Associate Editor for *Spatial and Spatio-temporal Epidemiology*, I decided after ten years of service to transition to the Editorial Board. I am looking forward to this new experience. Finally, as we move forward into a new year, I wish all of our *Spartan Geographer* readers all the best! Stay well, and Go, Spartans!



Shawn Murray - Undergraduate Program in Environmental Geography: Fall Campus Photo Contest (GEO435 Fall 2021)

Faculty Focus

SHARON ZHONG

PROFESSOR

Hello Fellow Spartan Geographers,

This past year, I taught Introduction to Meteorology, both in the spring and the fall. Although I have grown accustomed to remote teaching and have settled into the land of Zoom, I have really missed getting to interact with students face-to-face, as teaching was what drove me to switch from being a senior scientist at the Department of Energy's (DOE) Pacific Northwestern National Laboratory to being a professor. Compared to many of my colleagues who had to adjust to online teaching in a short time frame, I was fortunate to have an online version of this course already available. The online Introduction to Meteorology course was developed a decade ago by the onGeo team based on my teaching notes at that time, and since then, it has been taught every summer and some years in the spring by graduate teaching assistants. Teaching the online version for the first time gave me an opportunity to revisit and update the course. I would like to give a shout-out to Beth Weisenborn, our onGEO director, for her support and to my students who showed resilience and encouragement as we navigated a second year of remote learning together.

Outside teaching, I continued my research in the area of fire-atmospheric interactions and smoke transport and dispersion. We wrapped up a five-year project titled "Multi-scale analyses of wildland fire combustion processes in open-canopied forests using coupled and iteratively informed laboratory-, field-, and model-based approaches," for which I was a co-PI. The project, which was funded by the Department of Defense (DOD) Strategic Environmental Research and Development Program (SERDP) and led by Dr. Nicholas Skowronski of the Forest Service Northern Research Station, combines field studies, laboratory experiment and numerical modeling to quantify how variability in fuel characteristics and atmospheric conditions interact to drive fire behavior during prescribed burns. Our research group, consisting of Dr. Mike Kiefer and graduate students McKenzie Kulseth, Joey Seitz, and Ting (Diane) Wang (co-advised with Dr. Jeff Andresen), worked closely with scientists from the US Forest Service (Dr. Warren Heilman and Dr. Joseph Charney, in particular) and from several other institutions involved in the project, including the University of Notre Dame, Rochester Institute



of Technology, Worcester Polytechnic Institute and University of Edinburgh. Our contributions involved data analyses and numerical modeling of small- and management-scale prescribed burn cases to describe and understand turbulent heat and momentum transfer between the combustion zone and the atmosphere above. The outcome will improve the understanding of, and the ability to accurately predict, fire behavior under a wide range of management scenarios. The project earned the 2021 Project of the Year Award by the SERDP Resource Conservation and Resiliency program, which has 119 active projects and 219 completed projects listed on its website. Near the end of the project, we said farewell to McKenzie, who moved to St. Paul, Minnesota, and joined a tech company there, and to Diane, who started her pursuit for a Ph.D. in Environmental Engineering at U.C. Davis.

I also continued my long-time collaboration with Dr. Lejiang Yu of the Polar Research Institute of China and Dr. Timo Vihma of the Finnish Meteorological Institute to explore the role of atmospheric circulations play in sea ice variability in polar regions. Over the past four decades, sea ice extent has shown a significant declining trend across the Arctic, but regionally variable and an overall increasing trend in the Antarctic. Our work, which focused on identifying factors in the climate system that might have

New Faculty

contributed to this opposite trend in polar sea ice, helped elucidate how the dynamic and thermodynamic effects of anomalous atmospheric circulations triggered by sea surface temperature anomalies at lower latitudes have contributed to polar sea ice variability on different time scales.

In addition to fire and sea ice, I have also been drawn to research projects related to climate impact on agriculture. I enjoyed co-advising Diane Wang with my colleague Dr. Jeff Andresen. Together, we analyzed long-term climate data in combination with crop modeling to look at spring freeze events and their impact on perennial tree fruit crops across central and eastern United States. I also enjoyed working on a Plant Resilience Institute seed grant project with my colleague Dr. Julie Winkler and a small group of former and current graduate and undergraduate students to examine the vulnerability of potato production to climate extremes.

Travel restrictions allowed me to spend more time reading papers and providing reviews for various journals, which earned me the Editor's Award for the *Journal of Applied Meteorology and Climatology* published by the American Meteorological Society. Finally, I was able to enjoy some family time with my husband and two daughters, highlighted by a road trip to Maine during the summer. We had fun visiting national parks and the Maine Botanical Garden, picking strawberries, walking on the beaches, and, of course, no trip to Maine is complete without lobster rolls. Back in Michigan, we discovered many hidden trails. We also made numerous trips to the MSU Horticulture Demonstration Garden, learning the names of plants and enjoying the spectacular display of the perennial collection, particularly the extensive rose collection. We also rediscovered the Clarence E. Lewis Landscape Arboretum and were truly inspired by the fascinating world of trees every time we went there.

I hope that 2022 is a healthier, happier, less restrictive, and more productive year for all of us than these last two years have been. Take care.

SANDY MARQUART-PYATT PROFESSOR



We are pleased to welcome Dr. Sandy Marquart-Pyatt to the Department of Geography, Environment and Spatial Sciences. Dr. Marquart-Pyatt is not new to Michigan State University, having joined the University in 2009. She most recently served as Professor of Sociology. Dr. Marquart-Pyatt joined the Geography Department in the fall and shares a joint appointment in the Department of Political Science.

She earned her Ph.D. at Ohio State University and studies nature-society connections, public opinion and behavior, and methodology. Her current work investigates climate change, environmental attitudes and behavior, environmental policy and decision-making, and the spatial distribution of environmental concerns and environmental challenges. Dr. Marquart-Pyatt is lead investigator of a multi-state, panel survey of agricultural producers in the Upper Midwest of the US. She has methodological interests in structural equation modeling, multilevel/hierarchical modeling, panel models, and survey methodology.

Welcome Dr. Sandy Marquart-Pyatt!

LEO ZULU

ASSOCIATE PROFESSOR

The COVID-19 pandemic forced me to continue adjusting my research, teaching, and outreach to a new reality. For teaching, this means adjusting to the world of Zoom. I taught the graduate Seminar in Human-Environment Geography (GEO 873), World Regional Geography (GEO 210), and Geography of Africa (GEO 338). Remote teaching reduced the level of crucial in-person interaction but also brought new tools, a more organized and structured weekly routine, and ease in administering some assignments and exams. And a lot of paper and trees were saved! I was both relieved and anxious to return to in-person teaching in Fall 2021 after nearly two years of remote teaching. I was glad to restart in-person teaching with a small course (GEO 338) in yet another adjustment, this time to in-person teaching during a pandemic. I tip my hat to the students and their adaptability to learning under the toughest of conditions and for providing some creative suggestions to accommodate them and enhance learning. My two Ph.D. students graduated, and I continued to serve on advisory committees of five other Ph.D. students within and outside the department and supervising a Master's student and a postdoctoral fellow.

I continued research activities on nature-society interactions and health geography focusing on Sub-Saharan Africa, but the pandemic disrupted new data collection. I mainly analyzed previously collected data and writing, collaborations, and Ph.D. dissertation work, particularly on decentralized natural resources governance, forest landscape restoration, agroecological and agriculture sustainability, and livelihoods and international development. In Malawi and Ghana, the research reflects my new and growing global interest in youth and rural development. I built on a completed 4-year project funded by the British International Development Agency on developing and customizing indicators for gender and youth inclusion in sustainable agriculture intensification (SAI). Working with Ph.D. student Ida Djenontin, I engaged the new paradigm of forest landscape restoration (FLR) in Africa using the case of Malawi and mixed methods—social surveys, qualitative methods, game theory, and agent-based modeling (ABM).

The research investigated individual and collective smallholder farmer decision-making processes in FLR practices and their impacts on restoration intensity and land cover. It also investigated suitable pluralistic governance systems to implement FLR.

Working with Judith Namanya on her dissertation research, we studied social-structural drivers of persistently high new cases of HIV/AIDs among young women in northwestern Uganda relative to other demographics and gains in treatment and reduced deaths.



The pandemic, however, has disrupted data collection on a new project, Energy Security for Sustainability Livelihoods in Eastern and Southern Africa, which examines household energy choices and the acceptability and scalability of a micro-gasifier wood-pellet stove that doubles the thermal efficiency of current charcoal stoves. The funder for this work is the MSU Alliance for African Partnerships. Widespread adoption of this stove could reduce firewood and charcoal use and deforestation. Data collection resumed December 2021. I look forward to completing this project.

I am also working on sustainable biomass energy and natural resources management among tobacco farmers in Malawi, with Dr. Junice Dzonzi, a postdoctoral fellow from Malawi's Lilongwe University of Agriculture and Natural Resources under the MSU Alliance for African Partnership, [AAP African Futures Research Leadership Program](#). Dr. Dzonzi will be here for a year, having arrived in June 2021, and some of you might have bumped into her.

Finally, I congratulate my Ph.D. students, now Dr. Judith Namanya and Dr. Ida Djenontin, on graduating last fall and spring. I enjoyed working with them immensely. I am confident they will do great work, and I wish them success in their future endeavors. For now, I look forward to the end of this pandemic and a return to normalcy.

SICHENG WANG

POSTDOCTORAL RESEARCH
ASSOCIATE

My name is Sicheng Wang. I received my Ph.D. from Rutgers University and joined the MSU Department of Geography, Environment, and Spatial Sciences in July 2021 as a postdoctoral research associate. I have a very international and interdisciplinary background. I taught GIScience courses as an instructor in the Department of Geography at the University of South Carolina. Before pursuing my Ph.D., I worked as an urban planner and designer for seven years in China. My current research and career focus on the social, environmental, and economic issues related to emerging transportation technologies, such as automated and connected vehicles, mobility-as-a-service, shared mobility, and micro-mobility. I am passionate about contributing my research to a more sustainable, equitable, and resilient transportation system in the age of information.

At MSU, I am working with Dr. Elizabeth Mack on the National Science Foundation (NSF) project

“Prepare for the Future Workforce for the Era of Automated Vehicles” (WEAVE). I have received tremendous support from my supervisor, colleagues, and students in the Department. I am grateful that I started my first academic job in such a supportive, inclusive, diverse, and friendly place, especially during this challenging time of the pandemic. I wish I could know more people in the Department in the future.

The year 2021 was fruitful. I published five peer-reviewed articles, presented at five conferences, and won the Karen Polenske Best Student Paper Award, the THNS Resilient City and Transport Forum Best Research Gold Award. My dissertation was selected as a finalist of the Best Thesis Award of the 2021 World Symposium on Transport and Land Use Research.

My wife and I are welcoming our first baby this spring. I am super excited to become a father for the first time. I wish that my wife and baby are safe, healthy, and happy. I also hope everyone in the Department has a peaceful and prosperous new year of 2022.

JONI BURNS

ACADEMIC PROGRAM COORDINATOR | GEOGRAPHY GRADUATE PROGRAMS

We are pleased to welcome Joni Burns to the Department of Geography, Environment and Spatial Sciences. Prior to joining the Geography Department in March 2021, Joni worked at MSU in the College of Education for a number of years. She enjoys traveling with her family. Joni is also a proud MSU Alumna. Next time you're on campus, stop by and say hello. Throughout the pandemic, Joni has been a consistent, friendly face in the Geography building to help our graduate students navigate the ins and outs of the MSU academic records process. Welcome, Joni!



Reese Dresch - Undergraduate Program in Human Geography: Winter Campus Photo Contest GEO235 Spring 2022 Semester

Honors & Awards

RANDALL SCHAEZL

UNIVERSITY DISTINGUISHED PROFESSOR

Typically, MSU's Board of Trustees awards the title of University Distinguished Professor biennially to 10 faculty members across campus. Winners are recognized for their "exceptional teaching abilities, prominent record of public service, and scholarly, creative and artistic achievements". In the Fall of 2021, Dr. Randy Schaetzl was given this prestigious award. The title of University Distinguished Professor is permanent for the duration of a recipient's service at MSU, and according to MSU, is "one of the highest honors that can be bestowed to a faculty member by the university." Geography at MSU has had only one past winner of this award—John Hunter in 1990.

Deeming it a dream come true, Randy gratefully accepted the award at a November ceremony on campus, surrounded by his family. Randy thanks Dr. Alan Arbogast, who served as his nominator, and the five colleagues from around the nation who wrote letters in support of this award. Without question, three decades of unwavering support from family and colleagues, along with a cadre of exceptional students, made such a distinction possible. Past GEO Chairpersons Gary Manson, Judy Olson, Rene Hinojosa, Dick Groop, and Alan Arbogast have all been very supportive of the "soils guy" in the unit, including building the geomorphology lab and purchasing the backhoe that have been so instrumental in Randy's research program.

Geography at MSU has been a friendly, cordial, and positive environment in which to work. As the saying goes, if you enjoy your job, then it's not work. And that is how Randy summarizes his career thus far, at MSU, which has now culminated in this distinction.



University Distinguished Professor Randall Schaetzl and MSU Provost Teresa K. Woodruff.



WKAR VIDEO SPOTLIGHT RANDALL SCHAEZL

Each year WKAR Public Media, part of Michigan State University Broadcasting Services, a division of the MSU College of Communication Arts & Sciences, puts together a video feature in recognition of the achievement of each newly appointed University Distinguished Professor. Please click [here](#) to view the video spotlight for University Distinguished Professor Randall Schaetzl.

KYLA DAHLIN

NATIONAL SCIENCE FOUNDATION EARLY CAREER AWARD

Congratulations to Dr. Kyla Dahlin on being awarded an NSF Early Career Development Program award. Among the NSF's most prestigious, such CAREER awards support early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization. Under this nearly \$1.2M grant, Dahlin will lead research that takes a new approach to unravel the challenge of measuring carbon uptake, especially at large scales. Combining historical data from satellites, new data from airborne sensors, and computer modeling, they plan to map forest carbon uptake in eastern U.S. forests. The award will enable Dahlin to understand how past disturbances influence carbon uptake in forest ecosystems while strengthening her leadership in her field. The award develops the concept of 'disturbance syndromes,' suggesting that patterns of response to disturbances may be similar over time, even among diverse ecosystems. "Our current estimates of carbon uptake by plants are solid at really fine, plant scales and at really coarse, global scales," said Dahlin. "But when we think about landscape and regional scales, where most management decisions are made, we just haven't had the mechanistic understanding of how disturbance, environmental gradients, and plant diversity connect in order to predict the amount of carbon that can be absorbed. This award will help us to close that gap."



JOE DARDEN

COLLEGE OF SOCIAL SCIENCE DIVERSITY CHAMPION

Congratulations to Dr. Joe Darden on being named a Diversity Champion by the College of Social Science at Michigan State University. Dr. Darden has been a beloved and integral member of MSU's faculty for over 40 years. A professor in the Department of Geography, Environment and Spatial Sciences, Dr. Darden has authored 8 books, won countless awards, and earned international recognition for his work as a geographer. These awards include the MSU Distinguished Faculty Award (1984), Fulbright Scholar Award (1997), and American Association of Geographers (AAG) Lifetime Achievement Award (2019)—to name just a few. He also fought for a policy to admit and support more underrepresented graduate students of color within the Geography department, which was passed in 2018. Reflecting on his career, Dr. Darden said, "First of all, I'd like to say that my career has been enhanced by the fact that Michigan State University is, and has been, a very good place to work." Dr. Darden's research focuses on the impact, causes, and solutions for racial residential segregation.



Honors & Awards

JIQUAN CHEN

FULBRIGHT GLOBAL SCHOLAR

Congratulations to Dr. Jiquan Chen on being named one of the 18 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, Germany, from where he outreached to other labs by giving guest lectures and research seminars or organizing informal round table discussions, including the Leibniz Institute of Agricultural Development in Transition Economies (IAMO), German Centre for Integrative Biodiversity Research (iDiv), Max Planck Institute for Biogeochemistry in Jena, and Georg-August University in Goettingen, and Swedish University of Agricultural Sciences. Joint efforts for future collaborations for education and research were discussed and continued 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 for a local group of more than 20 elders.



Dr. Chen visiting Halle, Germany with his Tai Chi students.

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 third year consecutive year that Dr. Roy has received this distinction. The Highly Cited Researchers list is produced each year by the Institute for Scientific Information (ISI) at Clarivate.

The list identifies scientists and social scientists who have demonstrated significant and broad influence, reflected in the publication of multiple papers frequently cited by their peers during the last decade. These highly cited papers rank in the top 1% by citations for a field or fields and publication year in the Web of Science. Dr. Roy is one of only 11 MSU faculty to be listed on the 2021 Highly Cited Researchers List.



NATHAN MOORE

OUTSTANDING FACULTY MENTOR

Congratulations to Dr. Nathan Moore, associate professor and graduate program director, for receiving The Outstanding Faculty Mentor Award for a senior faculty member. The Graduate School Mentoring Awards recognize graduate programs, faculty mentors, and doctoral students whose practice exemplifies the foundational values for graduate student and faculty mentoring relationships and who make exceptional efforts to sustain the rights and fulfill the responsibilities outlined in the “MSU Guidelines for Graduate Student Mentoring and Advising.”

With a clear acknowledgment of the strength of this year’s nominees, the members of the awards committee independently ranked Dr. Moore at the top of this exceptional group. His nomination was put forward by many current and former graduate students, offering testimonials illustrating his strong support for them across a wide range of situations and issues. There is evidence of effectiveness, compassion, and empathy in Moore’s mentoring engagements, and the testimonials reveal the presence of an extraordinary and universal high level of trust from the students. His advisees speak to his commitment to their professional and personal development: his “defining trait is fearless encouragement,” and he “cares about the whole student as an intellectual . . . and as a person.”



ROBERT GOODWIN

JACK BRESLIN DISTINGUISHED STAFF AWARD

Please join us in congratulating Robert Goodwin on receiving a Jack Breslin Distinguished Staff Award. Goodwin is a Senior Geospatial Analyst with the RS&GIS Research and Outreach Services, a unit that serves as the point of contact for geospatial technology services at Michigan State University. On the team, Goodwin authorizes outreach project proposals and budgets, is the lead trainer for workshops offered by the department, a regular consultant to the University, and a manager of analysts, technicians, and developers.

The Jack Breslin Distinguished Staff Awards honor six University support staff members annually. These individuals are nominated by their colleagues as demonstrating the qualities of Jack Breslin, who served MSU as a student leader, honored athlete, top administrator, and steadfast advocate, personifying the “Spartan Spirit.” Award honorees display overall excellence in job performance, supportive attitude, and contributions to their unit and the University.



Honors & Awards

JUDY OLSON

AMERICAN ASSOCIATION OF GEOGRAPHER FELLOW

Congratulations to past Department Chair and Professor Emerita Dr. Judy Olson on being named a 2021 Fellow by the American Association of Geographers (AAG). The AAG Fellows program recognizes geographers who have made significant contributions to advancing geography.

Dr. Olson's career has been highly distinguished as a leader in cartographic research, especially in the fields of quantitative mapping, cognitive cartography, inclusive design, and her explicit focus on improving access to cartographic information for people with disabilities.

Dr. Olson has also been widely recognized for her teaching and mentoring, as well as her scholarship and teaching cartography. She is noted for the breadth of her leadership roles in the discipline, both as the first (and still only) female Geography Department Chair at Michigan State University. She also served as AAG Vice President, President, and Past President (1994-97), on the AAG Cartography Specialty Group, on several AAG committees at the national and regional levels, as well as in the leadership of the International Cartographic Association. Throughout her career, Olson has been an advocate for and selfless mentor to women in geography.

In addition to honoring geographers, AAG Fellows serve the AAG by contributing to AAG initiatives, advising on AAG strategic directions and grand challenges, serving on AAG task forces or committees, and/or by mentoring early and mid-career faculty. Similar to other scientific organizations, the honorary title of AAG Fellow is conferred for life. Once designated, AAG Fellows remain part of this ever-growing advisory body.



JEN FRY

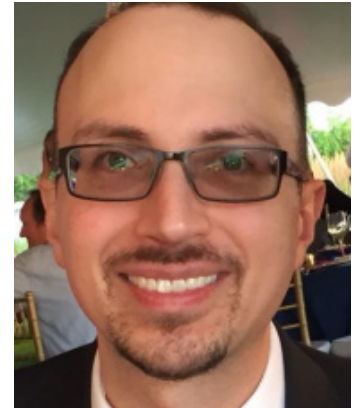
SPORTS ILLUSTRATED 100 INFLUENTIAL BLACK WOMEN IN SPORTS

Congratulations to Spartan Geographer and veteran volleyball coach Jen Fry on being spotlighted by [Sports Illustrated](#) as one of 100 Influential Black Women in Sports. Fry was featured as part of Elle-evate: 100 Influential Black Women in Sports, a series initiated by Sports Illustrated and Empower Onyx that spotlights the diverse journeys of Black women across sports—from veteran athletes to up-and-coming stars, coaches, and executives, among others. In addition to being a Ph.D. student in the Department focusing on sports geography, specifically the racial experiences of professional Black volleyball players in Europe, Fry is a social-justice educator and owner and CEO of her educational support and consulting firm, [JenFryTalks](#).



SHARON ZHONG & MICHAEL KIEFER PROJECT OF THE YEAR

A research project for which Dr. Sharon Zhong has served as a co-PI and Michael Kiefer as a senior personnel member was named a 2021 Resource Conservation and Resiliency Project of the Year by the Department of Defense Strategic Environmental Research and Development Program (SERDP). The project titled “Multi-scale Analyses of Wildland Fire Combustion Processes in Open-canopied Forests using Coupled and Iteratively Informed Laboratory-, Field-, and Model-based Approaches” has been led by Dr. Nicholas Skowronski of the U.S. Forest Service. It combines field studies, laboratory experiments, and numerical modeling to quantify how variability in fuel characteristics and atmospheric conditions interact to drive fire behavior during prescribed burns. The outcome will improve the understanding of, and the ability to accurately predict, fire behavior under a wide range of management scenarios. The SERDP and Environmental Security Technology Certification Program (ESTCP) Project of the Year awards honor significant research and demonstration achievements in addressing the Department of Defense’s environmental and installation energy challenges. Congratulations to Drs. Zhong, Kiefer, and Skowronski!



VEDA HAWKINS OUTSTANDING ADVISING ADMINISTRATOR AWARD

Congratulations to Veda Hawkins, Geography Ph.D. student and Assistant Director of Academic and Student Affairs within the Michigan State University College of Social Science, on receiving the 2021 MSU Outstanding Advising Administrator Award. This university-wide award recognizes advising staff who demonstrate the utmost commitment and exceptionalism towards students and the overall Spartan community. By positioning students in the center of her work, Hawkins exemplifies what it means to be a Spartan advisor and is more than worthy of university-wide recognition. In addition to Hawkins’s role helping students in the College’s Office of Student Affairs, she is also a student herself. Currently, she is pursuing a Ph.D. through the MSU Department of Geography, Environment and Spatial Science, and working on her dissertation entitled “From neighborhood and high school to a four-year degree and beyond: mapping progress at a predominantly white institution for Black students of Metro Detroit.”



2021 GEO Awards

The Department of Geography, Environment, and Spatial Sciences
PRESENTS

20 GEO AWARD RECIPIENTS 21

Recognizing Student Academic Achievement



Donald Akanga



Benjamin Andrews



Dalton Castle



Gracyn Freund



Raven Mitchell



Lewis Pontz



Pietro Sciusco



Ryan Snider

The Department of Geography, Environment, and Spatial Sciences at Michigan State University offers a hearty congratulations to all of our 2021 GEO Award recipients recognizing student academic achievement.

College of Social Science | Outstanding Senior in GEO | Ryan Snider

Ryan Snider hails from South Lyon, Michigan. He will be graduating this spring with a BS in Geographic Information Science and a minor in The City: Environment, Design, and Society. Ryan's interest in geography comes from his love of both maps and traveling. He loves exploring and understanding the interaction between the natural and human world and believes his degree will allow him to continue to explore these relations and understand them. Ryan has been an integral member of the GEO Club. His favorite memory with the Geography Department was the opportunity to research historic sites on the Great Lakes and understand which may be vulnerable to rising lake levels. His favorite GEO professor is Ashton Shortridge. Ryan really enjoyed GEO 425, taught by Shortridge, because it allowed him to really see the potential and use of GIS to solve the world's problems in a very fun and interesting way. Congratulations, Ryan!

The de Blij Geography Scholars | Gracyn Freund and Lewis Pontz

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.

Gracyn Freund is majoring in environmental geography with a concentration in atmospheric and climate science. At Michigan State University, she is working hard towards her goals to be employed at NASA or to become a meteorologist one day. Congratulations, Gracyn!

Lewis Pontz is focusing on fulfilling his dream of pursuing the atmospheric sciences to become a meteorologist. His goal is to work for NOAA and use the knowledge he is obtaining from MSU. Congratulations, Lewis!

Daniel Jacobson Memorial Scholarship in Cultural Geography | Dalton Castle

Dalton Castle is an undergraduate student in the Department. Dalton expressed that he was honored to even be considered for this award and is incredibly appreciative to have received it. He wishes to thank all of those who have supported him, including his friends, family, and Michigan State University. Congratulations, Dalton!

Owen Gregg Endowment for Global Climate Change Research | Pietro Sciusco

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. Pietro Sciusco is a PhD student in the Department and has received the Gregg award for two years in a row. Pietro is grateful for this award and believes this recognition is an example of the great support from the Department as it stimulates his professional and intellectual growth. He believes the current academic year looks promising, and he plans to use the award to keep making further contributions to the scientific world in terms of global climate change. Congratulations, Pietro!

James Potchen Awards in Geography for Graduate and Undergraduate Students (Undergraduate and Graduate Student of the Year) | Benjamin Andrews and Raven Mitchell

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.

Raven Mitchell is a second-year PhD student in the Department. Raven is honored to be the recipient of the E. James Potchen Award. Since coming to MSU, she says it has been a joy to be embraced as a member of the geography community, and she looks forward to years of continued involvement and activity within the Department as she progresses through the PhD program. Congratulations, Raven!

Benjamin Andrews will be graduating this spring. They are very grateful and honored to have been nominated and selected for the Potchen award. Benjamin believes that working with the students and faculty of the Department has been a phenomenal learning experience and opportunity to build meaningful connections. They are looking forward to applying this award as they begin their next endeavor this fall--graduate school at the University of North Carolina. Congratulations, Benjamin!

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

The Marjorie and Lawrence Sommers Geography Graduate Fellowship is awarded annually for Masters or Ph.D. students to support international research and travel within the next 12 months. Donald Akanga is a PhD student in the Department. Donald is very excited to have been awarded the Marjorie and Lawrence Sommers Geography Graduate Fellowship for International Research & Travel. He believes the award will contribute to the success of his dissertation research by defraying some of the fieldwork expenses to the Greater Mau Forest Complex Ecosystem (GMFCE), Kenya. The primary data he is collecting will assess the efficacy of remote sensing and machine learning techniques as well as unravel subtle nuances in examining the nexus between land-use land-cover dynamics, climate change, and sustainable livelihoods. Congratulations, Donald!

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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.

Graduate News



MICHELLE BULLOCK

When I sat down with my adviser and asked about researching a natural disaster for my thesis, he immediately mentioned the Bhola Cyclone. As a human geographer, understanding this natural disaster's political and social ramifications, not to mention its role as one of the precursors to a civil war, remains vital to understanding international relations in the area even today. The cyclone was also one of the first large-scale international relief efforts. I am researching the different forms of aid provided to the people after the cyclone. Emergency, short-term relief efforts provided food, water purification, and shelter to people within the hardest-hit areas. Medium-term efforts provided agricultural aid to see the agrarian society through until the next harvest. Long-term aid sought to build cyclone shelters and warning systems to prevent another disaster of this magnitude. These efforts required extensive coordination across

dozens of countries. For my thesis, I am researching the main actors of each stage of relief, the geopolitical climate shaping how they interacted with one another and mapping the agricultural relief efforts.



MEHMET EROĞLU

Mehmet Eroğlu is a Ph.D. student in the Department of Geography, Environment, and Spatial Sciences at Michigan State University. He joined the Geography program in the Fall of 2021 as a Fulbright scholar. Prior to MSU, he received his B.S. in Geomatics Engineering and his M.S. in Science, Technology, and Society at Istanbul Technical University (Istanbul, Turkey). In his master's thesis, Mehmet examined climate change policymaking processes in Turkey through two major cities, Istanbul and Izmir. At the moment, his research focuses on historical and political geography. More precisely, he studies how the decline in the coal industry affects historical coal cities spatially, politically, economically, and culturally.



GABRIELA SHIRKEY

I juggle research topics at the intersection of ecosystem function, renewable energy and socio-ecological systems. As a fellow of MSU's Environmental Science and Public Policy program and the National Science Foundation's Graduate Research Program, I aim to increase the understanding of how human activity impacts ecosystem processes in agricultural landscapes. Additionally, I organize 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. If I'm not working on my dissertation, you'll find me jamming with my Derby team Grand Raggidy, fly fishing, or sampling the many restaurants in Grand Rapids.



MICHAELA SHOPE

Michaela Shope is a graduate student in the Geography program at Michigan State University. She received her undergraduate degrees in Biology (Conservation Biology and Ecology) and Interdisciplinary Studies (Homeland Security and Philosophy) from Arizona State University. During her time at ASU, Michaela worked as part of a team reviewing the International Union for Conservation of Nature (IUCN) Red List assessments of the world's marine eel species and was able to go to the Philippines as part of a National Science Foundation (NSF) Research Experience for undergraduates, where she worked on marine debris surveys and water sampling. Though her research experience to date has largely been marine-based, her passions are tropical rain forests and fields.

VASILY TOLMANOV

HOW I SPENT MY SUMMER VACATION FIELD SEASON

That's the type of essays that I wrote very often back in Moscow in middle school. I was a child and diligently wrote this title in a green-covered notebook with a ball pen, sticking out my tongue. My summer always was full of adventures, because all the summer I lived in a country house, 100 miles to the south of Moscow. In the morning time, I needed to study math with my mom, but from the early afternoon to the late evening, I could kick up the dust on country roads and felt free by riding my old blue bike as fast as I could. I liked and hated the study part, I thought that it was hard, but at the same moment, I knew that it made my mind sharper...hmm...it was probably then I realized that I would like to spend every possible summer in my life this way, mixing studies with enjoying nature.

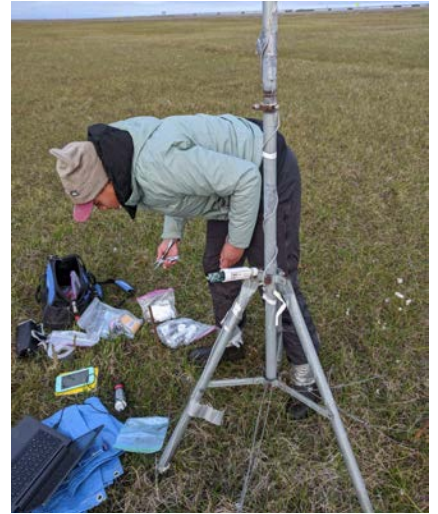
"Oh! That's when it's all started". I smiled and told myself, sitting on the triangle piece of rock (that reminded me of a shark tooth) on the step of the big natural stairway, cryoplanation terrace, 50 miles from Denali Mountain. The wind was blowing on my face, but after the month spent in the Alaska wind, it seemed more like a refreshing fan tickling my cheek. You're very surprised when you finally come back that somebody turned off the big cold fan.

I already spent five summer seasons in different remote Arctic locations and three field seasons in Alaska. 32° or less during the summer became a golden standard for me as well as the flat tundra surface where only the drilling equipment and I are unusually tall. The work consists of a long- distance snake-shaped walks and every 100 m. I collect the active layer measurement using a probe—a graduated metal rod. Every standard grid consists of 121 points. The distance that you need to cover if you have two people on the site is a minimum of 4 miles, but usually, your path is not straight.

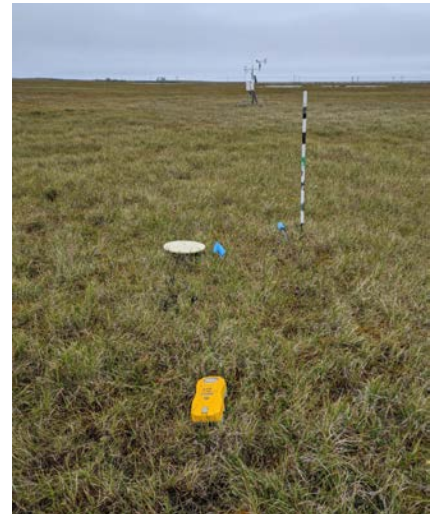
Sometimes, you need to go around the water bodies, which can easily make it 10+ miles a day. That's more than the required 10,000 steps per day, ha. Every day we have lots of additional work, such as getting the data from thermal and moisture data loggers measuring thaw subsidence. Oh, waiting for the rest in the evening...? Oh no, collected data should be carefully checked and prepared for future analysis. You'll totally forget the notes or comments that you had during the day if you do not spend the time properly obtaining the initial data. Moreover, trust me, you'll forget it the next morning. Evening data entry is a critical part of our work.

Collected active layer thickness measurements reflect the changes in the upper horizons of permafrost, show its state with another characteristic - permafrost temperature. The experimental sites of the CALM (Circumpolar Active Layer Monitoring Program) Network cover all climatic zones, have more than 10 1km² sites in Alaska and have more than 250 active sites in the world's permafrost zone. I am proud to be a part of the team, and my life split into main parts. Field work (2 month), expectation of the fieldwork (10 months).

P.S. The photos show the everyday routine, that takes 90% of our time, but the last one shows how beautiful Alaskan nature is... if you'll raise your eyes from the probe or logger.



Raven Mitchell replacing a logger battery.



Active layer measurement.



The beauty of CALMness.

Graduate News

DR. DAN WANYAMA

NEW SPARTAN GEOGRAPHER ALUMNUS

The last four and a half years pursuing a Ph.D. in Geography at MSU have been challenging yet very exciting and fulfilling! The journey has been one of the longest and busiest, but the growth and overall rewards are great. Over this period, I was very lucky to work with Dr. Nathan Moore, who has been a great mentor and person! Since this is my final time writing in the Spartan Geographer as a student, I would like to summarize my dissertation research conducted at MSU.

Generally, I seek to understand the differentiated impacts of climate change on local livelihoods and systems, with the aim of devising practical and contextualized ways to mitigate and adapt to the changing climate. Within my doctoral dissertation, I examined human-environment interactions and landscape change under climate change within the Mount Elgon ecosystem (MEE), a threatened mixed forest and agricultural ecosystem in Kenya and Uganda. The end goal was to find ways to simultaneously enhance environmental conservation and improve local livelihoods. I argued in the study that changes in the climate have forced local communities in the MEE to expand croplands at the expense of natural vegetation, thus leading to a highly deforested and degraded landscape with disrupted precipitation regimes and declining environmental stability. This work included a comprehensive assessment of persistent changes in vegetation greening and browning and an analysis of spatio-temporal patterns of precipitation change in the area. It also involved a detailed assessment of ecological and environmental (eco-environmental) vulnerability of the MEE using climate, topographic and socio-economic variables. Here, I aimed to find priority areas for policy intervention by identifying and assessing spatio-temporal changes therein, variables that characterize the vulnerability of this ecosystem. Finally, I developed a spatial land-use change model seeking to simulate future landscape dynamics in the MEE, with the goal of finding a good balance between environmental conservation and agricultural development in the MEE.



Dan Wanyama with his Ph.D. Advisor Professor Nathan Moore shortly after receiving his doctoral degree in Geography. Congratulations, Dr. Wanyama!

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!

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

>> <http://professional.ongeo.msu.edu>

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MAP **your** FUTURE 

For more information

visit us online at onGEO.msu.edu or email us at onGEO@msu.edu



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

Graduate Degrees Conferred

Ida Djenontin, PhD (Dr. Leo Zulu), “Governance of People-centered Forest-Agriscapes Restoration in Malawi: Institutional and Modeling Approaches.”

Nafiseh Haghtalab, PhD (Dr. Nathan Moore), “Evaluating Climate Variability and Coupling Strength of Land-Atmosphere Interactions Across the Amazon Basin.”

Pouyan Hatami, PhD (Dr. Lifeng Luo), “Geographic Applications of Knowledge-Rich Machine Learning Approaches in Spatiotemporal Data Analysis.”

Aaron Kamoske, PhD (Dr. Kayla Dahlin), “Seeing Within the Canopy: Measuring Three-Dimensional Forest Traits and Processes Across Ecosystems and Spatial Scales.”

Amanda Kreuze, PhD (Dr. Sue Grady), “The Toxic Truth: Environmental Justice and Environmental Health of Mothers and Children in Michigan.”

Xiaomeng Li, PhD (Dr. Igor Vojnovic), “Personal Service and Leisure Travel: Exploring Individual- and Neighborhood-Level Variability In the City Of Detroit and Its Suburbs.”

Zihan Lin, PhD (Dr. Jiaguo Qi), “Spatiotemporal modeling of dams and consequent impacts on the Mekong River Basin ecosystem.”

Wei Liu, PhD (Arika Ligmann-Zielinska), “Modeling the Joint Impacts of Social Network and Built Environment on Adolescents’ Physical Activity”

Judith Namanya, PhD (Dr. Leo Zulu), “Investigating Uganda’s High HIV Incidence Among Young Women in an Era of Widespread Gains in HIV Prevention and Treatment.”

Elizabeth Spitzer, MS (Dr. Ethan Theuerkauf), “Assessing the drivers and spatiotemporal patterns of cohesive bluff retreat along the Michigan coast of Lake Michigan.”

Ting (Diane) Wang, MS (Drs. Jeffrey Andresen and Shiyuan Zhong), “The Climatology of Springtime Freeze Events in the Central and Eastern USA.”

Dan Wanyama, PhD (Dr. Nathan Moore), “Using “The KITE” Framework for Understanding Landscape Change and Improving Agricultural Systems Under Climate Change.”

Qiong (Joan) Zhang, PhD (Dr. Sue Grady), “China’s Economic Development and Soft Target on Human Health: A Medical Geography Study of Haze Pollution Impacts on Maternal and Infant Health in Xianyang 2008-2016.”

**WELCOME OUR NEWEST
SPARTAN GEOGRAPHY ALUMNI!**

Commencement

SPRING & SUMMER GRADUATES:

Russell Alger | BS Human Geography

Benjamin Andrews | BS Economic Geography (2nd BS)

Ava Gawel | BS Geographic Information Science

Chase Haverberg | BS Geographic Information Science

Yuhang He | BA Human Geography

Danny Hickey | BS Geographic Information Science

Heather Hoeve | BS Economic Geography

Davney Holley | BS Environmental Geography

Andrew Kline | BS Economic Geography + Minor in Geographic Information Sciences

Mitchell Knedgen | BS Economic Geography

Josh Lazar | BS Economic Geography

Rachel Martell | BS Economic Geography

Alexis McGuire | BS Environmental Geography

Dalton McKinstry | BS Environmental Geography + CNCU in Atmospheric and Climate Sciences

Ketelelo Moapare | BS Economic Geography

Jokob Myers | BS Geographic Information Science

Matt Neill | BS Economic Geography

Joe O'Brien | BS Human Geography + Minor in Geographic Information Sciences

Dustin Rademacher | BS Human Geography + Minor in Geographic Information Sciences

Ryan Snider | BS Geographic Information Science

Garrett Wojcik | BS Geographic Information Science

Lennart Zorn | BS Economic Geography

FALL GRADUATES:

Danny Caton | BS Economic Geography

Clay Herwat | BS Geographic Information Science

Bryan Quilan | BS Environmental Geography

Kevin Sigler | BA Human Geography

Congratulations,

2021
Class of

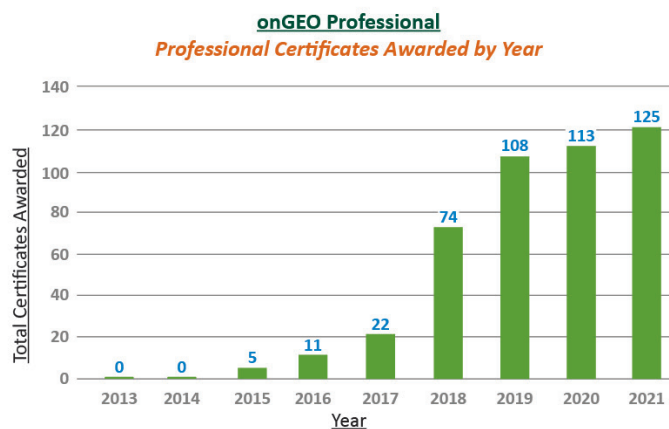
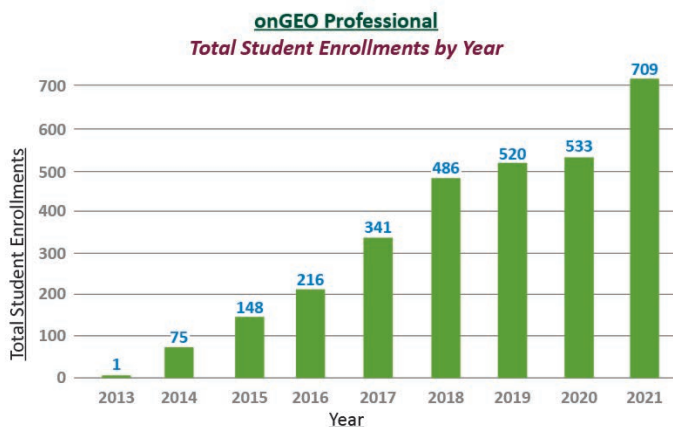
onGEO Connection

While our Professional-course enrollment numbers continued to increase over the past year, they did so in jumps that were unexpected. Our enrollment numbers and student-survey responses (700+) help to tell a story about our current Professional students. A majority of students surveyed are currently working professionals, typically Millennials and Gen Z, from a variety of fields, including environmental, education, archeology, engineering, fisheries and wildlife, urban/community planning, agriculture, public service, forestry, geospatial technology, information technology, utilities, transportation, shipping/logistics, emergency management, military, real estate, insurance, construction, public health, geology, law enforcement, and more. When asked what students hope to gain from taking our Professional courses, 61% say they want to gain new skills for new jobs in their current fields or career changes. Interestingly around the same time we started to see this story emerge, a countrywide discussion began about “The Great Resignation,” or as [Planet Money](#) has proposed calling it, “The Great Renegotiation.” Simply put, workers currently have bargaining power and are either negotiating for better pay and amenities in their current companies or seeking these in new job opportunities. *Could it be that our students are using their Professional Certificate in GIS to participate in The Great Renegotiation?* We cannot wait to see if a new survey of Professional Certificate earners (planned for 2022) reveals any insights!

onGEO-PROFESSIONAL

Impressive Growth of Our Professional Program

In 2021, we again saw growth in both the number of student enrollments in our Professional courses and our number of Professional Certificates in GIS awarded. We have had 3,029 total student enrollments and awarded 458 Professional Certificates since our program began in 2013. Our number of student enrollments jumped impressively in 2021 while our Certificates awarded continued to increase steadily. Our goals to expand our course offerings, the number of seats offered, and Professional Certificate selection are underway. We are excited about the program’s growth and grateful for the many new graduate students who now assist us with the development and delivery of our courses and the faculty members who have contributed to our course creation.



New Professional Course in Digital Image Processing

A new fully online professional course, written by Dr. David Lusch, is scheduled for a spring launch. The Digital Image Processing course is designed to meet the digital imagery exploitation and analysis needs of a wide variety of GIS personnel. It will focus on the extraction of land cover/use information from two commonly available image types: 4-band aerial orthoimagery and Landsat satellite imagery. Students will 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.

Partnership with RS&GIS

We are continuing our partnership with the RS&GIS research group on an MSU Project GREEN grant to develop a new course called *Drones in the Fields: Open-source Solutions for Data Collection, Processing and Analysis*. This course will provide opportunities for students to learn about current regulations, data collection, data processing and analysis, and data processing options in an open-source environment. OnGEO is responsible for the development of this online training course in D2L and its delivery for citizens who are interested in these technologies.

Where to Find Us

Our Professional Certificate is being advertised in GIS User Groups in Michigan and beyond and across social media platforms (LinkedIn, Instagram, Twitter, and Facebook). Be on the lookout for our posts, and feel free to share widely! OnGEO staff members Dr. Yi Shi and Juliegh Bookout will also be traveling to conferences this year. If you are planning to attend the Esri User Conference and Education Fair in San Diego, Dr. Yi Shi will be there. Juliegh Bookout will be attending the D2L Fusion Conference in Boston. Be sure to find us to say hello!

onGEO-UNDERGRADUATE

The evolution of textbooks & online courses

If you are of a past generation, like I am, you likely remember a time when hauling a heavy load of books around campus was a rite of passage. At the start of each semester, students would be crowding the campus bookstores, holding little slips of paper, matching course numbers and sections to labels on the shelf, and trying to be sure they had each of the required materials needed for their course. Since then, things have changed. And now, as an Instructor, I found myself accessing more and more of our textbooks online, just like in our courses, clicking on supplemental features, just like in our courses, and completing interactive review questions, just like in our courses.

It began slowly, one here, another there, and one by one, most were dropped until few were left. That's right, today, most of our onGEO undergraduate courses have no required textbook (note that we do offer students a textbook

recommendation). While it was not a conscious decision to remove the textbook requirement, each semester, it seemed something would happen that made us question the textbook we were using in a particular course and whether or not we even needed additional course materials (and students needed more reading). Interactive features, audio and video, and a linked table of contents, like the one we use in D2L, have become the norm in online textbooks. And as textbooks began to more closely resemble our online lesson modules, we began to ask ourselves, are we being redundant for the sake of tradition? We at onGEO believed that we could offer students everything they needed to achieve course objectives in one location and in one module. Our faculty are definitely capable of writing good, comprehensive content, and onGEO staff is definitely capable of developing that content for online delivery. Now, instead of assigning additional readings, we opt for more dynamic content such as short films and recorded presentations, which we feel brings more balance in a fundamentally text-based learning model.

The power of voice

Audiobooks are nothing new and most browsers today have text reader extensions for those who enjoy hearing content and those who need to hear content. After learning that one of my students had been using a screen reader to listen to pages of our lesson modules, I had a thought. What if I narrated our Geography of the United States course for students who preferred to listen to their content? One by one, I read each of our lessons aloud, catching errors in syntax (things sound differently when you read them aloud) and learning to *correctly* pronounce words, like Tuolumne and San Luis Obispo de Tolosa. I also discovered that when an Instructor speaks about a topic, they emphasize and enunciate in a way that signals to the student what is important and gives greater context to the passage. While student engagement remains to be seen, in the process of making these recordings, I not only gained a deeper understanding of the content I was delivering but also learned how students might use a tool like this and what could be done to improve upon this type of instructional model for use in this and other courses.

—Beth Weisenborn, Director of Online Courses in Geography, onGEO@MSU

It's hard to believe that it's been almost two years since the entire RS&GIS staff were all together in our office at the same time. Over the last two years, COVID-19 has forced us to evolve immensely, but hopefully, we are emerging from the pandemic stronger than before. This year, 2022, marks the 50th anniversary of our establishment. Established in 1972 as the first NASA-funded Center for Remote Sensing, what is now RS&GIS, was initially funded to see how the evolving remote sensing technology could be used to study issues related to land use. Now, RS&GIS is a self-funded unit within the Department of Geography, Environment, and Spatial Sciences with a track record of research and outreach projects from both the local and international scales.

We have done amazing work in these 50 years, including establishing the [statewide aerial image archive](#), helping to map the Titanic wreck site, developing citizen science programs to monitor coastal hazards and training hundreds of students and state employees on the use of geospatial software. And we are just getting started.

RS&GIS staff and collaborators are active and engaged in using geospatial data to address socio-ecological challenges around the world, training the next generation of MSU students in practical geospatial methods, and making a difference in the greater geospatial community. We had hoped to throw a large in-person event to celebrate our 50th anniversary, but we will have to wait and see what the future holds for such an event.

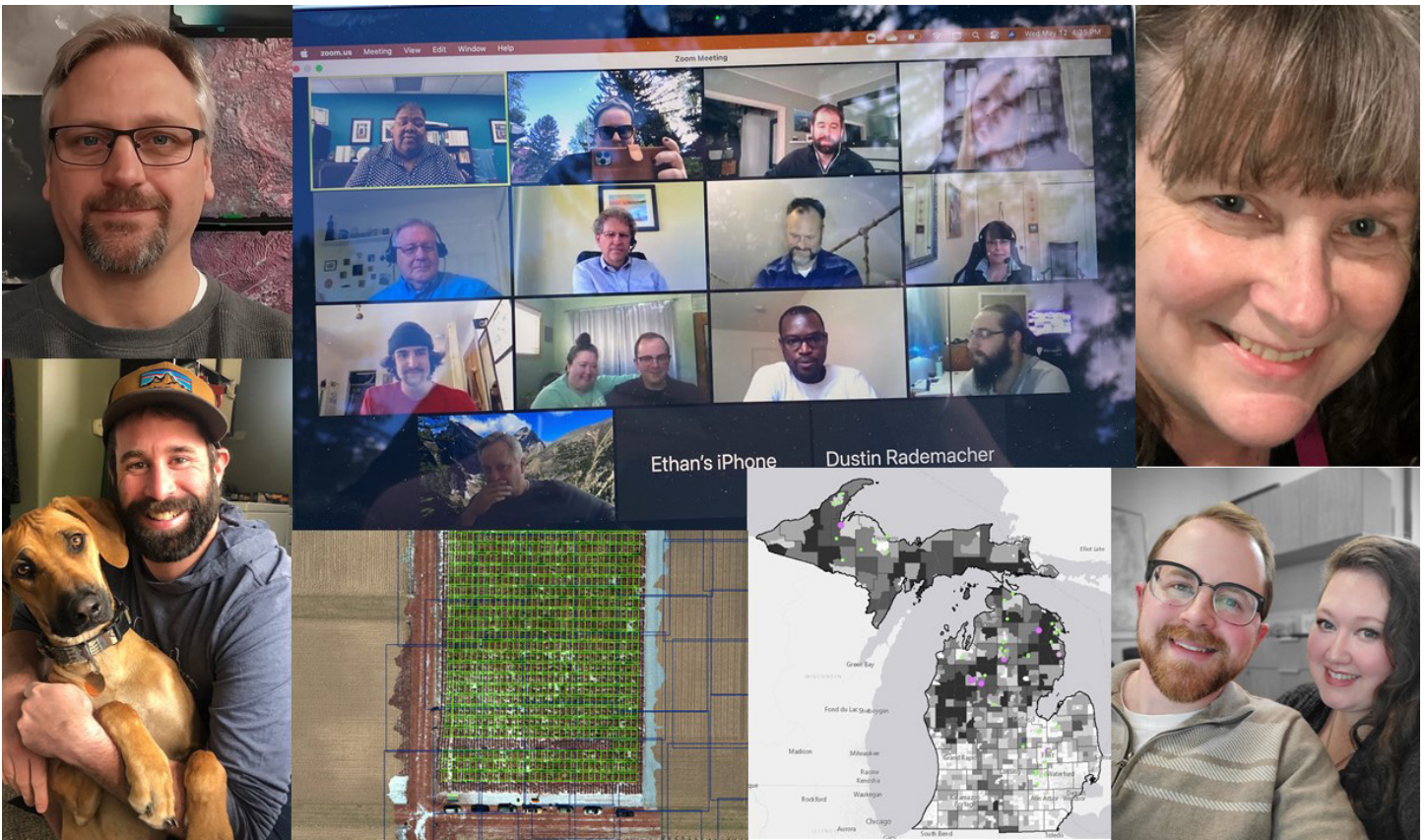
There were numerous bright spots in 2021, including great new projects, collaborations, and awards. In April of 2021, our Senior Geospatial Analyst, Bob Goodwin, was one of six campus-wide recipients of the Jack Breslin Distinguished Staff Awards. In Bob's 23+ years at RS&GIS, he has worked hard to mentor staff, develop projects, support the unit, establish RS&GIS as a leader in drone technology utilization across campus, and provide geospatial training to the public. Bob is crucial to the success of RS&GIS, and the award is well deserved.

PROJECT HIGHLIGHTS

RS&GIS picked up several large multi-year projects in 2021 that will set us up for further success in the future. Projects include new on-campus collaborations with Health Care, onGEO, MSU Extension, and the MSU Library. This year we submitted eight grant proposals by ourselves and in collaboration with others. From these submissions, three were funded, and two are still under review.

One of the first successfully funded grants was developed in partnership with the MSU Department of Computer Sciences. This grant, funded by the Department of Defense (DOD) Intelligence Advanced Research Projects Activity (IARPA), looks to design, implement, and evaluate a software system for whole-body biometric recognition. To do this work, RS&GIS will be holding a series of outdoor field data collection sessions at MSU starting in the summer of 2022. We are looking for several hundred volunteers to participate in these data collection sessions. If you would like to learn more about the project and potentially take part in the data collection, please email our data collection lead Erin Bunting (ebunting@msu.edu) or complete our [enrollment survey](#).

Our second key project to highlight has been several years in the works. This project, led by the State of Michigan Department of Technology, Management, and Budget, looks to realign all the hydrography data for the state. Current hydrography data (e.g., water bodies, streams, etc.) are available from the National Hydrology Dataset (NHD). However, this data is inaccurate and not representative of the actual landscape. For this reason, the United States Geological Survey (USGS) has developed specifications for mapping hydrography data from LiDaR-derived elevation data. Michigan is the first state to take on a statewide project of this nature. Using advanced geospatial analyses, machine learning, and statewide LiDaR and imagery, RS&GIS is leading the data development phase of the project. Other partners on this project include the State Department of Environment, Great Lakes and Energy (EGLE), NV5, Ducks Unlimited, and the USGS. As this publicly available, precise hydrography



A few scenes from the RS&GIS team during another year of the global pandemic. A highlight for all was celebrating with Robert Goodwin as he learned of being awarded the Jack Breslin Distinguished Staff Award (top center).

data rolls out over the next five years, it will allow resource managers, planners, engineers, and others to accurately model water flow, address erosion and nutrient issues in our waterways, properly site infrastructure, and more. As a bonus, dozens of MSU interns will be employed on this project over the next several years, thereby providing real-world experiences in geospatial data development.

Our EPA-funded Exchange Network Grant, led by State of Michigan EGLE, was chosen for Advanced Monitoring in other grant news. This recognition highlights the key technological advances made during the research and shines a light on our project internally at the EPA. Additionally, our developer team celebrated the official relaunch of the MSU Enviroweather website.

On the training front, we are looking to start our in-person geospatial course again as soon as it is

COVID safe, potentially in the late summer. Check out our [website](#) for more details on upcoming courses. Currently, we are planning in-person and virtual events, including Introduction to GIS, Drone to GIS Workshops, and Basics of Drone Flight. Additionally, through our partnership with onGeo we have several courses on their platform, including an FAA Remote Pilot (drone) Test Prep short course and a soon-to-launch course focused on Open-Source Drone Data Collection and Processing.

For more information about our staff, projects, grants, archive, and training, visit us online at www.rsgis.msu.edu. From the entire RS&GIS team (Erin, Bob, Tamsyn, Joe, Nick, Dylan, Matt, and our fantastic students and temporary staff), we wish everyone a happy and healthy 2022!

—Erin Bunting, RS&GIS Director

Spotlight on Diversity

GEOGRAPHY DIVERSITY, EQUITY AND INCLUSION COMMITTEE

By: Guo Chen & Raven Mitchell

Per our department bylaws, the department has formed its first standing Diversity, Equity and Inclusion (DEI) committee as of Fall 2021! Our current DEI committee members are Guo Chen (Faculty member and co-chair), Raven Mitchell (graduate student and co-chair), Mehmet Eroglu (graduate student), Diane Huhn (staff member), Jeffery Andresen (faculty member), and Sandra Marquart-Pyatt (faculty member). The committee met regularly in Fall 2021 and will continue to meet in Spring 2022 and welcome ideas from the Geo community.

We want to thank all members of the ad hoc diversity committee from last year (2020-21).

One major task completed in Fall 2021 by the new standing DEI committee is our department's first-ever DEI webpage, [Diversity Matters](#). Please check out the features of the pages! Stay tuned for more features on the website. You are most welcome to contact the DEI committee via a Google form link published on the pages. If you have any suggestions, please also contact us through this link.

SUPPORTING WOMEN IN GEOGRAPHY (SWIG) @ MSU

By: Guo Chen

[Supporting Women in Geography \(SWIG\)](#)

Group is a supportive group of women students, including women of color, individuals that identify as Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ), and diversely-abled individuals. We organize roundtables and talks per semester. For any department members interested in joining the SWIG group, please contact SWIG leader Gabriela Shirkey at shirkeyg@msu.edu or SWIG faculty advisor Guo Chen at guochen@msu.edu.

In Fall 2021, SWIG organized its inaugural speaker event to host Dr. Jennifer Fluri's talk entitled "Afghanistan: Security, Gender, and Development 2001-2021." Dr. Fluri is a Department Chair and Professor of Geography at the University of Colorado Boulder. This cross-campus event was successfully co-sponsored by the Department of Geography, Environment, and Spatial Sciences, Visiting International Professional Program (MSU VIPP), and Asian Studies Center, with support from the Center of Gender in Global Context and the Muslim Studies Program at MSU. A recording of this event can be viewed at the [Department's past event recording archive](#). The group also organized a highly engaging roundtable discussion with Dr. Fluri, joined by over 15 women graduate students.



In Spring 2022, SWIG will continue to host exciting roundtable events and support our diverse student body by providing safe and inclusive spaces for discussions about SWIG and DEI-related issues, as well as engaging members in networking, professional development, and community outreach.

SWIG was founded in 2015 by Dr. Raechel Portelli and graduate students Laura Johnson, Cadi Fung, Libbey Kutch, and Fatima Barry and has grown to include both undergraduate and graduate students, as well as Geography faculty and staff members.

GEOCAMP 2021



From left to right: Nathaniel Penrod, Clayton Sigmann, Joey Seitz, Sarah Grace Lott, Katie Brown, Mehmet Eroglu, Yousef Khajavi Godellou, Nidhi Kalani, and Michaela Shope. Not pictured: Abeer Alanazi, Qianlin Chen, Nicole Dear, and Vaysa Tolmanov.

GEOCamp 2021 inducted 11 new Spartan Geographers and forged new friendships and connections. After a delightful evening socializing at Wa Wa Sum and tubing down the Au Sable River, we toured the Lake Huron shore. Our first stop was shoreline mapping with Dr. Ethan Theuerkauf and Masters student Lucas Rabins, who demonstrated their tools and techniques for monitoring shore movement and sediment transport. Next, we toured up to Oscoda for lunch on the beach, followed by the Sturgeon Point Lighthouse and a discussion of the economic geography of protected areas. We concluded the trip with visits to the Civilian Conservation Corps (CCC) Camp at Houghton Lake and a discussion of Nature-Society interactions at Hartwick Pines State Park. A great start to graduate life at MSU!



Geography Graduate Group

TRIPLE G

By: Gabriela Shirkey and Herve Kashongwe

The Geography Graduate Group (Triple G) maintained a vibrant online community of scholarship and service while our members continued to largely work from home. Triple G met the years' COVID challenges with enthusiasm and hope, building fellowship and memorable experiences across scales. Our members continue to host lively colloquiums, enrich our GEO community through service, and blossom new friendships.

Graduate students serve pivotal roles in the department as instructors, mentors, and research assistants but also serve to revitalize our department culture. We are especially proud of our members who work alongside faculty on

department and college committees. Their aims include strengthening student-faculty relations, building foundational DEI language and practices in department activities, addressing concerns raised in the graduate student's letter of demands from 2020, and serving on the Dean's Student Advisory Committee.

The Triple G Colloquium committee, including Ana Rivera, Sarah Lott, and Hyunseo Park, continue cultivating seminars that attract university-wide participants three times each semester. In the fall of 2021, Triple G hosted Dr. Scott Warren to discuss the extractive industry and security within the U.S.-Mexico borderland, Dr. Barney Warf on the historical geography of cannabis, and Dr. Aaron Mallory on Missing Geographies and the HIV/AIDS epidemic within Black Queer communities. In the spring of 2022, Triple G and colleagues kicked off the series with Dr. Gabrielle Wong-Parodi on the topic of community and individual decision-making in response to climate hazards. In February, we also heard from Dr. Tanya Harrison on planetary-scale studies of Earth vs. Mars. In March, we also look forward to hearing from MSU Alumnae Dr. Jieun Lee on health disparities in urban areas.

Our Triple G members take advantage of every opportunity to build fellowship. Members near the heart of campus have hosted Friends-giving, game nights, and tailgates to keep the Spartan spirit alive in a time of remote commuting. Our social chairs, Lucas Rabins and Pietro Scuisco, gathered new and old graduates alike to share a holiday meal and a message of thankfulness. Members also joined together in celebrating MSU's football season, enjoying new friendships and victories over old rivalries. This spring, we look forward to the return of the Spring Poster Competition, led by our own Myung Cho. The annual tradition presents an in-house workshop for members to exchange feedback before the American Association of Geographers annual meeting or similar conference.

Halfway through the academic year, Triple G continues to support the graduate student body through dynamic leadership. We are grateful to our members who volunteer to build a better community now and for the future.



Members of Triple G enjoying "Friends-giving," in 2021.

2021-22 COLLOQUIUM SERIES

By: Ana Rivera-Rivera, Sarah Grace-Lott and Hyunseo Park

For the 2021-2022 academic year, the MSU Geography Colloquium has continued in its adopted remote format following the precedent set last year to accommodate the new order brought about by the COVID-19 pandemic. If history connects time, geography connects space. Although we miss getting together in Snyder Hall's basement, the online format has allowed us to connect with many people outside of the East Lansing community, assuring a wider audience for our selected geography topics of this series.

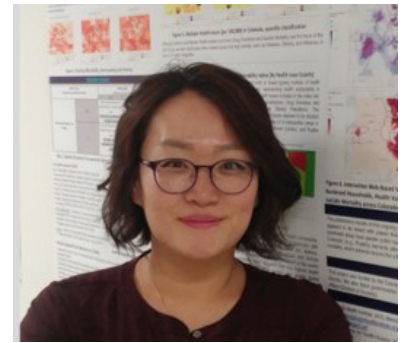
In the Fall of 2021, we connected with Dr. Scott Warren, Dr. Barney Louis Warf, and Dr. Aaron Mallory. We went from the US-Mexico border in Arizona to Asian Cannabis to hidden epidemics and missing geographies in Atlanta. For Spring 2022, we have hosted a trio of women in STEM, including Dr. Gabrielle Wong-Parodi, Dr. Tanya Harrison, and Dr. Jieun Lee, featuring topics that cover decision-making under extreme events, particularly wildfires in California, Martian planetary remote-sensing, and urban health disparities!

The 2021-2022 colloquium committee, made of graduate students Ana Rivera-Rivera, Sarah Grace-Lott, and Hyunseo Park, expresses its appreciation to our faculty mentor, Dr. Elizabeth (Liz) Mack, for her invaluable guidance. We also thank the previous year's committee organizer, now Dr. Ida Djenontin, for her continued support. Another special thank you goes to the Communications Manager, Diane Huhn, for her tremendous help with the always good-looking flyers and handling the repository of recorded webinars, which are accessible at the Department's [past events recording archive](#).

If you have spent time looking at COVID-19 maps, you have a geographer within you. So, we want to remind you that **EVERYONE** is welcome (family and friends) to the Geography Colloquium. We appreciate your respectful attendance and hope to see everyone again in the cyber realm.



Tanya Harrison



Jieun Lee



Aaron Mallory



Barney Warf



Scott Warren



Gabrielle Wong-Parodi

Research Groups

QUATERNARY LANDSCAPES RESEARCH GROUP

By: Randy Schaetzl

Way back in 2008, several GEO faculty hatched an idea to start an in-house research group focused on topics related to Physical Geography, Quaternary Studies, and geomorphology. The idea was to spur discussion about research and to firm up linkages among faculty and students. And so, the Quaternary Landscapes Research Group (QLRG) was launched. Of course, we needed a nickname and adopted the name “Quidders.” Our very informal slogan, meant to be more humorous than meaningful, is that “Winners never quit, and Quidders always win.” Call it corny, and... you’d be right.

Quidders provides a low-stress forum for short, informal talks on research that is being considered, is in progress, or has recently been completed. Typically, talks are given late on Friday afternoons to an audience of 10-20 people, all rapt with attention and awe. Afterward, we adjourn to a local establishment to decompress and extend the discussions. Much work actually gets done, and the forum helps everyone involved to, well, stay more involved in what others are doing.

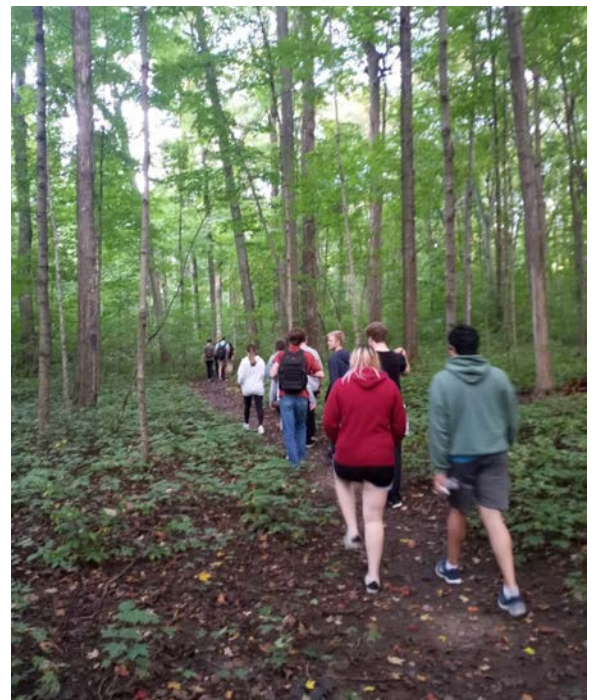
Quidders has been a highly successful and, I would argue, important part of our Department culture. To date, over 70 talks have been presented in this forum by students, faculty, and alums. We have a loyal and dedicated audience of scholars from across campus. Please visit our [website](#) for more details. To get on our email list, please get in touch with our webmaster and organizer, Randy Schaetzl, at soils@msu.edu. We welcome talks from alumni!

GEO Club

GEOGRAPHY CLUB

By: Alberto Villarreal

The Geography Club (GEO Club) at Michigan State University seeks to connect undergraduate students with an aligned interest in geography. Students of all majors are welcome to join the club and a community of like-minded individuals. Our club prides itself on being an accepting space where members can learn, discuss, and socialize with one another. We strive to not only build a professional networking community but to build personal connections with one another as well. During some of our past meetings, we built connections through hosting holiday-themed parties, geography bees, nature walks, and movie nights (to name a few). Since being founded in the Fall of 2020 during the pandemic, the GEO Club has grown from 7 members to 30 members and is expected to grow as we continue to share our interests and knowledge of geography with the community. Going forward as a club, we plan to collaborate with other student and local organizations. If you are interested in joining the GEO Club, past alumni, or involved in a local organization interested in GEO Club, please reach out to us through our email at rso.geographyclub@msu.edu or follow us on Instagram at [geoclubmsu](#).

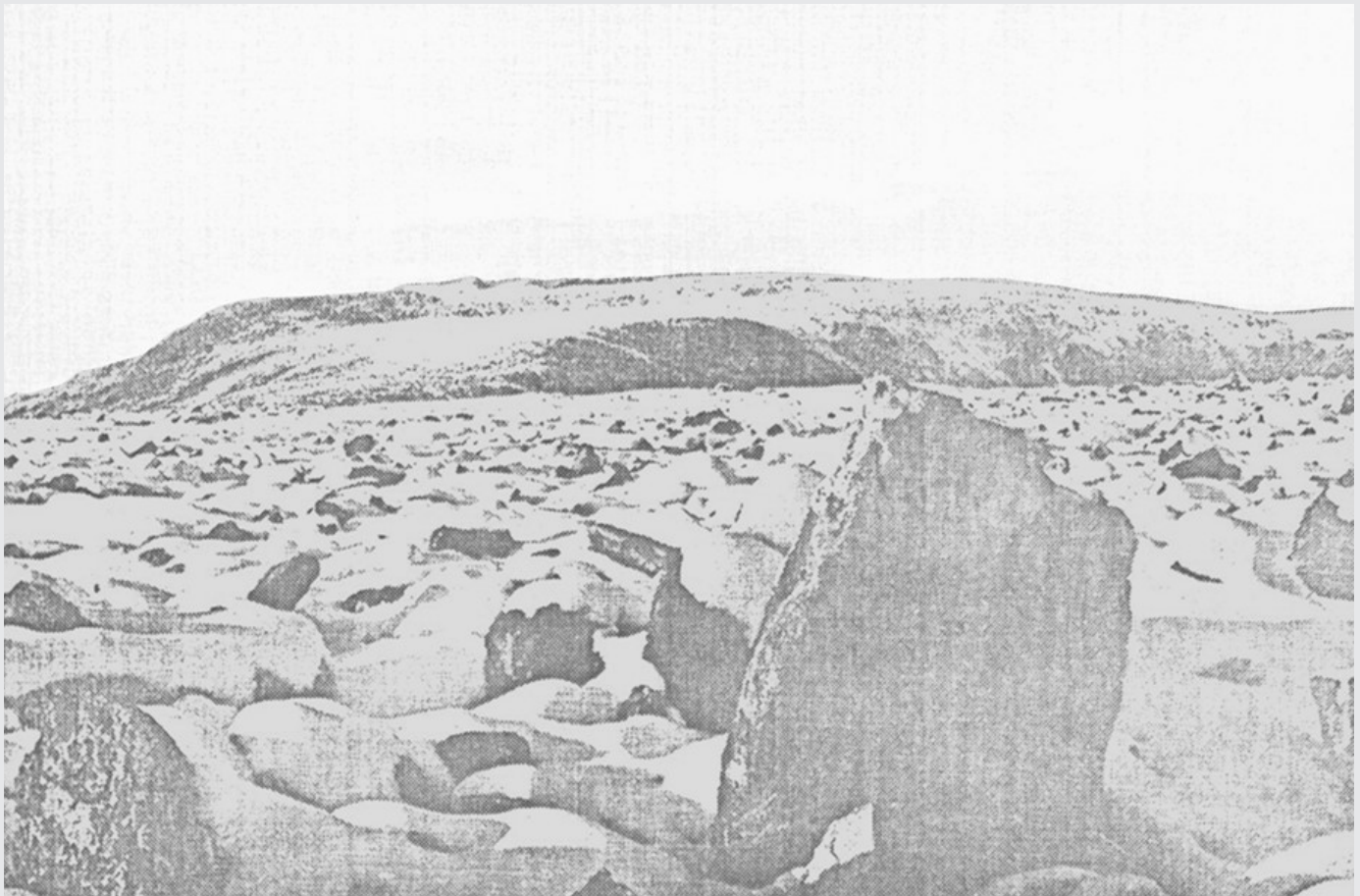


PERMAFROST GROUP

By: Fritz Nelson

The MSU permafrost group, currently comprised of Adjunct Professor Fritz Nelson, Professor Nathan Moore, and Ph.D. students Raven Mitchell and Vasya Tolmanov, managed to stay busy during 2021. Vasya (M.S., Moscow State University, 2020) joined the group in person after a prolonged visa process made especially difficult by diplomatic roadblocks and pandemic travel restrictions. During May, Raven and Fritz, with Dr. Kelsey Nyland (Ph.D., MSU Geography, 2019), conducted fieldwork on the origin of periglacial landforms in eastern Pennsylvania, part of Raven's dissertation project. In August, Raven, Vasya, and Kelsey were part of the field crew for the National Science Foundation (NSF)-funded Circumpolar Active Layer Monitoring program in Alaska.

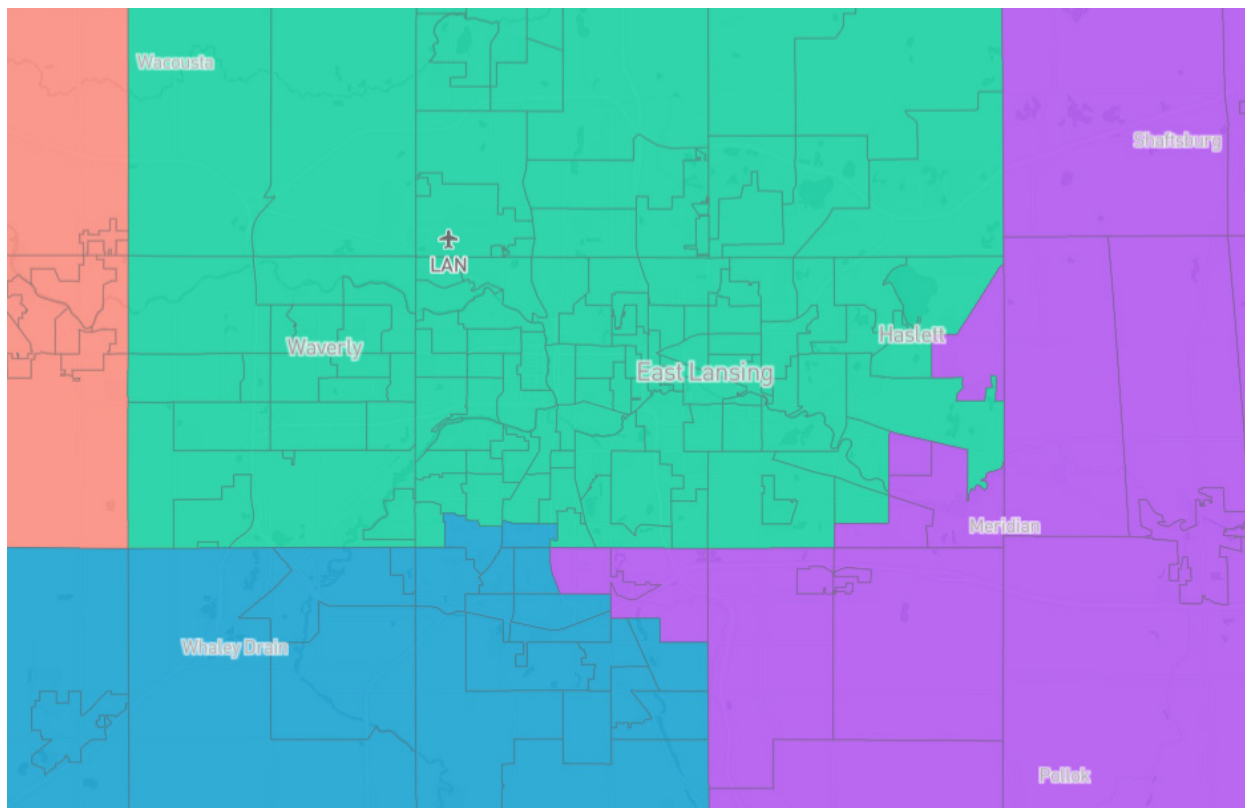
Fritz delivered a plenary lecture at the International Permafrost Association's Regional Conference on Permafrost in October. Collectively, the group published seven articles in peer-reviewed scientific journals during 2021. Fritz co-edited a special issue of the Russian journal *Geography, Environment, Sustainability* and brought to publication a report about Alaskan geomorphology written 56 years ago by his M.S. advisor, Dieter Brunnschweiler, who served as an MSU geography professor from 1957 until his death in 1983. In early November, Fritz gave a talk about Dieter and the report in the department's Quidders series. In attendance was Dieter's son Henry, also a graduate of the department. The article can be found [here](#).



Cryoplanation terrace in the Goodpaster Uplands, Alaska. Photo by D.H. Brunnschweiler, 1964. The photo serves as the frontispiece in the recent article, published in the journal *Polar Geography*.

Cracking the Redistricting Code in Michigan

BY: ASHTON SHORTRIDGE



It's 2022, and that means we are in the thick of the political redistricting process here in Michigan. This process is inherently geographical, and MSU Geography has been helping with the process and teaching students about it. The US Census, held every ten years, was established to help us know how many congressional seats each state should get and determine new district boundaries for those congressional districts—that second goal is called redistricting. Michigan not only draws boundaries for US congressional seats but also for state senate and house seats.

The 2020 Census found that Michigan's population increased slightly, and it also has shifted geographically since the 2010 Census. There are surprisingly few rules about how district boundaries should be drawn. By Federal law, all districts in a state must have the same population, and minorities must have equal opportunities for participation and selection of representatives. Michigan districts must also be contiguous and consider city, township, and county boundaries.

It turns out that GIS can be used to create boundaries that satisfy these criteria but nevertheless are what we would call gerrymanders, or carefully drawn districts that favor one party over another. This is accomplished by packing--cramping opposition voters into a few lopsided districts or **cracking**--splitting opposition voters into minority blocs within districts.

One way to measure gerrymandering is to compare the statewide voting percentages for both parties to how many seats those parties won. For example, in Michigan's 2018 State House elections, the total statewide popular vote went 53% for Democratic candidates and 47% for Republican candidates. However, the Republicans won 58 seats to just 51 for the Democrats. This is because Republicans controlled the legislature in 2011 when the legislature approved new districts following the 2010 Census, and those districts packed and cracked Democratic voters to ensure a large Republican majority—a gerrymander that has ranked among the worst of the last decade.

In 2018, an organization known as Voters Not Politicians led an initiative to end legislative redistricting in Michigan. The proposal passed by a wide margin. Over 60% of voters statewide and 65 of Michigan's 83 counties supported it. The result was the Citizen's Independent Redistricting Commission. This Commission was charged with developing new district maps that do not give a disproportionate advantage to a political party or favor or disfavor incumbents. Most interesting for geographers, they were also asked to develop districts that reflect Michigan's communities of interest, a broadly defined term that picks up on how Michiganders are connected spatially, culturally, historically, and economically.

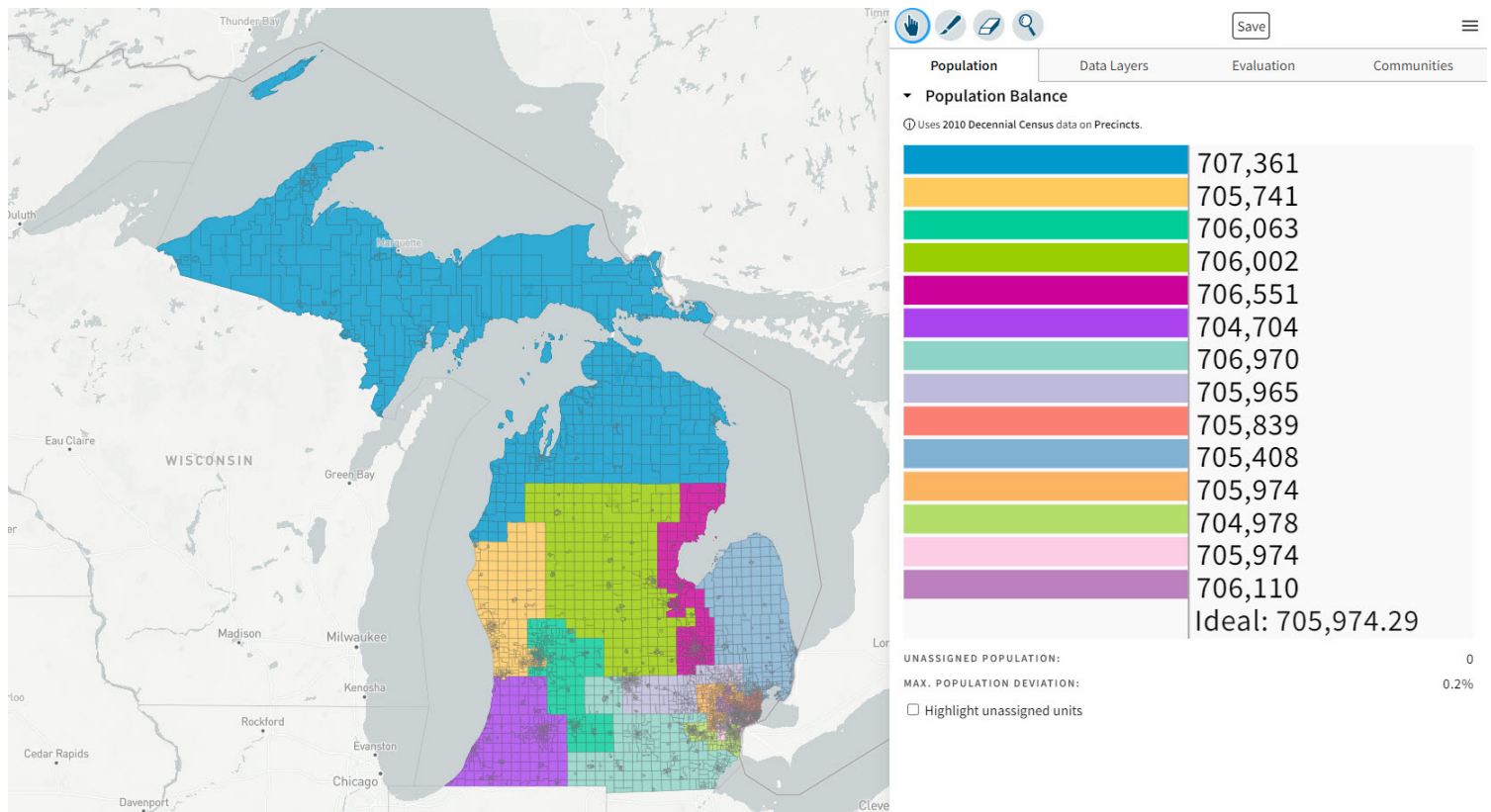
They have spent the past year drawing new boundaries and considering multiple district maps for the state. I was among a number of MSU faculty to consult with the Commission as its members learned about the redistricting process and various ways to tell how fair a particular districting scheme is.

By the beginning of 2022, the Commission had released new district maps for the US House and State House and Senate districts. Compared to

the old maps, these new maps feature a much larger number of competitive districts: districts that, based on recent elections, could go either for Democratic or Republican candidates.

Currently, multiple lawsuits have been filed (some dismissed) to overturn the committee's work from opponents across the political spectrum, and there has been some drama and controversy on the Commission itself. Nevertheless, the process has resulted in maps that align with what a broad spectrum of Michigan's people were looking for, and in particular, is not driven by one political party or another.

You may wish to try your hand at drawing districts in Michigan! There's a great website that allows you to literally paint your own regions on the map. Interactive features keep track of how many people are in each district and even report whether your map favors a particular political party and what the racial and ethnic breakdowns of your districts are. To check it out, visit <https://districtr.org/michigan> and try one of the "Draw a Plan from Scratch" options near the top of the page. I suggest you start with our US Congressional Districts. No login or sign-up is necessary, and the tool is fairly straightforward: basically, you are painting on a web map.



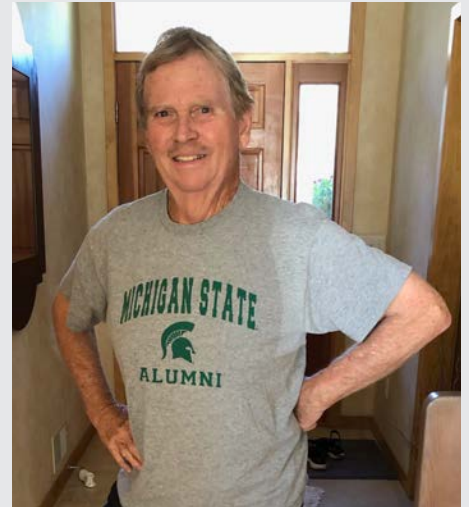
Alumni Focus

OWEN GREGG ('64, BA)

Well, 2021 again was a very strange year, indeed. No need to go into detail about having to deal with the COVID-19 pandemic or the current Omicron variant. I almost lost my grandson to it, but thankfully, he recovered. Many of my friends got it (delta), but they're doing OK now. Both my wife Kay and I, so far, have escaped its grips. We both have had the 2 Pfizer shots and were boosted in September. We're both extra careful.

I am proud to say that my sponsored Climate Change Endowment is in its 10th year. Would you believe it? I remember fondly sitting down with Dr. Arbogast in the Nat Sci Building and hammering out the details. During this highly-charged political environment, I am especially proud that the endowment focuses on climate change research in MSU's Department of Geography, Environment, and Spatial Sciences.

I continue to winter in Florida and summer in Minnesota. Right now, I'm glad I'm NOT in Minnesota: -19°two days ago. I'm too old to tough that out. Anyway, congratulations to Dr. Shortridge, and all the best to Dr. Arbogast. Two of the best!



Owen Gregg just before the "Run Fast for Flint," a run sponsored by his granddaughter, Annabel Gregg.

CELEBRATING 10 YEARS OF THE OWEN GREGG ENDOWMENT FOR GLOBAL CLIMATE CHANGE RESEARCH

As we mark the 10th anniversary of the Owen Gregg Endowment for Global Climate Change Research, the Department of Geography, Environment and Spatial Sciences wishes to offer our sincere thank you to Owen Gregg for his generous support in helping us invest in the next generation of Spartan Geographers. This important endowment provides a financial award in recognition of an undergraduate major or graduate student in Geography, Environment, and Spatial Sciences pursuing studies that make significant progress toward understanding climate change, its causes, and impacts on our fragile earth. This understanding should be demonstrated by incorporating elements of climatology, meteorology, cartography, physical geography, and political geography. Mr. Owen Gregg recognized the Department of Geography, Environment, and Spatial Sciences as the cornerstone of his first-rate education at Michigan State University. After going on to a highly successful business career focused on ingredient sales to the cosmetics and food industries, he recognized the well-rounded and valuable mentoring and support he received from Department faculty as fostering a broad curiosity about the complex world in which we live. He therefore felt that the Department was the logical place to 'give back' through establishing an endowment focused on global climate change.

OWEN GREGG CLIMATE CHANGE RESEARCH AWARD RECIPIENTS

2014
YING TING

2016
LYDIA RILL

2018
BRAD PETER

2020
PIETRO SCIUSCO

2015
STEVEN R SCHULTZE

2017
NAFISEH HAGHTALAB

2019
WILLIAM BAULE
DAN WANYAMA

2021
PIETRO SCIUSCO

ERIC BAUMAN ('72 BA, '76 MA)



After 25 years with the Electric Power Research Institute (in the last five years, managing worker health and safety research projects)—and 45+ years in environment, health and safety management, regulatory affairs, and corporate strategic planning in both the private and public sector - I have retired from full-time employment. I plan to finish writing a book on alcoholism and Korsakoff's Dementia and spend time in Germany with my family. I have also formed a consulting venture to work with corporate senior management to develop resilient, science-based, worker-focused health and safety initiatives (www.hse-strategies.com). My research training in GEO has served me well in tackling so many challenges in so

many different professional venues and has added a richness in my life of understanding different cultures. Kudos to GEO! —Eric H. Bauman, ehb@hse-strategies.com

DAVID BAYLIS ('15, PH.D.)

University of Arkansas - Little Rock

Greetings from the Bluff City! I'm working on several projects integrating public history, spatial storytelling, locative media, and free-and-open-source mapping applications. One project incorporates mapping and restoration efforts at Zion Christian Cemetery, the largest and oldest African American cemetery in Memphis, TN. Zion was founded by a Black fraternal order in the mid-1870s, just prior to a devastating Yellow Fever epidemic that led to the depopulation of the city and the temporary revocation of its charter. Zion's 15 acres contain some 30,000 burials, including the founder of Beale Street Baptist, Rev. Henderson, the first Black woman to become a surgeon in Tennessee, Georgia Patton Washington, and the victims of the infamous People's Grocery lynchings that launched Ida B. Well's anti-lynching crusade. Zion gradually fell into disrepair following the deaths of the last remaining fraternal order relatives and was even partially bulldozed in the 1970s. The Zion Community Project, of which I am a board member, has cleared and restored parts of the cemetery, secured historic designations for the site, and begun developing educational programming, including the narrative mapping of Zion's connections to American history.



Alumni News

DANIEL G. COLE ('79, MA)



Since last Spring, I have been vice-president of the Cartography and Geographic Information Society (CaGIS), and next April, I will transition to being the president. During the pandemic, I had more time to spend on research and publications, including one open-access article in the *International Journal of Geo-Information*, "[The Importance of Indigenous Cartography and Toponymy to Historical Land Tenure and Contributions to Euro/American/Canadian Cartography](#)." And I have been able to participate in more conferences (virtually) than usual, but I'm looking forward to participating in a few conferences (AAG, Esri, AutoCarto) in person during 2022. I'm co-chairing the [AutoCarto Conference](#), which will be held at the Esri campus in Redlands, CA. My involvement with the Exhibits departments around the Smithsonian has evolved to include extensive help by Esri staff on creating story maps for us. Two pilot projects include the Alexander von Humboldt exhibit at the Smithsonian American Art Museum and the Objects of Wonder exhibit at the National Museum of Natural History. The former is being published later in January, and the latter will be published at the end of February.

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

Goodbye, 2021! These past few years have been... interesting, to say the least. Personally, my daughters, Olivia and Juliet, are now 5 and 2. They are growing like weeds and will be future Spartans (Hopefully!).



Professionally, I'm the Practice Leader for GIS at OHM Advisors, where I oversee all GIS operations and 11 GIS team members (w/a few MSU Geo alums). I'm a Board member of MiCAMP, the MSU Geo Alumni Advisory Board, and the Vice-Chair of the Frederick Douglass Academy for Young Men GIS Program that we started a few years ago. Getting involved in these organizations is very rewarding, and I'm glad I can give back where I can. I've been busy expanding our usage of Innovative Technologies here at OHM, which include: UAS/Drones, Machine Learning & Artificial Intelligence, Augmented & Virtual Reality, 360 Camera Mapping, custom video capturing, and usage of high-precision Eos Arrow Gold GPS units. If anyone wants to learn more about this tech, please let me know!

Lastly, if you are a student (kudos for reading this), get involved in the Geography Club & GTU, any professional org, and join your local user groups! Connections are key, and they make for easy points with your certifications, like the GISP!

Cheers & Go Green!

OHM Advisors

Michael.Cousins@ohm-advisors.com

Please link up with me on LinkedIn: www.linkedin.com/in/MikeCousinsGISP

ROY COLE ('91, PH.D.)

Roy Cole retired from Grand Valley State University in August 2020 after 30 years of teaching in the Department of Geography and Sustainable Planning.

Roy earned his Ph.D. in Geography in 1991 with a focus on African regional development. During his Ph.D. and MS (Resource Development) programs at MSU, he was a US Department of Education Foreign Language and Area (FLAS) Fellow for the Arabic language and African Area Studies and was affiliated with the MSU African Studies Center. Roy conducted his doctoral research on understanding the response to drought by (mostly) farmers in Central Mali: "Trends in drought-coping strategies in the Ségou Region of Mali."

In addition to his Fulbright Fellowship for the Ph.D. research in Mali, Roy was also a Fellow of the Center for Arabic Study Abroad (CASA) in Egypt and a Fellow of the Center for the Advanced Study of International Development (CASID) at MSU. He has won numerous awards, including Michigan State University's "Women in Development" award for best scholarly research paper on environment and gender relations in Red Sea Province, Sudan. His notable publications include Cole and de Blij (2006) *Survey of Sub-Saharan Africa: A Regional Geography*, Oxford University Press; "Measuring Drought and Drought Impacts in Red Sea Province, Sudan," with Oxfam Press; and numerous articles.

Although initially never intending to become an academic, nearing the end of his Ph.D. program in Geography at MSU he applied for an adjunct teaching position at the University of Michigan-Flint campus, liked working with students, and taught there for two years before accepting a full-time, tenure-track position at Grand Valley State University in starting in August 1992.

Although originally hired by GVSU into the Anthropology/Sociology Department to develop the African and African American Studies program (among other things), the need for a Geography major at GVSU became apparent, and Roy was asked to prepare the documents for the major and minor that GVSU submitted to the Michigan State



Department of Education in 1996. The new major in Geography was approved in that same year. There was a teaching minor and major proposal that he drafted and submitted as well. He also pioneered the teaching of the Geographic Information Systems (GIS) program at GVSU. He led students on the study of urbanization abroad for several years in the U.K. and France. He spent a semester teaching at the University of Cape Coast in Ghana.

Prior to his employment at GVSU, he was the principal researcher in an international program investigating drought, drought recovery, and sustainability in Red Sea State in Sudan for Oxfam/UK.

Before graduate school, Roy was a Peace Corps Volunteer in Senegal and Mali for close to five years and worked in small villages on very small projects initiated by villagers. Some of the projects were funded by Catholic Relief Services and the US Embassy. While living with village families in Senegal and Mali, he learned Wolof, Fulfulde, and Bambara.

Roy is married, has two grown children, and lives in the St. Louis area. He is an avid organic vegetable gardener. He can be contacted at bamanakerc@gmail.com.

Alumni News

WALLY ELTON ('70, PH.D.)



In December of 2020, I moved from Saratoga Springs, NY, to Middlebury, VT, where I once lived during my academic career. In addition, I am now into my third year of trying to rid myself of cancer that started as a tumor on the base of the tongue. Robotic surgery at Dana-Farber Cancer Institute in Boston was followed by six weeks of radiation. Periodic scans have led to three more surgeries to remove remnants, all of which went well. As I write this, I will be going for my next scan tomorrow! Because of the cancer treatment, I was able to get the COVID booster earlier than most people and perhaps in a higher dose. Despite all that, I still get out hiking, cross-country skiing, and birding whenever possible. My email is unchanged (wally.elton@earthlink.net) and I'd be pleased to hear from other former grad students of the era.



DARREN GRAFIUS ('04, PH.D.)

Darren Grafius, Ph.D., continues to live in the United Kingdom, where the state of the job market through the COVID-19 pandemic led him to transition away from academia and into the private sector. In August, he began work as a Sustainability Consultant in Natural Capital Approaches with Jacobs Engineering Ltd. He is using his scientific background to champion nature-based solutions in varied infrastructure projects as well as identifying opportunities to provide multiple co-benefits, including ecosystem services and supporting biodiversity. He remains every bit as passionate about environmental stewardship and viewing complex problems with a spatial and system-based perspective as he did during his time at MSU.



TREVOR HOBBS ('09, MS)



Since 2012, I've had the pleasure and honor of working in various positions on your National Forests--the Huron-Manistee National Forests of Northern Lower Michigan--where I continue to learn, discover, and realize the multiple benefits of our Nation's public lands. In 2018, I landed a permanent full-time position as the Resource Information Manager where I lead a small staff of GIS professionals implementing an enterprise architecture for over 100 dedicated GIS users who collect, edit, and publish a wide range of natural resource data used to make informed decisions about the future of our forests. I've been fortunate to have had time and support to develop skills in acquiring,

managing, and modeling with LiDAR and imagery to develop enhanced forest inventories. Recently, I returned to my passion in soil geomorphology within a new position on the Huron-Manistee National Forest where I get to help others understand the best land uses for different soils, provide geologic expertise in planning and compliance issues, and steward a multi-generational database (40+ years in the making) of terrestrial ecological community data—oh, what fun! All the while, I continually reflect on how lucky I am to have attended graduate school at the MSU Department of Geography, Environment and Spatial Sciences, where lasting friendships and working relationships were forged and remain strong to this day. I live in the woods north of the Manistee River with my wife Katy (a certified professional midwife) and our three wonderful kids, Sylvia (8), Mary (5), and Oliver (2). On occasion, I can still be found on stage with my band, Breathe Owl Breathe. I miss my Triple G cohort! I hope all of you are well and inspired by the work you do.

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

Greetings from Kansas! Some relief from COVID made travel in 2021 safer for us all. Bobbie and I spent eight days with our children and grandchildren in northern Vermont and Boston. But we also made several exciting trips in Kansas. One of the places we "discovered" was the geographic center of the Lower 48 conterminous states in north-central Kansas.



Alumni News

DEE JORDAN ('20, PH.D.)

Geography Alum Dee Jordan is a Dean's Postdoctoral Research Fellow at Harvard Medical School in the Department of Global Health and Social Medicine. Since completing a dual Ph.D. in Geography and Environmental Science and Policy in 2020, Dee has been elected to the council of the American Geographical Society - the oldest professional geographical organization in the United States and appeared on PBS Kids' Curious About Careers to share her experiences in Health Geography. (See it [here!](#))

In 2021, Dee developed an [online anthology](#) celebrating Black Geographers worldwide and their contributions to the discipline, starting with the first cohort whose degrees were conferred between 1900-2000. The anthology, hosted by the American Geographical Society, is currently enrolling the second cohort of Black Geographers with degree conferrals from 2001-2010. Dee also won a National Institutes of Health Loan Repayment Award in Health Disparities Research in 2021 from the National Institute of Allergy and Infectious Diseases. She also co-created and co-instructed the first diversity, equity, and inclusion (DEI) Responsible Conduct of Research (RCR) curriculum, a required course, for Harvard Medical School Postdocs and affiliates.

Dee closed out 2021 with the publication of a co-authored manuscript titled "[Exploring Persistent Racial and Ethnic Representation Disparity in U.S. Geography Doctoral Programs: The Disciplinary Underrepresentation Gap.](#)" A second manuscript on the Advancing Geography Through Diversity Program (AGTDP), a framework to address the underrepresentation, which Dee founded while a doctoral student in geography, is slated for publication in early 2022.



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.



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MATTIE KELEPILE ('19, PH.D.)



Hi Spartan Geographers! This is Mattie Kelepile. I graduated with a Ph.D. from this wonderful Department in 2019. I got hired in the same year at my former undergraduate Department of Environmental Science at the University of Botswana. I teach and research in the field of Medical and Population Geography. With the skills I learned from MSU Geography, in 2021, three other colleagues and I were selected to be part of the COVID-19 Botswana Presidential Task Force, designing COVID-19 maps to track the country's weekly confirmed cases. Another thing that I learned from MSU Geography is the importance of relationships and networks. I am still very much in contact with my Ph.D. advisor, Dr. Grady. We have been working successfully on manuscripts together. I miss everyone back in snowy Michigan. As I always say, I can't wait for COVID-19 to end so that we all reunite at the cool AAG Geo parties! Go Green!

PAUL MCCORD ('11, MS)

It's been several years since I sent an alumni update, and in that time, A LOT has happened. My daughter, Laina, is three years old and absorbing nearly everything she sees and hears. One of her favorite phrases these days is "Go Green!" I have no idea where she learned it. Couldn't be her Spartan-loving Dad!

In the years since graduating from the Master's program in 2011, I completed a Ph.D. from Indiana University in 2017 and returned to MSU as a postdoc from 2017 to 2019 -I just couldn't stay away. I've since transitioned to the private sector to team up with an awesome group of GIS'ers at OHM Advisors, where we flex our creative muscles to build some amazing apps and maps. I recently picked up my GISP certification as well; always good to add a few more letters after your name! Finally, I joined the MSU Geography Alumni Advisory Board in 2020, so I still feel closely connected to all of the talented faculty and students in East Lansing. Go Green!



Alumni News

LISA-MARIE PIERRE ('19, PH.D.)

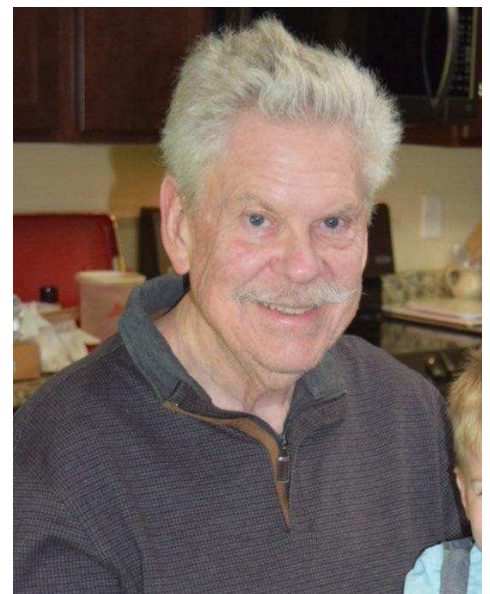
After graduating, I worked at Bronx Community College in the Division of Workforce Development & Continuing Education, where I managed economic development programming. A highlight of my time there was writing an awarded entrepreneurship grant of \$500,000 from the Blackstone Charitable Foundation. In November 2021, I transitioned from that role to work at an innovation and strategy consulting firm called Luminary Labs. In my role as a Senior Open Innovation Associate, I work with government clients such as the Department of Education on CTE CyberNET, a national cybersecurity teacher professional development initiative, as well as providing strategic guidance on the Build Back Better Regional Challenge in partnership with the Economic Development Agency.

During my time at MSU, I created a system to help me navigate the uncertainty of a Ph.D. program. I created a workbook and workshop, which I shared with my peers and students. In October 2021, I extended and published that work into a journal called the *Intellectual Will: A Guided Journal for Self-Discovery in Uncertain Places*.



RICK SAMBROOK ('92, PH.D.)

Dr. Rick Sambrook retired in August 2021 after serving for 12 years as Department Head in Geography & Geology at Eastern Michigan University. After graduating from MSU, Rick held full-time visiting positions at Ball State University, in Muncie, Indiana, at Miami University in Oxford, Ohio, and Eastern Kentucky University, in Richmond. He secured a tenure-track position (1994 through 2009) at ECU, where highlights included service as Chair from 2005 through 2008 and oversight of the successful merger of the Geography & Geology departments. Rick was among the first faculty members at ECU to develop online course delivery and taught general education courses via interactive television to hundreds of place-bound students through the Kentucky Tele-linked Network (KTLN) for over a decade. Dr. Sambrook also served as Director of the Ecuador study abroad program for the Kentucky Institute for International Studies from 1999 through 2006. Rick and Stephanie still live in Ypsilanti, Michigan.





Sonali Sharma - Winter Campus Photo Contest (GEO435 Fall 2021)

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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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.



FROM THE FIELD: RURAL KYRGYZSTAN



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

During July 2021 Professor Liz Mack and Professor Geoff Henebry, accompanied by Dr. Monika Tomaszewska and Dr. Munavar Zhumanova from the Center for Global Change and Earth Observations, and supported by collaborators from the American University of Central Asia, led a three-week field campaign in rural Kyrgyzstan to collect data under the auspices of a NASA Land Cover Land Use Change project. Professor Mack led the team conducting 427 social surveys and 29 in-depth interviews in settlements in Naryn and At-Bashy rayons in central Kyrgyzstan. Questions focused on household livelihoods, experience with labor migration, use of remittances, and impacts of environmental shocks and the COVID-19 pandemic. Professor Henebry led the team gathering data along 48 paired 100m orthogonal transects to characterize the condition of winter, transitional, and summer pastures using high-resolution digital photography, soil moisture measurements, and structured observations of ground cover and vegetation composition. These transects were collected across a latitudinal range of 1.17° and longitudinal range of 1.74° and elevations from 1950 m (6398 ft) to 3553 m (11,657 ft). Professor Henebry

has been working in Central Asia since 2001 and in Kyrgyzstan since 2015. The photo that graces the cover of the 2022 *Spartan Geographer* was taken by Dr. Mack and shows a typical Kyrgyz homestead. Below are additional scenes from the team's field work.



Spartan Geographer

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