

# Spartan Geographer

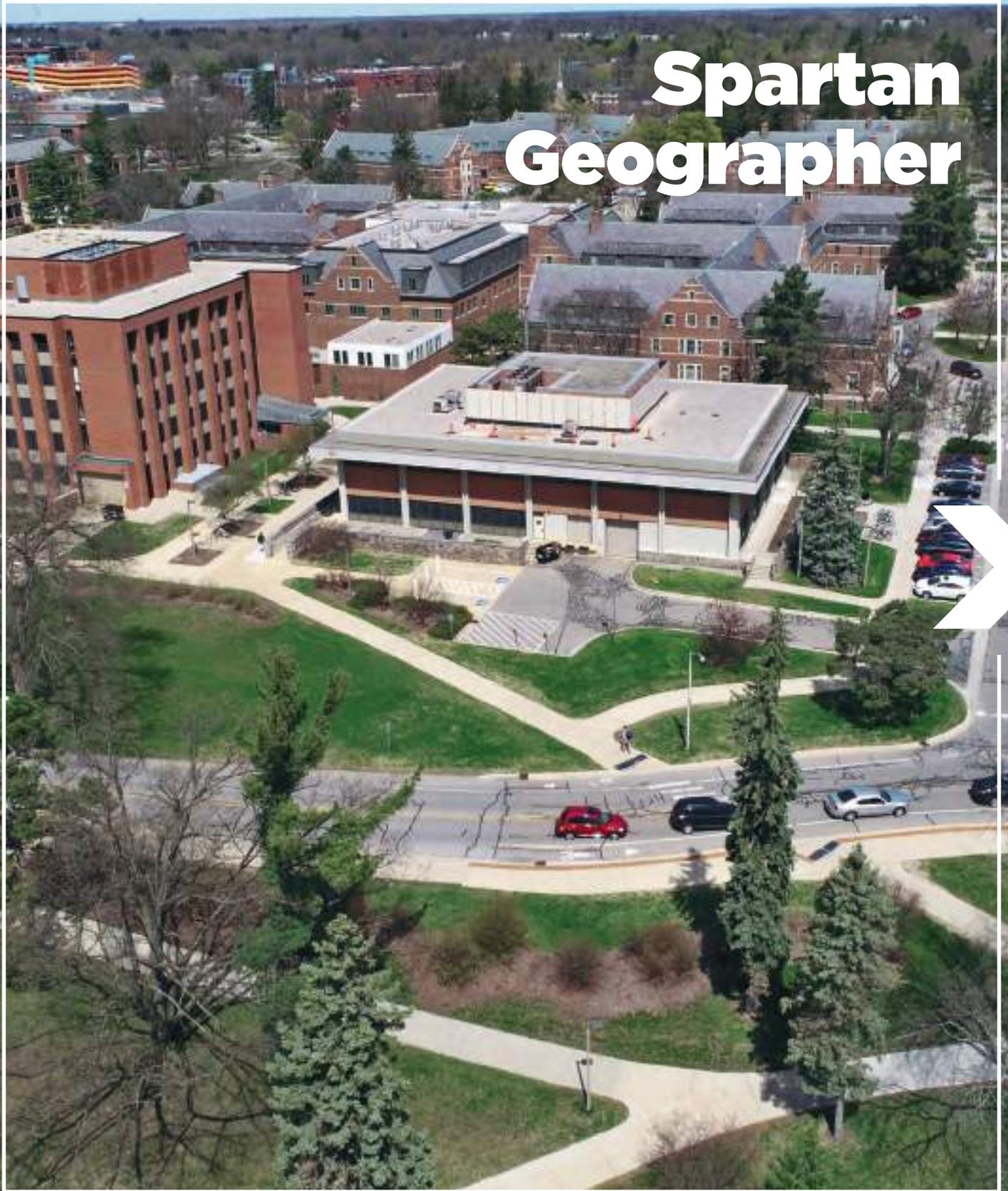


Photo by Bob Goodwin



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

# Sustainability Statement

We are happy to announce that this year we have changed our interior pages of this newsletter to 100 percent recycled paper. This is to help minimize the environmental impact of our publication. We hope for this to be the start of a more sustainable newsletter. Due to this switch in paper, we are able to save approximately:

**29**

TREES

**2,120**

GALLONS OF WATER

**4,060**

POUNDS OF GREENHOUSE GAS EMISSIONS

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# Message from the Chair



## ALAN ARBOGAST

PROFESSOR AND CHAIR

Hello Spartan Geographers!

On behalf of the department, I hope all are doing well. Just like that, it's time for another newsletter. You will likely notice that this year's production has a more polished look than older ones. MSU, and our College, are in the midst of a major effort to standardize the brand in campus publications. In prior years, we did our own thing as far as layout in the newsletter was concerned. Some level of consistency persisted across the years, but it was a loose approach. We are now working with a template given to us by the College of Social Science, our home College. This transition is a good thing, as I believe it sharpened the appearance of this year's effort.

Last year I wrote quite a lot in my introduction about the massive upheaval that had embroiled MSU in the previous months. Although things have settled somewhat since that writing, the campus continues to be in a period of transition. It starts at the top with the hiring of President Samuel Stanley and his arrival last August. President Stanley came from Stony Brook University in New York. Shortly after he moved here, Provost June Youatt resigned under pressure related to the difficulties of the previous couple of years. Interim Provost Teresa Sullivan, who is an MSU alum and former President of the University of Virginia, replaced her for a one-year term. One has the impression that the ship is now moving toward the right direction—it's certainly a new one—although some difficult challenges remain.

In our own College, Dean Croson recently accepted a position as Executive Vice President and Provost at the University of Minnesota, one that she will begin in late March. Dean Croson was at MSU for three years and we all knew that she yearned to be a Provost at a R1 university. In her short time here, she made some significant changes in the way the College operates, such as creating a new mission statement and strategic plan that provides needed direction and identity. The College will soon have a new interim Dean, who will likely be in the position until August 2021. Closer to home, Joe Messina took a position as the new Dean of the College of Arts and Sciences at the University of Alabama after serving as the Associate Dean for Research in the College. Many of you may remember Joe, who was also a member of our Department. He is missed and we wish him the best. Roll Tide!

Although we are in the midst of abundant external change, the department keeps humming along. We are now ranked in the top five of research departments nationwide because our faculty are cranking out high quality work at a prodigious rate. Last year our faculty collectively produced 122 peer-reviewed papers, one book, 70 non-refereed papers, and 210 delivered papers. They also submitted 79 proposals to various agencies and obtained a bunch of impressive grants. Our faculty won several awards, which are highlighted later in the newsletter.

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We hired a new coastal geomorphologist, Ethan Theuerkauf, who began last August and is working on erosion and sediment transport along Lake Michigan. Given the ongoing record high lake levels, which are causing all sorts of chaos on the lakeshore, the timing of his arrival is serendipity indeed.

On the student front, our current group of graduate students is doing great work. We brought in a strong new group of 10 in 2019, including four individuals associated with our efforts to enhance diversity within the discipline. Per the norm, our new students kicked off their programs at our annual GeoCamp in August at Camp Wa Wa Sum on the AuSable River. This century-old fishing camp (now an MSU property) is a beautiful place to get to know one another before the semester begins. On the other end of the temporal spectrum, we awarded PhD degrees to nine students in 2019: Victoria Breeze, April Frake, Albert Fulton, Cadi Fung, Matihogonolo Kelepile, Libby Kutch, Kylsey Nyland, Bradley Peter, and Lisa-Marie Pierre. Six students graduated with an MS: Thomas Bilintoh, Kara Komoto, McKenzie Kulseth, Connor Plensdorf, Shiqi Tao, and Sara Torres. Congratulations to all!

With respect to our undergraduates, we continue to have about 100 in the program. Most are enrolled in our Environmental Geography or Economic Geography majors. A huge ongoing transition is that Gary Schnakenberg is no longer our undergraduate advisor. This is Gary's last year with us because he will move to New England to be with his wife, Rebecca, in August. His decision makes perfect sense, of course, but he will be missed greatly. He has done a wonderful job in that role. To his credit, and to our great benefit, he wanted to stay through this year to help with our transition to a new undergraduate advisor. He is also teaching a full complement of classes. We are very fortunate that Ryan Shadboldt, a former PhD student of ours, wanted the job and began last August. Ryan and Gary have worked together closely in the past months to ensure that all bases are covered and I'm relieved that the department remains in great hands on the advising front.

We also continue to promote our department widely. The highlights of these efforts are our annual Career and Internship Fair in the last week of February, as well as our annual big event during Geography Awareness Week (GAW) each November. Our Career and Internship event last year was our best yet. We moved it from Bessey Hall where it had been held for years to the Kiva at Erickson.

The move gave the event a more intimate feel and a number of students scored good jobs and internships. Our featured speaker during GAW was Yoruba Richen, who presented her award-winning documentary *The Green Book: Guide To Freedom* to a packed house at the Pasant Theatre in the Wharton Complex. It was a very poignant film and the reaction to it was great!

In closing, remember that the newsletter is a representative slice of life in the department. It leaves out many things, such as all of the great work that our energized Advisory Board is doing on our behalf. It does include a piece, however, about our very first department golf outing last fall, which the Board sponsored! The newsletter only skims the fantastic work our onGEO group is doing with our online courses, and the success we've had marketing our Professional Certificate in GIS. We have a fantastic staff (pictured below), including Becky Young, Claudia Brown, Tamsyn Mihalus, Ana O'Donnell, and Sharon Ruggles that keep the trains running on time. In short, although this past year was difficult on campus, our Department remains a wonderful place to work!



Left to Right: Tamsyn Mihalus, Claudia Brown, Becky Young, Ana O'Donnell, Sharon Ruggles.

# Faculty Focus

## ELIZABETH MACK

ASSOCIATE PROFESSOR  
AND ASSOCIATE CHAIR

I am excited to be serving the department as Associate Chair. In addition to this position, I am an Associate Professor in economic geography and director of the Mack Lab ([elizabethmack.com](http://elizabethmack.com)). My research program contains three main areas: broadband and new information technologies, water affordability and sustainability, and entrepreneurship. As the first official associate chair of the department, I have three primary responsibilities: faculty liaison for the graduate-student led colloquium series, attendance at monthly meetings for associate chairs, and assistance with the newsletter you are reading now.



Over the last few years the department has added several new faculty, graduate students and staff. This presents a fantastic opportunity to work with AI to carve out new directions and initiatives. This semester, using feedback from faculty and students, the graduate students and I are working to re- envision our colloquium series. We hope this will draw people from across campus and make our department the place to be on a monthly basis to learn about all types of geographic research. I will also help promote the exciting research and community engagement of our students and faculty.

As a new position in the department, I welcome suggestions as they may come to you and look forward to serving the department in this capacity over the next few years.

## JEFF ANDRESEN

PROFESSOR

Jeff 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. Current funded research projects with which he is involved include a USDA NIFA-funded project, “Developing and promoting water-, nutrient-, and climate-smart technologies to help agricultural systems adapt to climate and societal changes” led by Dr. Bruno Basso of MSU Geology. The project considers the development of new technologies to improve agricultural productivity in the Midwestern USA where historical trends towards a wetter and warmer climate during the past several decades have resulted in new challenges and opportunities.

As the State Climatologist for Michigan and an Extension Specialist with MSU Extension, Jeff is responsible for providing weather- and climate-related information and professional expertise to the university and to the general public. Jeff serves as Director of the Michigan State University-based Enviro-weather Project, which provides detailed weather-based information to support agricultural pest, production, and natural resource management-related decision-making. Since the inception of the system in 2006, data requests and visitor ‘hits’ have grown from less than 500 per day initially to more than 20,000 per day during 2019. The system just passed a significant milestone during 2019 with the addition of the 100th station in the system’s mesonetwork of automated weather stations across Michigan and Wisconsin. The system is available for free public access at [enviroweather.msu.edu](http://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. With a geographical focus on the Great Lakes basin, 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.

Jeff has served as U.S. Representative from Region IV to the World Meteorological Organization (WMO) Commission for Agricultural Meteorology (CAgM) Agrometeorological Services Implementation/Coordination Team since 2015 and as an advisor to the USA delegation in the 17th Joint Session of the CAgM held in Seoul, South Korea in 2018. The organization enables the global agrometeorological community to review advancements, reassess priorities, and revise plans for improving the use of weather and climate information to support agriculture. In December 2018 Jeff was nominated and appointed as representative from region IV (North America) on CAgM's newly created Expert Team on Information Communication Technology Applications.

Jeff teaches his GEO 402 agricultural climatology course and a new world regional climatology course, GEO 302 "Climates of the World". He currently serves as advisor to PhD student William "B.J." Baule and co-advisor to new M.S. Student Diane Wang. B.J.'s thesis research considers the potential impacts of historical and projected future climate change on corn production in the Midwestern USA. Former PhD student Daniel Ddumba (PhD) completed his degree program in 2018 with a research project examining the feasibility of traditional crops such as sweet potatoes to increase local food security in Africa under a changing climate. Daniel now is now a faculty member in the Department of Geography, Geoinformatics and Climatic Sciences at Makerere University and Director of Redan Institute of Innovation in Kampala, Uganda.

Jeff Andresen on a recent site visit to the High Plains Regional Climate Center in Lincoln, NE.



Another former PhD student Ishara Rijal completed her degree program with a project examining the use of water mist to delay phenological development of tree fruit (through latent cooling) and increase the resilience of the crop to spring freezes. Ishara is now Agricultural and Environment Science Research Program Coordinator at North Carolina Agricultural and Technical State University in Greensboro, NC.

Best Wishes for a Happy, Prosperous, and Productive 2020 and Go Green!

## GUO CHEN

### ASSOCIATE PROFESSOR

Guo recently finished a prestigious Wilson Fellowship in residence at the Woodrow Wilson Center in Washington, DC, and a one-semester sabbatical leave. She was told that "this past year [the Center] had over 300 applications for 18 spots. The numbers are one thing, but the Center tends to get a large number of qualified applicants and high-quality proposals—we have very few omits every year. The quality makes it even more difficult to get down to the recommended group. It is also a multi-tiered process—internal and an external panel of experts made up of academic and practitioner experts—as well as the Fellowship Committee of our Board of Trustees who come from academia, business, and government and have final approval. It is an extremely competitive process." While at the Center, Guo attended weekly scholar seminars, where she presented her project on recycling migrant slums and housing inequalities in Beijing and received positive feedback. She worked with interns to transcribe all her prior community interviews in Nanjing and Shanghai.

Guo and other fellows from Wilson Center gathering for lunch, 2018.





Orphanage at Kathmandu, Nepal, 2018.

Years after the earthquake in 2015, Nepal still faces great challenges to rebuild homes, buildings and roads. A trip from Tibet-Nepal border to Kathmandu via road involved long drives (and an 8-hour drive on bumpy mountain roads on the Nepalese side) and much observations of the differences between the two sides of the border despite shared Himalayan lands.



Due to a mounting waste problem, China has closed the base camp on its side of Mount Everest since 2019.

She also engaged in invited talks and workshops in and beyond the D.C. area (from a One Child Policy panel in Maryland to an Urbanization Series at UPenn and a Housing conference in Hong Kong, etc.) in addition to geography conferences. Guo took the opportunity to learn from scholars and staff, policy researchers, editors, media experts, and documentary producers she met with at the Center. These helped to shape her ideas about her project on slums in urban China. She received valuable miscellaneous training to become a public intellectual. She gave a TV interview and wrote three op-ed articles ([check out a most-read piece at China Environment Forum](#)).

Following a busy Fellowship year, a short sabbatical further allowed her to link her fieldwork and research with academic scholarships and public affairs discourses outside the U.S. She is also grateful that this short leave allowed her some flexibility to be with her family while doing fieldwork and take her daughter to the field. During the short sabbatical, Guo continued to interview migrants in Beijing, visited Tsinghua University, volunteered on recycling initiatives in rural Hebei Province, and completed a short-term Visiting Scholarship at the University of Melbourne. In her spare time over the past years, she and her family traveled to Tibet (Mount Everest base camp) and Nepal, Australia and New Zealand, and other exciting places in Asia and Europe, from Malaysia to Russia.

These experiences have helped redefine her work in an exciting way. After returning to MSU, Guo takes her time to balance research, teaching and service with family and personal health. During the transitional time, she is working on submitting several ongoing revisions and a couple of coauthored articles with Chinese scholars. She serves on the editorial boards of *The Professional Geographer* and *Journal of Urban Affairs*. In addition to teaching *Global Inequality*, she looks forward to offering *Geo337* to a broad student audience as an exit course for an expanding college minor, *Asian Studies*. Along with several other faculty, Guo has been recently elected to serve on a university-wide advisory board for MSU's *Asian Studies Center*.



Local garbage sorting and recycling initiative led by Liwen Chen and student volunteers in rural Hebei province, 2018. Households received free sorting bins to place their sorted trash outside their doors for collection in this village that is increasingly besieged by trash dumps.

## **WILLIAM MCCONNELL**

ADJUNCT ASSOCIATE PROFESSOR

One of the great side benefits of my new adjunct appointment in GEO is that it gives me a more straightforward answer to the question you always get when you mention that you work at a university: “what department?” As it happens, my main appointment is in the Center for Global Change and Earth Observations, which is administratively under the College of Social Science—not an easy thing to explain to in-laws at a holiday pot-luck.

In the rare instance when someone asks just what I do as a geographer, I tell them I study land use, which again, most people have heard of, or can at least conjure some sort of mental picture for. If their eyes haven't completely glazed over by that point, I might mention that we often use imagery from airplanes, satellites and drones to observe how the earth's surface is changing, and my specialty is figuring out who did what and why.



In the photo above, my neighbors are using a time series of aerial photographs—from the wonderful RS&GIS archive—to consider converting the Homeowners Association's 6-acre park to a more environmentally friendly land use. I have similar photos from NSF-, NASA-, or USAID-sponsored research in places such as China, Thailand and Madagascar demonstrating my commitment to the principle and practice of what I call 'collaborative planning'—in which a broad range of stakeholders come together to make use of available data to share their knowledge of places and their visions of what those places could become.

Then, if they haven't nodded off, I might sneak in the fact that I often do this work in international settings—like Africa, or Asia, or Latin America—which invariably causes them to flee to the desert table. Folks generally have an easier time understanding the land use work I do outside of academic work, such as serving on my township environmental commission, or on university committees addressing land use issues in and around campus.

## **FREDERICK “FRITZ” NELSON**

ADJUNCT PROFESSOR

*The Cold Trail*

The MSU permafrost group, currently consisting of Adjunct Professor Frederick ('Fritz') Nelson, Associate Professor Nathan Moore, and second-year M.S. student Raven Mitchell, had a busy field season in 2019. Nelson, Mitchell, and Dr. Kelsey Nyland (MSU PhD 2019) spent two months in Alaska, Yukon Territory, and northwestern British Columbia working on several projects concerned with permafrost and periglacial (cold-climate, nonglacial) landscapes.

In July, for the third summer in a row, the group worked out of the Juneau Icefield Research Program's Camp 29, a high-elevation hut near Atlin, British Columbia. Work focused on installing field instrumentation for Mitchell's research on the impacts of hillslope hydrology on landform development in an alpine periglacial environment. The instruments were purchased with funds provided by MSU's Graduate School, College of Social Science, and Department of Geography, Environment, and Spatial Sciences.

In early August Mitchell and Nyland took part in the International Permafrost Summer School, a program operated jointly by George Washington University (GWU) and Moscow State University. The group of 11 students and 3 faculty from Russia and the U.S. traversed Alaska from north to south, investigating permafrost features and climate-change impacts in Fairbanks, the University of Alaska's Toolik Lake Field Station, and Prudhoe Bay.

In mid-August, the group was joined by former MSU Assistant Professor Grant Gunn, recent MSU graduate Carly Finegan, and professors and students from GWU for work on the Circumpolar Active Layer Monitoring (CALM) project on which Nelson and Moore are Co-Principal Investigators, Mitchell is a Research Assistant, and Nyland is a GWU postdoctoral scholar.

CALM, now in its fifth 5-year block of funding from the National Science Foundation, maintains more than 200 permafrost observatories in both polar regions, the Tibetan Plateau, and several mid-latitude mountain ranges. The MSU and GWU researchers are responsible for nearly 20 of these locations in northern and western Alaska. Many of the sites are in very isolated locations, and reaching them requires helicopter or light fixed-wing aircraft.

In December, Nelson, Nyland, Mitchell, and Clayton Queen (MSU M.S. 2018) made presentations at the first Southern Hemisphere Permafrost Conference, sponsored by the International Permafrost Association. The conference gave scientists, working primarily in the Northern Hemisphere, an opportunity to interact with Antarctic scientists, and to see the magnificent cold landscapes of New Zealand's South Island through three extended field trips.

In 2019, Nelson was a co-author of two papers concerned with the hazards posed by thawing permafrost, published in the Nature family of journals. A map from one of these publications, depicting potential permafrost-related hazards in the Northern Hemisphere, will be featured in a 16 x 5 foot display as part of an exhibition at the Guggenheim Museum in New York City running from February to August 2020.



Raven Mitchell and Kelsey Nyland preparing for CALM field work at Ivotuk, a remote location in the northern foothills of the Brooks Range, August 2019.

## Quidders

The Quaternary Landscapes Research Group (QLRG) is an informal cluster of geographers and our colleagues working on research questions related to Quaternary landscapes in the Great Lakes region, particularly the processes involved in their physical formation as well as their use by humans. The group was established in 2008 with the overall goal of fostering and maintaining an interdisciplinary network of like-minded scholars on campus interested in improving our historical understanding of the Great Lakes region. The QLRG is led by a core group of geography faculty, including Drs. Alan Arbogast, Randy Schaetzl, Ethan Theuerkauf, and Catherine Yansa. Each semester the group sponsors a series of lectures, called “Quidders Talks”, to provide a forum for shared intellectual exploration and discussion. The talks feature exciting new research being conducted by faculty, graduate students, and professionals from all aspects of Quaternary studies. To be added to the Quidders mailing list please contact Chris Baish at [baishchr@msu.edu](mailto:baishchr@msu.edu). More information on the QLRG, including links to publications, can be found at: [geo.msu.edu/extra/qlrg](http://geo.msu.edu/extra/qlrg)



Left to right: Randy Schaetzl, Alan Arbogast, Catherine Yansa, Ethan Theuerkauf.

## GARY SCHNAKENBERG

### SENIOR ACADEMIC SPECIALIST

In 2007, I stood at a crossroads. In 2020 I find myself at another...

Back then, I was living in New Hampshire, having just remarried a few years after my late wife's passing. I had been teaching high school for 22 years, and was wondering if there was something else in my future. Though a History major as an undergrad, I had been going deeper into geography in the previous decade and a half, to the point that I was getting known as "the geography guy." I participated in District and State-level geography curriculum development, and worked for several years as an adjunct instructor at Keene (NH) State College. After a trip to South Africa for teachers in 2004, I really seriously considered further study.

My wife was a Professor of Social Foundations of Education in EMU's Department of Teacher Education, and as I talked about this possibility, she finally said, "You know, there's no mystery about how you go about doing this... find a place where people are doing things you're interested in, and APPLY!" So I looked around. I decided to investigate programs I could reach from my home in New Hampshire, or her house in Ypsilanti (her being in NH at the time is another story!)

I first checked out Clark University in Worcester, Massachusetts, but had a terrible experience; they were dismissive because I was "only a teacher" and "they turned out serious geographers." I reported the conversation to my wife, who was incensed. She said I should email Harm de Blij (whom I had met a few times), tell him what I was interested in, and ask for recommendations. We set up a meeting in Oklahoma City at that year's NCGE over a glass of wine, and as Harm would have said, "And the rest... is geography!" MSU took a chance on a near-geezer and admitted me in Fall 2008. I completed my PhD in Summer 2013 under Antoinette WinklerPrins (with one academic year back at my high school job in 2010-2011). Immediately after defending, I was hired with a split assignment: half-time as Department Undergraduate Advisor and half-time as Instructor. Although I think that Dick Groop had first brought the idea up with me, this may have been Alan's first hire as Chair!

The past seven years have flown by! As prior issues of the newsletter have pointed out, the Department launched a push to increase our number of majors right about the time of my arrival, and it really paid off.



We have seen steady growth, aided by the introduction of the BS in Economic Geography major in 2016, which has become our most popular (I think Alumni Advisory Board member Brett Grech was its first grad!). In addition to Advisor duties, I taught a section of GEO 151 or ISS 310 (People and Environment) each semester, ran 'Grandparents' University' sessions four consecutive summers, and had the pleasure of being Committee Chair for Ph.D. student Laura Johnson, now on the faculty at Humboldt State University in Arcata, California. I also managed to maintain a tiny bit of scholarship: I was lead author on a couple book chapters, and presented annually at AAG and several times in Finland on research in rural Jamaica and geographic education. In 2016, Alan told me he thought it would be a good idea if I taught Senior Seminar. Since I had been the initial contact for students beginning their journey within the Department, it made sense for me to help complete it! I agreed, and the last three years of that class have been very fulfilling. I was promoted to 'Senior Academic Specialist.' Things have been going great! So, what's the "crossroads?"

After 33 years at EMU, my wife retired in Summer 2019, and relocated with our dogs to the house we maintained in New Hampshire. As we were talking about that decision, the obvious question arose... what would I do? On the one hand, we had sold our house in Ypsilanti. On the other, I was not feeling like I was 'finished' with my working life. I met Alan for lunch, and pitched a proposal: I would transition out of being Advisor and shift to a full teaching load for the 2019-20 academic year, enabling me to be around to help my successor learn the various systems and act as a general backup/support.



Also, Tourism in Regional Development had not been taught in several cycles, yet was one of the 400-level courses in the choices for our EconGEO degree. Since another course was also not a regular offering, it meant that those students had a choice on paper of three out of six courses, but in reality it was three out of four, with only one of them an annual offering!

Alan was supportive, and we were able to hire a supremely capable replacement in Dr. Ryan Shadbolt, who was up to speed without a hitch. So, having taught GEO 459 and Senior Seminar in the Fall, I have large classes of GEO 151 and ISS 310 this Spring, while renting a small house that is only TEN MINUTES from the office... far better than the hour and twenty minute commute I used to have! When we first hatched this idea, it was kind of open-ended... maybe a couple of years, depending on how I liked it and how it worked.

Although a lot works well—flights from Detroit to Manchester are easy and relatively inexpensive, I see a lot of my daughter and our grandson, and I love the teaching assignments I have—this academic year is going to be my final one in East Lansing.

This has not been an easy choice. I love this Department. I am grateful for what it and its members have given me. The quality of any institution is measured by its relationships, and I deeply value those I have made here. I like that laughter is so frequent at faculty meetings. I am thankful for everything that the outstanding academic and support staff do to make this place work for us all. Mostly, I appreciate the many students I have come to know, both through the Advisor role and in the classes I have been privileged to teach.

But, if I have learned anything about life it's that it's short, and being away from my wife and our animal companions is hard.

So, this Spring I will be heading back to New Hampshire, both with anticipation and some heartache. I will likely seek to pick up a course at a nearby college/university to teach, and hope to maintain a connection with the Department with our online course team. From the bottom of my heart, I thank everyone who has made my time here so fulfilling, and hope to take your good wishes on to my Act III!

## **RYAN SHADBOLT** UNDERGRADUATE ADVISOR AND INSTRUCTOR

### *Love Letter to East Lansing*

Harm de Blij once taught me about The Power of Place. You recently illustrated this point clearly when you signaled me home once again. A couple years ago I turned my back on you as I was swept off my feet by the surface beauty of another. When we first parted ways, I did not fully recognize and appreciate all we had experienced together. Admittedly, it was hasty to chalk up our first encounters as superficial. Sure, that new locale was enticing with forests draped in snow, rolling old mountains, and a big lake. However, after that honeymoon period came to an end, I discovered that the new place lacked your inviting charm, which led to rethinking my priorities.

While away, I started to realize all the things I missed about you—long walks we once shared, your vibrancy, and the diversity and friendliness of the people who call you home. There were favorite memories like hikes in nearby park trails, picnics and bonfires, sharing delightful dinners, and enjoying the local art and music scene. You are full of quaint, neighborly appeal when I need it. Yet, when I crave it you can be cosmopolitan and cultured. You brought me closer to the people I trust and love like family, friends, and great colleagues. My family will enjoy life here. We can experience snowy holiday gatherings inside sitting around a table set with love.

These new memories mean even more now that Baby Scout has joined our family. You will provide a safer, more welcoming space for him. I can admit now that in my younger years I once took some of these things for granted and did not fully appreciate them until they were gone. You have played a large role in shaping the person I am today.

Thank you for calling to give me another chance. I now understand just how important you are in my life. Hopefully you will soon forgive me and allow me to call you home again. You are where I want to be.



## **ETHAN THEUERKAUF** ASSISTANT PROFESSOR

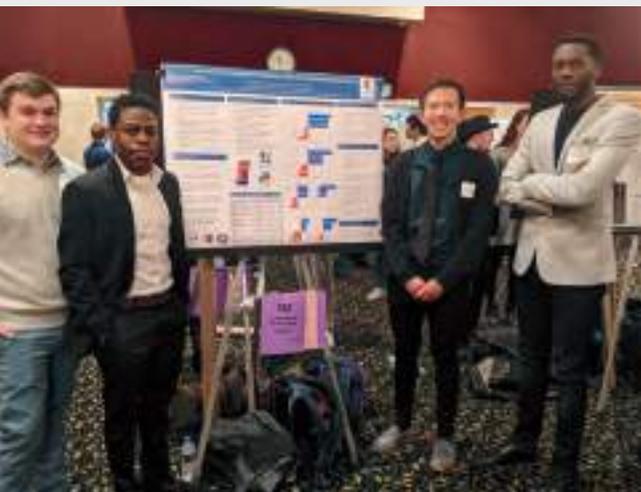
Hello MSU GEO alums and friends! I am honored to have joined the department as an Assistant Professor in August 2019. I am a process-focused coastal geomorphologist that studies how coastal landscapes respond to physical forces such as fluctuating water levels, storm waves, and winter ice. My research has a heavy emphasis on management and decision-making applications, as coastal zones experience myriad challenges related to climate change and human development. Prior to arriving at MSU, I cut my teeth on Great Lakes coastal research as the Coastal Geologist for the Illinois State Geological Survey at the University of Illinois at Urbana-Champaign. I am a Midwest-transplant, originally hailing from the South.

I grew up in Virginia and received a BS in Geology from the College of William and Mary. After graduation, I moved further south and attended the University of North Carolina at Chapel Hill for my MS and PhD degrees, which are both in Marine Sciences. My MS research involved critically evaluating the accuracy of traditional beach survey methods in comparison to modern 3D methods, such as LIDAR. This work indicated that selecting the right “tool” for the job when mapping coastal change can dictate the success of a coastal management action. My PhD research started with a study examining beach erosion in response to sea-level anomalies. This study concluded that these frequent, yet low-magnitude water level variations can facilitate as much or more erosion than a hurricane. I ended my doctoral work examining the role erosion plays in dictating whether saltmarshes store carbon from the atmosphere. Often, we think of marshes as carbon sinks, but shoreline erosion can actually lead to the loss of carbon and other important ecosystem services.

These themes carry forward to the work my lab at MSU GEO conducts, which broadly focuses on three questions: (1) how are coastal environments changing (particularly in the Great Lakes), (2) what drives those changes, and (3) why do we care about those changes? My students and I are currently involved in research projects ranging from unraveling the role of changing winter shore ice conditions on coastal erosion and sand transport to understanding how bluff retreat rates along the Michigan shoreline have changed over the last century to documenting the fate of eroding sand from Michigan’s beaches and dunes during high lake levels. For our research, my lab uses a variety of field and laboratory methods including lake-bottom mapping with research vessels to airborne remote sensing with drones to GIS-based computer analyses. I am also involved in a collaboration with other GEO department faculty on a National Science Foundation project that focuses on training citizen scientists to collect coastal erosion data using drones. Beyond the academy, and most importantly, I am a father to a 16-month old girl named Harper and a husband to my wife Kristen. I enjoy spending most of my free moments playing with Harper, doing renovations around our house with Kristen, and hiking with our black lab Summer.

## **Undergraduate News**

Geography students participated in the University Undergraduate Research and Arts Fair (UURAF). It is an annual April expo at which students share their work. This team of GEO students (from left: Joey Seitz, Ariclenes da Silva, Vincent Black, and Hugo Victor) presented an analysis of data they collected at MSU from more than 1900 cloud-based surveys. This work was part of a large study at four universities around the country regarding student perceptions of geography-based keywords; important for understanding interest levels in geography as a discipline. The data collection was supervised by Dr. Amber Pearson and Dr. Gary Schnakenberg, and contributes to a forthcoming article in the *Annals of the American Association of Geographers*.



# Gamma Theta Upsilon Spring Reception



**Initiates:**

Left to Right: Dr. Gary Schnakenberg (GTU Chapter Advisor), Ida Djenontin, Dan Wanyama, Gabriela Shirkey, Joey Seitz, Ana Rivera, Kyle Redican, Kevin McKeehan, William Baule, Christopher Baish.

Missing from photo: McKenzie Kulseth.



**Graduate and Undergraduate Research Presentation Competition Winners**

Left to Right: Jonnell Sanciangco (second place), Raven Mitchell (third place), and Presenter Dr. Jeff Andresen.

Missing from photo: Jonah White (first place).



Marjorie and Lawrence Sommers Graduate Fellowship for International Research and Travel presented to Raven Mitchell (left) by Laurie Sommers (right).



E. James Potchen Award in Geography. Left to Right: Undergraduate of the Year Crystal King, Chair Dr. Alan Arbogast, Graduate of the Year Dee Jordan, and Dr. Joe Darden.



Owen Gregg Global Climate Change Research Award recipient Dan Wanyama.



Owen Gregg Global Climate Change Research Award co-recipient William Baule.



Dr. Harold A. 'Duke' Winters Memorial Fellowship in Environmental Geography awarded to Matthew Hadden.



Daniel Jacobson Outstanding Cultural Geographer Award recipient Dustin Rademacher.



Michael A. Graff Dissertation Completion Award to Kelsey Nyland.

# Honors & Awards



## CYNTHIA BREWER

MSU Geography Alum, Dr. Cynthia Brewer became the first woman to be awarded the O.M. Miller Cartographic Medal during the American Geographical Society's (AGS) 2019 Fall Symposium in New York City. The award has been given out since 1968, Dr. Brewer's contributions to cartographic design and data visualization techniques are an asset

to the discipline and improve the richness of the dynamic maps Geographers create and share with the world. Dr. Brewer was the doctoral student of Dr. Judy Olson (former Chair of the MSU Department of Geography).



## DEE JORDAN

MSU doctoral candidate, Dee Jordan became the first graduate student to receive the Association of American Geographers Enhancing Diversity Award. The annual award honors those geographers who have pursued efforts toward or actively participated in efforts towards encouraging a more diverse discipline. The award will be presented during the 2020 Annual Meeting Awards Luncheon in Denver. Among Dee's

many notable accomplishments, she founded and co-leads the Advancing Geography Through Diversity Program (AGTDP), the MSU Department of Geography graduate student recruitment initiative that addresses underrepresentation in the discipline.



## ELIZABETH MACK

Congratulations to Liz Mack for winning the Geoffrey J.D. Hewings award. This award is named after Professor Geoffrey J.D. Hewings who introduced and mentored numerous graduate students to the field of Regional Science. It recognizes contributions to Regional Science by scholars who have completed doctoral studies in the last ten years.



## JUDITH NAMANYA

Congratulations to Judith Namanya, PhD Candidate, who is a Women's Leadership Institute Award Winner in the College of Social Science. According to the College website, "the Women's Leadership Institute offers programming intended to support, advance, and empower students in achieving their leadership aspirations.

The Women's Leadership Institute Emerging Leaders Scholarship Competition asks students to reflect on what leadership means to them and how they aspire to lead. The scholarship and networking reception endeavor to inspire and assist students on their leadership journey through monetary support, evidence-based education, and facilitating high level networking." Judith says, "This recognition means a lot to me because I strongly believe empowering young women to take-up key leadership roles is key to sustainable development and transformation of societies."

# Colloquium



## **JULIE WINKLER AND JIQUAN CHEN WIN THE WILLIAM J. BEAL OUTSTANDING FACULTY AWARD!**

Two of our faculty, Julie Winkler and Jiquan Chen, have been recognized this past year for their stellar accomplishments. Both individuals received the William J. Beal Outstanding Faculty Award for their outstanding total service

to MSU. Julie won the award last year, just after the newsletter was produced, and Jiquan won it this year. Congratulations to Julie and Jiquan!



## **JULIE WINKLER RECOGNIZED WITH THE AAG LIFETIME ACHIEVEMENT AWARD**

It was a great year for Julie Winkler. In addition to winning the Beal Outstanding Faculty Award, she was also recognized by the American Association of Geographers as a new Fellow. According to the AAG, "Fellows will serve the AAG as an august body

to address key AAG initiatives including creating and contributing to AAG initiatives; advising on AAG strategic directions and grand challenges; and 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." Congratulations Julie!

Throughout the academic year, our colloquium series hosts respected scholars and professionals who lecture on current research and issues from various subfields of geography and from intersecting disciplines. It attracts students and faculty both from within the department and across campus, as well as members of the broader community—all are welcome! Topics covered during the recent fall semester include the geomorphology and stratigraphy of the lowan Erosion Surface by Phillip Kerr (Geologist, Iowa Geological Survey), geovisualization from MSU alum Joshua Stevens (Data Visualization Lead, NASA Earth Observatory), coloniality in Colombia by Dr. Nicholas Padilla (Assistant Professor, Western Michigan University), and water and nutrient fluxes in urban forests by Dr. Asia Dowtin (Assistant Professor, Michigan State University). If you thought you missed the opportunity to get your fill of snacks and thought-provoking discussion—fear not! The colloquial series resumes this spring starting February 14th. For colloquium updates/reminders, please contact: [Baishchr@msu.edu](mailto:Baishchr@msu.edu), [mitch893@msu.edu](mailto:mitch893@msu.edu), or [knauffja@msu.edu](mailto:knauffja@msu.edu).

Looking forward, the colloquium schedule is as follows:

February 14th- Dr. Julie Winkler, Michigan State University

March 13th- Dr. Harvey Miller, Ohio State University Geography

Colloquium Committee from left to right: Christopher Baish—MS student, Jarrod Knauff—PhD student, Raven Mitchell—MS student.



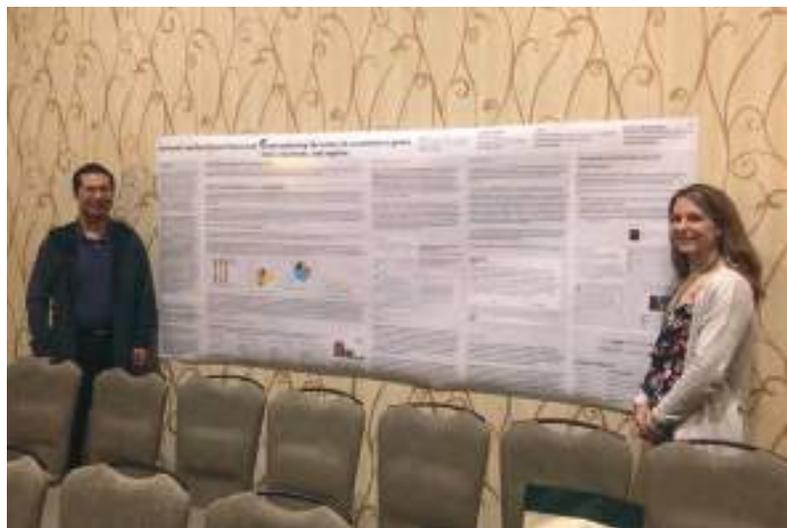
# onGEO Connection

In our onGEO Connection feature for 2019 we wrote a piece that focused on our program, specifically the continued growth and success of the Department's onGEO Professional Certificate in GIS courses and the development of two new specialty courses that resulted from collaborations with the School of Criminal Justice and RS&GIS. We are thrilled to report that this trend has continued and in 2019, onGEO registrations for our professional courses rose to over 530—a 9% increase over 2018 registrations.

In our 2020 edition of the onGEO connection, we would like to share our plans for the upcoming Association of American Geographers' Annual Meeting in Denver, Colorado. For those of you who plan to attend, we hope to pique your interest and perhaps even get the chance to connect with you there! So, just what do we have planned? onGEO's own undergraduate course guru Juliegh Bookout will be working with Penn State University's Adrienne Goldsberry (Online Geospatial Education) to co-chair two paper sessions and one panel session, as well as present a short paper and sit on the panel with fellow onGEO staff member, Dr. Yi Shi. If you got a bit lost in that last sentence, it is understandable. What it all boils down to is that onGEO is not only looking to increase the presence of the Department's online program at the Annual Meeting, but also online geography education as a whole.

One of the themes for the 2020 meeting is expanding the community of geography and we are ready to address how online education can do just that. Across the country and around the world, geographers are increasingly engaged in or exposed to the online teaching and learning of students in some way. For those of us who are in the online trenches day after day, teaching, developing, and/or administering courses, we know that these courses come with a unique and evolving set of circumstances and situations in the wider pedagogy of geography. Noticeably absent from Annual Meetings of the recent past was a chance for these online warriors, new and experienced, past, present, and future, to come together to share and discuss these circumstances and situations. Together with Penn State's Geospatial Education program, onGEO wanted to give these geographers a chance to do just that in 2020.

If you are looking to be a part of this community or just stop by for a listen and say hello, you can find onGEO at three sessions on Thursday, April 9th, starting at 8:00 AM with our first of two back-to-back paper sessions on Online Geography Education & Its Role in Expanding the Community of Geographers. After receiving such a great response to a call for papers for the first session, we opened up a second session to give everyone interested an opportunity to present. After the two back-to-back paper sessions, we will continue the discussion in a panel session at 11:10 AM, titled Expanding the Community of Geographers Through Online Education. This panel session will feature onGEO staff members Juliegh Bookout and Yi Shi, along with Penn State's Adrienne Goldsberry, and three additional online educators, Rich Donohue (University of Kentucky), Stephanie Long (Austin Community College), and Nick Santos (Coursera and University of California, Davis). OnGEO is beyond excited to join together with such a distinguished group of panelists to discuss how the online format is uniquely suited to expand the community of geography to non-geographers, share our experiences teaching practical geographic skills, and consider how students can and do apply those skills beyond the classroom.



Yi Shi and Juliegh Bookout with their poster presentation at the 2018 AAG Conference in New Orleans.

# Professional Certificate in GIS

From onGEO at 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 non-credit, online courses

- Introduction to Geospatial Technology
- Geographic Information Systems (GIS)
- Remote Sensing
- Cartography

## Need to earn academic credit?

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

## Where do I start?

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

## Get started today! Visit our website

>> [professional.ongeo.msu.edu](https://professional.ongeo.msu.edu)

## Contact Info

Phone or Text: (517) 258-7991

E-mail: [ongeo@msu.edu](mailto:ongeo@msu.edu)

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East Lansing, MI 48824

MAP your FUTURE

### For more information

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



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

# Graduate Degrees Conferred

**Breeze, Victoria**, PhD (Nathan Moore), “China in African Agriculture: Modeling Narratives, Spillovers, and Investments.”

**Frake, April**, PhD (Joseph Messina), “Scaling Irrigation and Malaria Risk in Malawi.”

**Fulton, Albert**, PhD (Catherine Yansa), “Late Holocene Native American Land-Use Impacts on the Vegetation of Western and Central New York State, USA: An Integrated Historical and Paleo ecological Analysis.”

**Fung, Cadi**, PhD (Cynthia Simmons), “Spaces of Conflict and Conservation in the Central Brazilian Amazon: Artisanal Fishers, Wildlife Tourism, and the Amazon River Dolphin.”

**Kelepile, Mathogonolo**, PhD (Sue Grady), “Antiretroviral (ART) and Prevention of Mother-to-Child Transmission (PMTCT) Therapies Adherence in Greater Gaborone, Botswana: A Mixed Methods Health Geographic Study.”

**Kutch, Libbey**, PhD (Sue Grady), “Investigating the Relationship Between UV-B Radiation Exposure and Preeclampsia: A Medical Geography Study.”

**Nyland, Kelsey**, PhD (Frederick Nelson and Randall Schaetzl), “Stairways to Heaven: Origins and Development of Cryoplanation Terraces.”

**Peter, Bradley**, PhD (Joseph Messina), “Integrated Remote Sensing and Crop System Modeling for Precision Agriculture Across Spatial and Temporal Scales.”

**Pierre, Lisa-Marie**, PhD (Elizabeth Mack), “Entrepreneurial Propensity: The Constraining and Enabling Factors of Institutional Environments on Women Faculty in Engineering.”

**Bilintoh, Thomas**, MS (Ashton Shortridge), “Remote Sensing for Mapping and Modeling Presence of Armyworm Infestation on Maize in Ejura, Ghana.”

**Komoto, Kara**, MS (Julie Winkler), “A Climatology of Persistent High Relative Humidity for the Lower Peninsula of Michigan: Implications for Health and Agriculture.”

**Kulseth, McKenzie**, MS (Shiyuan Zhong), “An Evaluation of the Hot-Dry-Windy Fire-Weather Index Using Historical Fire Events and Meteorological Analysis Datasets.”

**Plensdorf, Connor**, MS (Raechel Portelli), “Analysis of GEOBIA Algorithms for Contextual Detection of DPRK Missile Testing Facilities.”

**Tao, Shiqi**, MS (Jiaguo Qi), “Urban Expansion and Urban Environmental Evaluation in Chengdu, China.”

**Torres, Sara**, MS (Sue Grady), “Near and Dear: A Study in Pro-Environmental Behaviors.”

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## CONGRATULATIONS GRADUATES!

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# Commencement



The 2019 Spring/Summer graduates and several faculty of the Department of Geography, Environment, and Spatial Sciences gathered at the Breslin Center on May 4, 2019 for the College of Social Sciences commencement. Several in this group made significant contributions to the Department, and enriched us all through their time with us. Congratulations to all!

## **SPRING & SUMMER GRADUATES:**

Bottom, from left: Ezequiel Mussambe (BS GIS), Hugo Victor (BS GIS), Isaias Tony (BS GIS), Rory Nicholson ('Outstanding Senior'; BS Economic Geography), Shuai Nie (BS GIS).

Second row, from left: Satiel Cudila (BS GIS), Aires Gonguela (BS GIS), Won Gu Kim (BS Economic Geography), Leqi Yin (BS Economic Geography), Ben Enderby (BS Economic Geography).

Third row, from left: Helder Dinis (BS GIS), Vincent Black (BS Economic Geography), Zach Argo (BS Economic Geography), Dr. Gary Schnakenberg.

Fourth row, from left: Shoshana Grode (BA Human Geography), Caitlyn Crane (BS Economic Geography), Luke Gerber (BS GIS), Corey Fellabaum (BS GIS).

Top row, from left: Dr. Randy Schaetzl, Dr. Joe Darden, Dr. Alan Arbogast (Department Chair), Peiyuan Wang (BS Economic Geography), Brendan Flack (BS Environmental Geography).

Not pictured: Julia Anderson (BS Economic Geography), Crystal King (BS Economic Geography), Joel Marshall (BS Environmental Geography), Ariclenes Silva (BS GIS), Jake Wellman (BS Environmental Geography). Also not pictured are students who received a 2nd degree with us: Opal Jain (2nd BS GIS) and Joey Seitz (2nd BS Environmental Geography/Atmospheric Sciences Concentration).

## **FALL GRADUATES:**

Erin Blackwell (BS Environmental Geography), Ben Janevic (BS GIS), Pedro Kuyenga (BS GIS), Nolen Obrien (BS Environmental Geography/Atmospheric Sciences Concentration), Emma Putney (BS GIS), Landon Stadler (BS Economic Geography).

As we move into 2020, we at RS&GIS can't help but reflect on the truly successful year that was 2019. We presented our work at seven conferences. We held more than a dozen training sessions. We flew drone demonstrations for Senator Gary Peters office. Last, but not least, we secured 18 funded grants including three with the National Science Foundation (NSF), two with Michigan State Project GREEN, and other major granting institutions including the Department of Energy and the Environmental Protection Agency (EPA). RS&GIS is busier than ever doing research and outreach with broad applications in the fields of agriculture, land management, biomass technology, and more.

One of our most exciting accomplishments of 2019 was the funding of our NSF Coastlines and People proposal. This multi-year project, involving Drs. Mack and Theuerkauf from MSU Geography, looks to develop a large-scale citizen science program across Michigan focused on coastal hazard monitoring. The severity of coastal hazards requires better data and quantitative assessments to understand the physical changes to coastlines, their causes, and rates of change. From a societal perspective, this information is important to develop evidence-based hazard mitigation strategies and policies. To address this need, this grant will conduct a pilot program (IC-CREAM): Interdisciplinary Citizen-based Coastal Remote Sensing for Adaptive Management) to test hypotheses about the feasibility and scientific value

Left to right: Sean Collins, Dan Wanyama, Dylan Hoffner, Christina Matsoukis, Bob Goodwin, Christian Matsoukis, Joe Welsh, Nick Weil, Tamsyn Mihalus, Erin Bunting.

of a citizen-science approach to creating a localized, repeat aerial image database on coastal processes in the Great Lakes. Our first partnership community is the City of Marquette, MI and our kickoff workshop is planned for February 2020.

## ANALYST TEAM 2019 RECAP

In October of 2019 RS&GIS took delivery of a heavy-lift DJI M600 Pro hexacopter drone equipped with a Headwall sensor package that includes co-aligned VNIR and SWIR hyperspectral sensors, as well as a Velodyne LiDAR sensor. Funding came from an MSU Strategic Partnership Grant (SPG) secured through a multi-department collaboration led by Dr. Addie Thompson from the Department of Plant, Soil and Microbial Sciences. This new sensor package, which is one of only about a dozen in operation, represents a quantum leap in multi-temporal drone imaging. With 537 narrow spectral bands spanning the spectrum from blue to short-wavelength infrared, along with precise LiDAR scanning, this sensor package provides RS&GIS with the ability to distinguish between minor differences in neighboring plants, determine nutrient deficiencies, map plant structure and more. Initially, this equipment will be used for plant phenomics research here at MSU.

Building on the success of our Vinifera wine grape suitability mapping project funded by the Michigan State Horticultural Society, RS&GIS, through additional funding from the Horticultural Society and MSU AgBioResearch, is generating cultivar specific Vinifera suitability data across Michigan.



This applied research uses geospatial modeling to link climate, soil and topographic variables to expert knowledge provided by Dr. Jeff Andresen and Dr. Paolo Sabbatini. Analysis of climate change will be investigated as well to predict how suitability may change over time. The result will be a first of its kind, local-scale, map of ideal locations in which to grow various Vinifera cultivars. To assist current and prospective growers, as well as MSU Extension personnel, data generated from this research will be hosted within a searchable, public-facing web application ([rsgis.msu.edu/research/vinifera](http://rsgis.msu.edu/research/vinifera)).

In 2019, RS&GIS analysts were busier than ever, particularly on the drone front. Drone projects included numerous agricultural projects, thermal investigations, wild rice mapping, pollution detection at decommissioned power plants, wood fiber volume estimation and more. Besides drone work, RS&GIS has been busy with research and outreach projects, from Battlefield Mapping to parcel data creation to enterprise GIS deployment. In 2020, RS&GIS will be unveiling our ArcGIS Enterprise research support program allowing researchers within and outside MSU to quickly collect, access and distribute information via web applications on all devices.

## DEVELOPER TEAM 2019 RECAP

The Developer Team grew and changed throughout 2019. We have a new lead developer, Christian Matsoukis. Christian has been at RS&GIS for several years and this year took a leadership role. Christian's vision and drive will lead the developer team down new avenues.



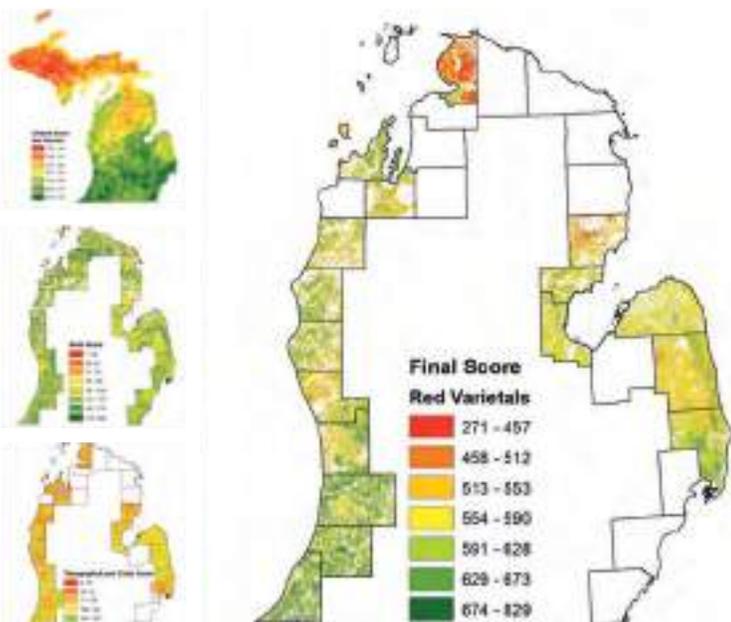
Headwall co-aligned hyperspectral / LiDAR autonomous system purchased as part of a Strategic Partnership Grant from MSU. This UAS will be used for plant phenomics research starting in the summer of 2020.

Additionally, in the summer of 2019, a new member of the Developer Team came on board permanently; Dylan Hoffner. Below is an excerpt from Dylan about getting started in this field.

“I was extremely interested in programming from a young age because I loved playing video games and, eventually thought, ‘Why only play other people’s games? Why not create my own world?’ I started programming my sophomore year of high school and the rest is history.”

Over the course of 2019 RS&GIS developers worked with more than a dozen research and outreach clients including multiple departments at MSU (Geography, Surgery, Extension, and Social Work). Additionally, the team has worked with the Michigan Fitness Foundation, USAid, and Ingham County on advanced geo-visualization projects using both open source and commercial software. This year the team was also tasked with developing the new RS&GIS website, check out their great work at [rsgis.msu.edu](http://rsgis.msu.edu).

In October of 2019, the Developer Team, in partnership with Dr. Jay Olaguer at the State of Michigan, began work on an EPA-granted project entitled: “A Web and GIS-Based 3D Visualization Platform for Electronic Permitting, Emissions Reporting, and Compliance Assurance for Michigan Industrial Facilities.” The Air Quality Division (AQD) of the Michigan Department of Environment, Great Lakes and Energy (EGLE) are responsible for the regulation and oversight of industrial facilities in the State of Michigan, to ensure compliance with the requirements of the U.S. Clean Air Act (CAA) and of the State’s laws and rules governing air pollution and control, as specified in Michigan Act 451 Part 55, known as the Natural Resource Environmental Protection Act (NREPA).



Vinifera suitability modeling and mapping conducted in 2019 as part of a Michigan State Horticultural Society grant.

Programs run by the AQD include: 1) a Permit-to-Install (PTI) application process for new and modified emission sources; and 2) a Renewable Operating Permit (ROP) program for existing major sources to satisfy the emissions reporting and compliance assurance aspects requirements. The project's aim is to increase the efficiency of the PTI and ROP processes based on a state-of-the-art web application developed by RS&GIS which includes spatially minded database architecture, GIS functionality, 3D visualization, and object-oriented analysis.

The Developer Team is not slowing down yet. Working closely with the Analysis Team; our in-house Aerial Imagery Archive is being updated into a modern web application. This update will have a smaller virtual footprint.

The goal is to focus on speed and optimization while also delivering a simple to use interface that gives our users the best experience. RS&GIS understands the importance of data. We also believe that access to the data is equally as important. The researchers and users of our applications should be able to access their data anywhere; whether they are in the field or office setting, our applications will load.

The year 2020 is shaping up to be our biggest year of research to date. As part of this research development there will be multiple publications, databases, mobile and web applications, and tools/models being released from RS&GIS in 2020. For more information about our staff, projects, and trainings, visit us online at [rsgis.msu.edu](http://rsgis.msu.edu). From the entire RS&GIS team we wish everyone a happy 2020!

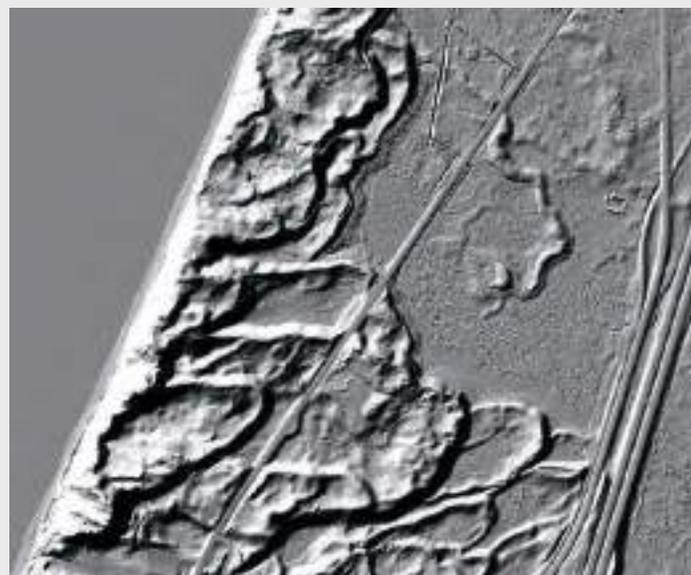
## First Comprehensive Map of Michigan's Coastal Sand Dunes

Department Chair, Alan Arbogast, is an expert on the formation and evolution of Michigan's coastal dunes. Last year, he worked with the Michigan Environmental Council (MEC) on a project called "Valuing Michigan's Coastal Dunes: GIS Information and Economic Data to Support Management Partnerships." Arbogast and his research assistant, Clayton Queen, used aerial photographs and high-resolution LiDAR imagery like the image above to create the first comprehensive map of Michigan's coastal sand dunes. Previously, the only detailed mapping of the dunes was in association with Michigan's Critical Dunes act, which identified ~75,000 acres of dunes that were generally considered to be the "best" and largest dune complexes in the state.

Although it was known that more dune acreage existed beyond the critical dunes, its true geographical extent was unclear. Through their mapping, Arbogast and Queen determined that ~230,000 acres of coastal dunes actually occur in the state.

They further determined that much of this additional acreage is already dotted with homes and has been developed to some extent. The resulting map is included in the Dunes Geographical Information System (GIS), as well as made available to the public for future use to aid with future research, local planning, and dune conservation efforts.

According to Arbogast, "the genesis of this project was that many misconceptions still exist about the dunes, including their true geographical distribution and overall economic value". This project was designed to tackle some of these issues and involved a great collaboration between the MEC and Dr. Robert Richardson in the Department of Community Sustainability at MSU, who investigated the social, cultural, and economic importance of the dunes.



LiDAR image of coastal dunes near Holland, Michigan. Such imagery shows the dunes and their geographical extent in incredible detail and permitted easy mapping of the landscape.

# Graduate News



Donald promoting geography to high school students at Friends School Kamusinga, Kenya (Photo by Zakayo Chemiati, July 27, 2019).

## **DONALD AKANGA**

Donald is a second-year PhD student in Dr. Kyla Dahlin's Ecological Remote Sensing and Modeling (ERSAM) Lab. His research focus involves using remote sensing and Community Land Model (CLM), a land surface model, to examine how natural and human actions affect the carbon cycle—currently in Kalamazoo River Watershed. In February 2019, he participated in a week-long Community Terrestrial Systems Model (CTSM) workshop organized by the National Center for Atmospheric Research (NCAR) in Boulder, Colorado. In March 2019, he was invited by his alma mater (University of North Alabama) to give a motivational talk to geography graduate and undergraduate students. He also gave a talk to Friends School Kamusinga high school students in Kenya last summer, promoting geography! In Fall 2019, Donald was selected as a recipient of MSU's Cloud Computing Fellowship by the Institute for Cyber-Enabled Research (ICER). He looks forward to completing PhD coursework, focusing more on research and sitting for comprehensive exams in 2020. Donald is excited to apply the skills he has acquired to examine the effect of human-environment interactions on climate and its impact on land use in Kenya.

## **KEVIN MCKEEHAN**

Kevin McKeehan, a second year PhD student, spent the summer conducting repeat photography of coastal dunes along the state's Lake Michigan shore. He visited over 100 sites on the lakeshore, recapturing historical photographs as part of his dissertation and the Sands of Time project, a multidisciplinary approach to understanding our coastal dune environments, in partnership with the Michigan Environmental Council and the Michigan Department of Environment, Great Lakes, and Energy. By analyzing the differences between the original historical photographs, some older than 100 years, and the new photographs taken at the same location in 2019, Kevin determined that vegetation had expanded at nearly all of the coastal dune locations, covering what was once bare sand. An example of this can be seen at Laketown Beach near Holland, where vegetation expanded markedly over bare sand since 1989, when the original photograph was taken. These important changes were likely due to an increase in precipitation in the area since 1940, although other factors may have contributed as well. Kevin was also inducted into the 2019 Gamma Theta Upsilon class for MSU and will represent the East Lakes Division at the World Geography Bowl competition at the 2020 AAG Conference in Denver.





## JIANG CHANG

I am a fourth year doctoral candidate and a graduate research assistant in the Global Urban Studies Program (GUSP). My dissertation investigates gentrification and displacement in Hong Kong, China. Hong Kong is a unique city. On the one hand, Hong Kong has been ranked as the least affordable major housing market in the world for nine consecutive years.

On the other hand, Hong Kong has one of the most successful public housing systems that helps 45.6% of Hong Kong's total population live in either rental housing or subsidized sale flats. The coexistence of the extremely high housing prices and one of the largest public housing systems makes Hong Kong an interesting case for gentrification study, particularly with a focus on the city's most disadvantaged. Speaking of living conditions in Hong Kong, there are some 92,700 subdivided units accommodating 91,800 households and 209,700 persons. The median floor area per household was 107.6 square feet and the median monthly rent was HK\$4,500 (or US\$535). Worse still, residents are facing increasing pressures of displacement. This study will address urban equality issues and fill a critical gap in understanding the impacts of gentrification on the underprivileged in Hong Kong.

Jiang Chang is collecting data in Sham Shui Po, one of the poorest areas in Hong Kong, China.



## JEN FRY

First year PhD student Jen Fry received 3rd place at the 2019 AAG East Lakes Meeting within the Student Poster Graduate Division for her poster entitled: "Relative Racial Diversity of Division I Volleyball Teams within Power Five Conferences." She is being presented her award by MSU Geography alumna Karen Johnson-Webb.

# New Graduate Cohort

GeoCamp 2019 brought together a great new cohort of budding geographers this year, which we held once again at Wa Wa Sum near Grayling, MI. In addition to the usual board games, tubing, and socializing, we also had a busy schedule touring the physical and human geographies of Northern Lower Michigan. We visited a growing Anishinaabe farm, then saw the Mighty Mac and talked about tourism and the geomorphology of the Great Lakes. We also explored changes to Michigan's biogeography with Dr. Kyla Dahlin at the Michigan Biological Station, and discussed society's growing distance from nature in the cathedral of trees that is Hartwick Pines State Park. I am excited by the incoming students and the ideas they want to explore.

Dee Jordan, Ken Camacho, and Cordelia Martin-Ikpe served as our seasoned veterans to welcome the new crew and did a great job forging a sense of connection and community. Ken also stepped up as photographer, and snapped this traditional Hartwick Pines photo. A big thank you to everyone who attended for making an effort to build togetherness; a special thanks to Sharon Ruggles for making it all go so wonderfully, and to Dr. Dahlin for joining the fun.



Left to right: Diane Wang, Kionna Henderson, Grad Director Nathan Moore, Md Tajminur Rahman, Pedro Valle de Carvalho e Oliveira, Herve Kashongwe, Angie Shinos, Meicheng Shen, Jen Fry, Alice Hu, Veda Hawkins, and Liz Spitzer.



## **POUYAN HATAMI**

I am a fourth year PhD student working on a joint project between the departments of Geography and Computer Science and Engineering. The project is entitled “Robust Algorithms for Multi-Task Learning of Spatio-Temporal Data” funded by NSF in which I apply novel machine learning techniques for various geospatial-temporal problems. So far, I have completed multiple projects such as applying various regression

methods to address the crime prediction rate in neighborhoods, and investigation of the feasibility of using machine learning methods to reproduce the US drought monitoring maps generated by domain experts. Currently, I am working on a project to downscale satellite remotely sensed soil moisture data with the help of machine learning.



## **DEE JORDAN**

The year 2019 was a great one for PhD candidate Dee Jordan. She enjoyed a Spartan summer abroad conducting research in Senegal, Tanzania and Zanzibar. Dee climbed 204 steps to the top of the African Renaissance Monument in Dakar, Senegal. She flew 2,000 ft over Senegal in a gyrocopter to release sterile male tsetse flies across the country as part of the tsetse eradication

campaign using the sterile insect technique. Dee traveled over 1,000 miles around Tanzania through Tanga, Arusha, Dodoma, Morogoro and Dar es Salaam, to observe tsetse control programs and to speak with regional officials, local leaders and policy makers.

On the island of Zanzibar, Dee traversed the historic tsetse control campaign areas to document the land use changes since their successful eradication of tsetse. She worked with members of the original eradication team to learn how many of the discoveries in tsetse control were made on the island. Zanzibar is the only place in Africa that has been declared tsetse free by the World Health Organization.

In 2019 Dee also won three major awards: E. James Potchen Graduate Student of the Year, Association of American Geographers (AAG) 2020 Enhancing Diversity Award and the Council of Graduate Students (COGS) Disciplinary Leadership Award for 2019–2020. Dee was also one of the University Fellowship recipients featured in the MSU Graduate School’s 25th Anniversary Magazine.



## **AARON KAMOSKE**

Aaron Kamoske is a fourth year PhD candidate in Dr. Kyla Dahlin’s Environmental Remote Sensing and Modeling Lab (ERSAM). Aaron earned his BS in Natural Resource Conservation and a certificate in GIS Science and Technologies from the University of Montana’s College of Forestry. This past year he defended his dissertation proposal

and completed all his PhD course work—ABD! He also spent several weeks at the University of Michigan Biological Station collecting data for a collaborative research project with forest ecologists from several universities. This past December, he presented some of his dissertation research at the American Geophysical Union fall meeting in San Francisco, CA. In the coming year he is hoping to publish another first authored manuscript and defend his dissertation!



## **WILLIAM “B.J.” BAULE**

The past year in my PhD program at MSU has been a productive and engaging one. I’m continuing my research examining the effects of climatic variability and change on nitrogen in Midwestern agricultural systems. I presented some of the preliminary results of my work at the American Association of Geographers National Meeting in Washington D.C. this past April. I’ve also continued my field work at several field locations throughout Michigan. In addition to my research, I’ve had the opportunity to provide several outreach talks around the state and online with Michigan State University Cooperative Extension and to additional groups as well. I am also working with a group of climate scientists in the development of quarterly and annual climate summaries for stakeholders and decision makers in the Great Lakes region. This group involves scientists from Michigan State University, the University of Michigan, National Oceanic and Atmospheric Administration, Environment and Climate Change Canada, and the Great Lakes Water Quality Agreement.



## **JUDITH NAMANYA**

Last year, I was fortunate to be a recipient of the 2019–2020 Policy Communication Fellowship. The program is organized by the Population Reference Bureau (PRB) and the African Institute for Development Policy (AFIDEP). The main goal of this one-year Policy Communication Fellows Program is to “train the next generation of

leaders shaping policy in their countries”. We must acknowledge that generating scientific evidence is one thing and policymaking is another thing. Gaps remain in packaging scientific evidence in a way that makes sense to policy makers. It is therefore important to equip young scholars and leaders with the knowledge, skills and competences to effectively communicate their research findings to policy makers if we are to see evidence-based policies and related timely change in our communities and countries.

## **Advancing Geography Through Diversity Program**

During the fall of 2019, MSU Department Chair, Dr. Alan Arbogast hosted lunch with prospective scholars for the third cohort of the Advancing Geography Through Diversity Program (AGTDP). The AGTDP seeks to address underrepresentation among African American, Hispanic American and Native Americans in the discipline of Geography. The Fall Preview Day allows prospective graduate students for the program to visit campus, meet faculty members, graduate students and members of the university communities. On a beautiful, sunny October afternoon, the scholars engaged in meaningful dialogues and learned about the Department while sharing time and space with the Chair.





## DAN WANYAMA

The past year has been very busy and most interesting of all! This is the year I got published! The paper is from my master's thesis in which I developed a land suitability model for maize farming in Kenya. It was published in *Geocarto International* in August. During the summer, I spent almost three months in Kenya and Uganda, talking to farmers and local government

officers about issues such as climate change, agriculture and environmental conservation. I also discussed major results from my first chapter with them and they generally agreed that the climate is persistently changing and human activities (especially deforestation) are mostly to blame. The valuable information collected from this exercise will be used to validate land use and land cover maps I developed from remotely sensed imagery. It will also be used to parameterize the agent-based model seeking to identify major drivers of landscape change observed in the Mount Elgon Ecotone.

I also got very busy preparing for my comprehensive exams which I successfully completed in January 2020. With this out of the way, the focus now is to update my dissertation proposal and finish up the land use land cover change paper for submission. I will also be working on the agent-based modeling paper for most of the year. This year I also got a research assistantship (the first ever) after four years of being a teaching assistant. I am working with Dr. Erin Bunting in Remote Sensing and GIS (RS&GIS). Right now, we are mapping potentially suitable areas for growing wine grape (specifically the red and white *Vitis vinifera* varieties). We are also analyzing spatial and temporal trends in environmental conflicts in Africa. These studies are very different from what I have been involved with in the past. Working on the projects has exposed me to new and practical analytical skills and software and expanded my research interests too. With these, my dissertation, and more projects to come, I believe that this year promises a lot of fun (fun in grad school!?)

## Triple G Activities

Triple G had another fun, wholesome semester this fall. From nights out around East Lansing and beyond to the yearly Halloween and holiday parties, we grew closer as a group and got to know the city a little better. We assisted with the planning and implementation of Geography Awareness Week, including a fun new Spark Talks event where students and faculty attempted to cram their research into five-minute blocks, which proved to be an amusing and light-hearted learning experience. For the first time, we also assisted the Department of Earth and Environmental Sciences with their Earth Sciences Week, which they modeled after our own success with Geography Awareness Week. We have also been renewing a focus on giving back to the Lansing area. While the summer air was still around, we enjoyed a day of tree planting at Hunter Park in Lansing. As the semester wrapped up, we collected food for the Greater Lansing Food Bank in time for the holidays. Next semester, we hope to continue to expand our outreach activities. We also look forward to a trip to the Detroit Institute of Art, the first Geography Hot Pot, the Poster Presentation Competition, and other fun Triple G Events.



Planting young mulberry trees at Hunter Park in Lansing. Left to right are Pedro Valle de Carvalho e Oliveira, Pietro Sciusco, Judith Namanya, and Kenneth Camacho.

# Geography Awareness Week

In November's third week last year, we celebrated Geography Awareness Week as has become tradition the past few years. Our goal is always to promote the department to the wider university and demonstrate how geography is relevant in so many important ways. This year our graduate students organized a couple of cool events to celebrate the week, including a trivia night at a local pub and an information table at the student union. They also hosted a Spark Talk Brunch where faculty and students presented research projects and results in five minutes. It was fun to watch!

The highlight of the week, as has become the norm, was our featured speaker. Our goal every year is to invite a notable individual who is doing work related to the discipline, but doesn't necessarily think of it that way, to speak or present a film that is geographically relevant. This year our featured speaker was Ms. Yoruba Richen who produced and narrated the wonderful documentary *The Green Book: Guide to Freedom* to a packed house at the Pasant Theatre at the Wharton Center. The film was profound and compelling, vividly demonstrating how African-Americans used the guidebook to map out safe places to travel and vacation in the U.S. during the Jim Crow era. A featured town in Michigan was Idlewild, which was a favorite resort in northwest Lower Michigan for people of color during that era. In anticipation of the presentation, the MSU Map Library had a display dedicated to *The Green Book*, which Yoruba saw. It was an awesome week.



Kathleen Weesies (MSU map librarian) and Yoruba at the display for *The Green Book* at the MSU library.



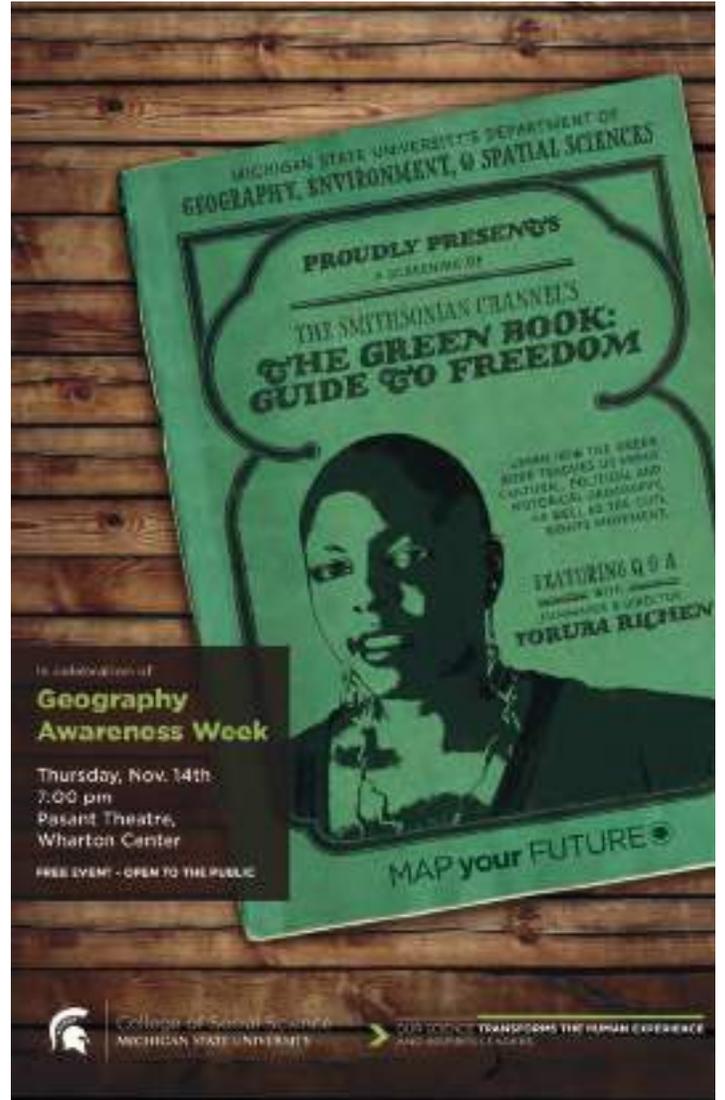
Yoruba on stage at the Pasant Theatre before the showing of *The Green Book: Guide to Freedom*.



Several of our students met with Yoruba for lunch in the Geography Building. They were, from left to right: Jen Fry, Kionna Henderson, Raven Mitchell, Ana Rivera-Rivera (foreground), Cordelia Martin-Ikpe (behind), Yoruba Richen, Veda Hawkins.



Undergraduate students at our booth in the student union.



Promotional poster for Yoruba's presentation at the Pasant Theatre.



Faculty and invited guests mingled in the Christman Lounge in the Wharton Center before the presentation.

## Career Day & Job Fair

One of the most important activities of the year is our annual Career Day and Job Fair. The event started over a quarter of a century ago when our Geography Club students and club advisors Drs. Bob Thomas and Judy Olson wanted a career and internship event showing the kinds of jobs potentially available with a geography degree. This event is now a tradition in the department in the latter part of February. The early events were held at night in our old building, Natural Science. In 1995, for example, the event occurred between 6 and 9 pm and six vendors presented potential opportunities at their firms or various state agencies. When the department moved to our current building in 2005, the Career and Internship Event expanded to include more firms and agencies and was held in the hallways and classrooms of the building's first floor. When the event outgrew that space, it moved into the much wider hallways of Bessey Hall and is now held in the more spacious Kiva at Erickson.

In the past few years, we have tried to expand the event further into a full-blown Career Day and Job Fair where students can bring resumes to find more immediately-available internships and jobs. In the days before, a representative with MSU Career Services comes to the building to lead a workshop for students on resume preparation. The number of presenters at the fair has been at least two dozen in the last few years and continues to grow. Last year's fair was the best yet, with a dynamic atmosphere in the new space. Best of all, students landed over 20 jobs and internships!



Students met with many firms and agencies at last year's Career Day and Job Fair.

## Our Marketing Internship Team

Jordan Smith and Wyatt Stonhouse work together to help market the department through events, social media, email marketing, and more. Jordan (middle in picture) has been with the department for two years now, working closely with Becky Young to put together events such as Geography Awareness Week, Career Day, the annual AAG reception, and the end of year GTU reception. She also works on marketing the department through social media and advertising campaigns. Jordan will be graduating from Michigan State University this year with her Master's in Public Relations.



Wyatt is our graphic design intern who works on social media and designs for the events. He works with Beth Weisenborn on content creation for social media and Becky Young to design materials for events. Wyatt has helped create flyers and posters, and also works intensively on our department newsletter; the Spartan Geographer. Wyatt will be graduating in December 2020 with a Bachelor's in Graphic Design and a minor in Environmental Studies and Sustainability.



# Alumni Focus

## KAREN JOHNSON WEBB

During Geography Awareness Week 2019, I had the pleasure of returning to MSU for the Department's screening of the Smithsonian Channel's *The Green Book: A Guide to Freedom*. I attended the reception at which I presented a check for \$10,000 on behalf of the American Association of Geographers to Dean Croson. It was the first installment of a \$30,000 gift in support of the Advancing Geography Through Diversity Program (AGTDP) and as AAG Secretary and MSU Alum, I was commissioned by the AAG to make the presentation.

Left to right: Karen Johnson-Webb, Dean Rachel Croson, Joe Darden, and Dee Jordan on November 14, 2019 AAG check presentation to the department's Advancing Geography Through Diversity Program (AGTDP) at the Wharton's Christman Lounge reception.



Shortly before the presentation, I was told that I was the first African-American (U.S.-born) to earn a Master's degree (1994) in Geography at MSU. This seemed hard to believe. Geography is a very diverse discipline in terms of ethnicity and nationality. However, scholars of African American, Hispanic American and American Indian heritage are grossly underrepresented. This not only means that important perspectives are underrepresented, it also means that funded assistantships, many of which are generated by taxpayer dollars, are not reaching underrepresented scholars in geography.

Many ancestors of these groups paid taxes for generations without being able to take advantage of the opportunities these funds produce.

This is why the AGTDP is so important and groundbreaking. The department is making a concerted effort to recruit and fund these scholars. Now other geography departments are following suit. I commend the efforts and commitment of Dr. Arbogast, Dr. Shortridge, Doug Richardson and Dee Jordan. Finally, we must never forget Dr. Darden's tireless efforts both in the department and in the discipline to increase diversity in this way. My education at MSU means everything to me. It prepared me to go on to earn my PhD. My father received his EdD at MSU. He was delighted when I chose to attend MSU and even more so when I finally settled in to geography. I was mentored and cared for by geography faculty and staff, and fellow geography students supported me in so many ways. I love Michigan State, I love the department and I love the discipline of geography. I barely have the words to describe how proud I am of the Department's tangible commitment to diversity.



# Alumni Advisory Board

The Alumni Advisory Board for the Department of Geography, Environment, and Spatial Sciences had a very busy 2019. We accomplished many things this year and have many more goals set for 2020. Our 11-member board would like to share with fellow alumni a few milestones that we have accomplished over the past year but first we would like to re-introduce the board members to you. The board consists of Dr. Steven Aldrich (MA 2004, PhD 2009), Josh Bocks (BS 04), Michael Cousins (BS 07), Melissa Faustich (BS 05), Paige Gebhardt (BS 16), Brett Grech (BS 16), Brandon Lambrix (BS 14), Michelle Lee (BS 98), Lindsay Maki (BS 05), and Beth Weisenborn (MS 01), as well as Department Chair Dr. Alan Arbogast.

First, we participated in the department on-campus job fair. The new location bolstered record breaking attendance. We had several of our board members represent their employers at this fair including Paige Gebhardt representing the Michigan DNR, Michelle Lee representing RSG, and Mike Cousins representing OHM Advisors. Melissa Faustich also attended as a representative to network and publicize our board. Following the event, we hosted our first GEO Alumni Happy Hour at Beggar's Banquet and it was well attended by many alums, several department staff members, and two members of the College of Social Science administration.

Second, we had our first annual golf outing. This year's event was at Wheatfield Valley Golf Club in Williamston. We had 12 teams participate which included countless alumni, many current and former professors from the department, and many other friends of geography. The event was very successful for a first-year outing.

Left to right front: Michael Cousins, Michelle Lee, Paige Gebhardt.  
Left to right middle: Melissa Faustich, Lindsay Maki, Alan Arbogast.  
Left to right back: Brett Grech, Josh Bocks, Brandon Lambrix

We were able to raise over \$1,200 for the Geography Field Experience Fund. In addition to the golfing, we had both a silent auction and a live auction for items that included MSU gift baskets, football tickets, and autographed balls signed by both Tom Izzo and Mark Dantonio. We were very pleased with the turnout and expect that next year's event will be much larger. We are already seeking hole sponsors and prize donations for next year's event. If you are interested in sponsoring, donating, or playing please reach out to us at [msugeoalumniandfriends@gmail.com](mailto:msugeoalumniandfriends@gmail.com)

Additionally, the entire board participated in a group advisory meeting with other advisory boards from the College of Social Science. Our board was the most representative board in the room and led much of the discussion, of which we are very proud. At this meeting all our other board members joined board chair Josh Bocks and vice-chair Melissa Faustich by being inducted into the Berkey Hall Society.

Lastly, our board helped participate in an on-campus event that included watching the documentary film *The Green Book: Guide to Freedom*, as well as meeting and speaking with its director Yoruba Richen. This documentary, not to be confused with the Hollywood film of a similar name, looks at the evolution of the *Green Book* from its beginnings as published by Victor Green and through its expansion and how it shaped the lives and travels of African-Americans from the 1930's into the 1960's. This event started with a meet and greet reception and concluded, after the movie, with a Q and A session with Ms. Richen.

The board looks for continued growth and outreach as we attempt to generate interest in new students and raise funds for the betterment of the Department

Alumni Board Members Josh Bocks, Paige Gebhart, and Melissa Faustich join Yoruba Richen at the Wharton Center.



# SWIG



Alums searching for a golf ball after (most likely) an errant t-shot during the inaugural department outing. Just another reminder that geography matters at all scales and situations.

and the University as a whole. If you are interested in helping the board in its initiatives or simply want more information please contact us at the email provided above. You can learn more about the board at [geo.msu.edu/people\\_categories/alumni-advisory-board](https://geo.msu.edu/people_categories/alumni-advisory-board)

In closing, the Alumni Advisory Board would like to thank the College of Social Science Dean Rachel Croson for her guidance and leadership in the College and her help shaping our board and its activities. We wish Dr. Croson all the best in her future endeavors and hope she comes back to visit us often. Your time at MSU was a true gift to us and we will always consider you a Spartan.

If you'd like to stay connected to the board for updates on events and alumni opportunities, please follow us on Facebook, Twitter, Instagram or LinkedIn:

[facebook.com/MSUGEOAlumni](https://facebook.com/MSUGEOAlumni)

[twitter.com/MSUGEOAlumni](https://twitter.com/MSUGEOAlumni)

[instagram.com/msugeoalumni](https://instagram.com/msugeoalumni)

[linkedin.com/groups/12031026](https://linkedin.com/groups/12031026)

“The Dirt Doctors” at our first annual golf outing. Left to right: Mike Michalek, Mike Luehmann, Randy Schaeztl, Alan Arbogast.



According to the American Association of Geographers (AAG), geography is a predominately-male discipline (Kaplan and Mapes, 2015). Moreover, in the U.S., of all female completing doctorates, approximately 10% are awarded to women in geography. At MSU, the percentage of female doctoral graduates in the Geography Department was 36.2% (2000–2012). Supporting Women in Geography (SWIG) is an international group aiming to create a supportive network to address the barriers of women in geography. SWIG's MSU chapter hosts coffee hours, which create an intimate space to talk about the challenges of being a woman in a male-dominated discipline, a bi-weekly writing group to share writing goals, a graduate-undergraduate mentorship program, professional development workshops, and various social events, like movie nights. In the New Year, SWIG anticipates connecting with other SWIG chapters at the AAG National Conference in Denver, CO and continuing to promote healthy work-life balance by inviting inspirational guest speakers.



SWIG Co-President Ana Rivera, Head of the MSU Map Library Kathleen Weesies, filmmaker and director Yoruba Richen, and SWIG Co-President Cordelia Martin-Ikpe stand in front of the Detroit *Green Book* exhibit on November 14, 2019 at the MSU library. The exhibit was created by Kathleen Weesies at the request of SWIG to compliment the Geography Awareness Week screening of the *The Green Book: Guide to Freedom* by Ms. Richen.

# Alumni News



## JIM BILES

Jim Biles (MA 1998, PhD 2001) recently celebrated 10 years at The City College of New York (International Studies and Sustainability) and the CUNY Graduate Center (Earth and Environmental Sciences). After several years in administrative positions, he is happy to be back among the “rank-and-file” faculty and to focus on his teaching and research. He was recently invited to take part in the

AGS Symposium Geography 2050: Borders and a Borderless World. Jim’s primary research remains focused on development policy and livelihoods in southeastern Mexico and the Yucatan Peninsula. He lives with his wife, Lolita, about an hour north of NYC near the Hudson River. His two oldest kids, Alex and Monica, are now grown and on their own. Youngest son, Eric, just started college and will soon leave the nest.

## HARRY COLESTOCK

It has been great to be able to use academic learning and actual experience to enjoy retirement. First and foremost, this past year has been local and international travel to go places and identify birds in various environments. My wife and I have made contributions to citizen-science to help develop the Virginia Breeding Bird Atlas as well as to enhance the worldwide database on birds held by the Audubon Society. We also contribute to a regional “Important Bird Area” project to look at the impacts of sea level rise on bird populations in coastal Virginia. I also get to have fun using my expertise on committees at the local level: the Local Emergency Management Committee and the Floodplain Management Committee. A geographic perspective has proven most useful in finding solutions to complex situations.

## LISA-MARIE PIERRE

This summer, I traveled to Colombia (Cartagena; Guatapé; Medellín), Peru (Lima; Machu Picchu), Spain (Madrid), and Portugal (Lisbon). While taking this culturally rewarding trip, I caught up on much-needed post-doctorate rest.

This winter, I joined the JP Morgan Chase Ascend Cities national project, which builds local networks promoting business growth for women, veterans, and people of color. As program manager of Ascend New York, I’m based in the Workforce & Economic Development Office at Bronx Community College.

This is an exciting opportunity to apply my urban and economic geography knowledge to the development of the Bronx economy.

# 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 or letter and we will insert it into the next issue of the newsletter. Thanks for helping make the newsletter even better.



## OWEN GREGG

Personally, this has been a year of change for me. I hit the 77-year mark; good grief, how time flies since I graduated from MSU in 1964. Three of four grandkids are off to college: Orange Coast College, Costa Mesa, CA; Hunter College in NYC; and, believe it or not, North Dakota State, in Fargo, ND. Very proud of them all. Granddaughter Annabel Gregg, now a freshman at Hunter, has been especially active in raising money for Flint and Newark, reporting that progress is being made in Flint, with the current Mayor looking into replacing and/or inspecting every water pipe in the City.



Now more than ever, Michigan State's efforts to understand climate change, and its effects on both day-to-day life, as well as our food supply, is becoming more and more paramount. I am especially proud of my Endowment for Climate Change Research, and Dr. Arbogast's managing of it. I hope to visit campus this year, and become more active in the Geography Department's Alumni Affairs.

This photo was taken last summer, at my son Peter Gregg's upstate NY maple sugar house. (I'm the one on the left). He publishes The Maple News for the industry, and is reporting that many of his subscribers have noticed severe differences in the seasons in northern NY and New England in the last few years. For instance, some Vermont sugar makers have been tapping their trees in December, and getting large quantities of syrup. Unheard of until recently. He also says that the maple syrup industry is one of the best caretakers of the woods in our country. Michigan is a large producer of syrup, too, only behind Vermont, and New York. Quebec is the largest.

## KEVIN ROSE

For the last 17 years or so I've been the network engineer for the UNM Health Science Center and UNM Hospitals in Albuquerque, New Mexico. Last year I finally got a chance to travel to Hong Kong and Japan, which I have wanted to do for over 30 years.



## KRISTY GRULEY

I completed my PhD in Geography at UW-Madison in 2015, and am currently working for the Savanna Institute, a nonprofit focusing on increasing agroforestry—the practice of managing trees together with other crops and animal production. It's increasingly recognized as a key to mitigating climate change while providing environmental and socioeconomic

benefits. I am currently their education program manager and working on launching an online course as well as an apprenticeship program. Joel, who is currently the undergraduate advisor in the Department of Geography at UW-Madison, excites students about studying all aspects of geography as a major and helps them figure out next steps—whether it's grad school, giving them ideas of who to study with and where, or tips to finding jobs. This April, we welcomed our second child, Nadine. Our other child, Miles, is giving us a run for our money, as any respectable three year old would. Working and solo parenting with Nadine at the SI conference in December.



## JOHN HARRINGTON JR.

Retired in May 2018 and now living in SW Washington. Two major career honors were recently announced/awarded. I was selected for the 2020 class of AAG Fellows based on my work addressing "real world problems" in climatology and land change science. AAG Fellows "have made significant contributions to advancing geography."

I also received the Miller Award from the National Council for Geographic Education. The Miller Award is "the Council's highest award, for distinguished service in geographic education." AAG Past President, Sarah Bednarz, described the two honors as "lovely parting gifts."



### DENNY HAUSKER

My wife, Bunny, and I remain retired. We've had our 72nd birthdays and 51st wedding anniversary. I attended the bowl game in Yankee Stadium and was glad we won. Also, watching MSU basketball spank the Wolverines at the Breslin was particularly satisfying. We're doing some traveling lately, at least as much as our old bodies can tolerate. This world has some amazing sites and sights.



### CRYSTAL KING

After spending my final semester interning at the American Association of Geographers in Washington, DC, I came back home to Detroit and am currently working as a financial coach at Southwest Economic Solutions. The nonprofit offers support to homeowners and home buyers, small business entrepreneurs, homeless veterans, and adults seeking literacy and job training.

### HIDEGKUTI & JONES

Dave (PhD '75) and Julie Hidegkuti Jones (MA '69). We have been thoroughly enjoying retirement for many years now, with travel a high priority. Now with about 30 Road Scholar educational programs under our belts, this past year saw trips to Martinique, Chincoteague/Assateague (VA), and the Scandinavian capitals, and 2020 plans include Cuba and a grandparents trip to Costa Rica. Guess we're entering the slow-go period but grudgingly! Life in Reston, VA, along with our two kids (both geographers) and five grandchildren is definitely good. Greetings to all and best wishes in 2020!

My role as a financial coach offers a direct application of my degree in economic geography. Although my position is focused on financial literacy and support, I work directly with some of the main issues impacting native Detroiters (specifically those of color) including homelessness/homeownership, bankruptcy, employment, and business ownership. It feels great to do this type of work in my hometown.

In the future, I hope to go back to school for either an MS in geography or an MBA (or both!). I am very grateful for all the support that was extended to me by the geography department in my time at MSU and hope to stay connected.



### JEN HOLMSTADT

Jen Holmstadt manages the Geohazards team at WSB in Minneapolis, MN. Her team designs and implements geohazard risks assessment programs for organizations like the Minnesota Department of Transportation (MnDOT). Currently, her group is assessing all MnDOT-owned highways for slope failure vulnerability using a suite of GIS-based models they designed. Jen's primary responsibilities are

staff, project and client management, and business development. Her team is small but growing—it currently boasts two geomorphologists and is adding a third in 2020.



### DAVE KROMM

Dave (MA 1964; PhD 1967) and Bobbie Kromm drove from their home in Kansas to Michigan in September. They visited cousins and family places throughout southeast Michigan, including picturesque Port Sanilac, where Dave's dad was born. Dave's grandfather was the village miller. *Groundwater Exploitation on the High Plains*, a book edited by Dave and Steve White that was

published by the University of Kansas Press in 1992 is being reissued in the Open Access Program in a digital format, and Dave wrote a new preface relating changes in the Ogallala in the past quarter century.



## CHRIS LOWRIE

After three years working for Apple Maps as a GIS Testing Engineer, I've returned to school at Columbia University in New York City for a masters in Climate & Society. I'll graduate from this program in May, and plan to pursue a career in applied climate science and environmental coalition building. MSU Geography prepared me well for my current courses and career path,

and I'm incredibly proud to see the achievements of the faculty, staff, current students and alumni.



## STEVE SCHULTZ

I'm a tenure-track professor at the University of South Alabama up for tenure next year! I've been working on the connections between microclimates and agricultural crop response, and recently I've gotten back in to my dissertation research concerning the effect of climate change on the global wine industry. On top of that, since taking over as GIS Program Coordinator

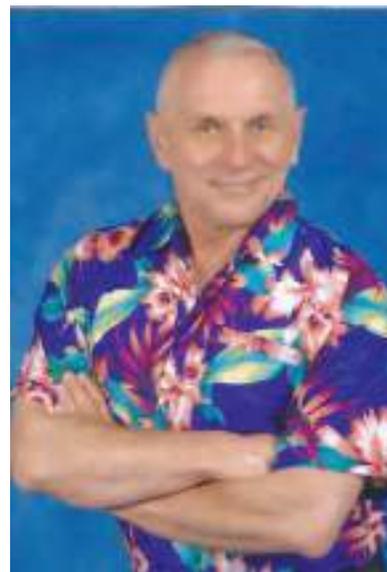
for my school in 2017, we have doubled our number of students (up to 40!) and are opening the still-unnamed "Campus GIS Center" this spring where we will have students work with regional partners to solve problems using GIS and Remote Sensing to gain experience and get paid while doing so. Last May, I took 10 students to Germany for three weeks with 11 days in Munich and 10 days in Hamburg and this May, I'll be taking 10 students up to Michigan for 2.5 weeks. And in June I'll be carrying out a grant I won last year to go to the Galápagos Islands to place microsensors along the elevation gradient on San Cristóbal Island to explore the tropical mountain-island climatology in unprecedented spatial and temporal resolution. See you in Denver, Steve.



## MARK SCHWARTZ

Distinguished Professor Mark D. Schwartz (University of Wisconsin-Milwaukee, MS from MSU Geography in 1982) was presented with the 2019 Outstanding Achievement in Biometeorology Award from the American Meteorological Society (AMS) at the award dinner during the AMS Annual meeting held in Phoenix, AZ (January 9, 2019). The award citation reads "For innovative advancements

in phenological modeling and observations, and exceptional achievements in promoting knowledge and applications of phenology for the benefit of research and society". Further, Schwartz was selected to be an Association of American Geographers (AAG) Fellow, as one of 13 members in the 2019 class. This is the second year the AAG has bestowed these lifetime honors and brings to 33 the total number of Fellows recognized by the Society. Finally, Schwartz was also recognized by the AAG Climate Specialty Group, receiving last year's Lifetime Achievement Award. Both AAG honors were given during the AAG Annual Meeting being held 3-7 April 2019 in Washington, D.C.



## KEVIN WEBSTER

I have been working as a Boeing Program Manager managing geospatial intelligence programs for the National Intelligence Agency for eight years. My role as a manager has helped me see many changes in the geospatial data field. I graduated from MSU in Geography in 1980 with a computer cartography specialization. At that time we used punch cards to program the computers to make maps

and evaluate geographic data for displays on maps and charges. I work and live in the Washington DC area and have always been a proud Spartan.

# 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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### **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 field work 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.

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