

SPARTAN GEOGRAPHER



MICHIGAN STATE
UNIVERSITY

Department of Geography,
Environment, and Spatial Sciences

What does it take to get the group shot?



First: You need everyone to show up



Count on having a clown in the group.



The next trick is making sure everyone is in the picture. There's Raj, but where's YJ?



Here comes YJ!



Oh no! Now we don't have Raj!



At last! Everyone is in the picture.

Message from the Chair



► Alan at the Prime Meridian at Greenwich, England last summer. His left foot was in the eastern hemisphere.

Hello Friends of MSU Geography!

Yes – the calendar has turned and it's time for the annual newsletter! As in year's past, the goal of the newsletter is to reflect on the accomplishments of the past year and to give our alums and friends some sense of how things are going in the department. I have to tell you - we are cooking! Our faculty and graduate students continue to do great work, which is not only making a difference in Michigan and beyond, but it is increasing our stature across the MSU campus and within the discipline of geography as a whole. The sense of energy within the unit is palpable and our courses continue to be extremely popular. We continue to add new faculty in a way that has created a core cadre of young people who are just really getting after it. We have learned how to promote the unit better across campus and we are becoming a destination place for many students looking for employable degrees that will result in careers that genuinely make a difference. It is an exciting time to be at MSU GEO!

I hope that you will get some sense of the achievements and progress we're making in the following pages. One major sign of progress is that we successfully lobbied to officially change our name in the past year to the *Department of Geography, Environment, and Spatial Sciences*. Many of you will recall that this process began nearly two years ago and was borne out of the reality that most folks outside the discipline simply don't

understand the nature of our work and its applications to societal problems. With that in mind, we really hoped to incorporate the word "environment" in our name, as well as some sense that our work has spatial applications. We conducted a systematic sampling of the alums and the response from you was overwhelming. Given that feedback, as well as internal discussions within the faculty and graduate students, we subsequently proposed the new name to the broader university. Although we faced a lot of political headwinds across campus, we won approval for the new name, which will officially take effect on July 1 of this year. We believe that it will raise our profile and more clearly brand us to prospective students.

In addition to the name change, there are many other things to celebrate in this newsletter. You will be introduced, for example, to Dr. Elizabeth Mack, who is our new Assistant Professor and works in the area of Economic Geography. Before joining us, Liz was an Assistant Professor at Arizona State University where she was off to a great start. She is a Midwesterner at heart, however, and was drawn to our advertised position last year to help us launch our upcoming new major in Economic Geography. Perhaps she was further intrigued because both of her parents are, ironically, MSU graduates. So maybe being here is just in the DNA. Can you say "Go Green"?

Speaking of the new major; wow - are we looking forward to that launch?? This major has been in the works for about a year and

was conceived because we believe that many students formerly in business or economics will be drawn to it. After a lot of work, we gained approval of the major last fall and it will officially take effect next fall (2016). We are already beginning to see the positive effects of the major as it relates to student numbers. At the beginning of September, 2015, we had about 60 undergraduate majors in the department. By the end of the term, the number had grown to the mid-90s, which is more than anyone can remember. Although we lost about 20 to fall graduation (& other reasons), we are already back in the mid-90s at the onset of this semester!! Many of these new students are coming to us in anticipation of the new major. That said, it is also clear that our relatively new major in Environmental Geography is also attractive to students. Overall, we believe that we'll have over 100 undergraduate majors sometime in the foreseeable future.

In addition to our growing faculty and student numbers, several other really cool things happened in the past year. We had a great alumni reception, for example, at the Annual Meeting of the Association of American Geographers conference in Chicago last spring. We aggressively promoted the event and held it in a great venue near the hotel. The attendance was outstanding, with well over 100 passing through at some point. It was one of the best such events that anyone can remember and really indicated a tight bond of MSU geographers. Thanks to everyone who was there, and we hope to see you at a similar reception at this year's meeting in San Francisco. See the ad later in this newsletter to learn more.

We also had a great Geography Awareness Week (GAW) this past November. (see page 8) As you may recall, we've been using GAW to really promote geography across campus the past few years. It's safe to say that last fall's GAW was a *resounding* success. It began with a proclamation from Governor Snyder that we were the official hosts of GAW in Michigan this year. In addition, our graduate and undergraduate students bonded together to host several successful events over the week. We hooked up with the local NPR station, which featured a geographer per day on radio. As in the recent year's past, we also hosted a feature presentation with an invited speaker that was open to the campus and surrounding community. Our guest this year was Dr. Roberta Bondar, who holds the



Message from the Chair

distinction of being the first female Canadian astronaut, as well as being a neurologist. Roberta did a *wonderful* job of relating her work to geography and really sold the discipline to the packed house of ~ 600. The reviews were rave and her presentation really set the bar for future such events. It was a fantastic night.

This past year was also a transition year in other ways. In this context, I'd like to acknowledge the retirement of Dick Groop, who served as Department Chairperson for 13 years before I assumed the job in 2012. As someone who's been in the job ~ 3.5 years, it's hard to imagine 13!! He successfully guided the Department through a major period of change, including a period of rapid growth in faculty, establishment of our top-notch online program, and the complicated move to our current building. As I write this looking at snow, he is on vacation in Spain with his wife, Kim, so I don't see any reason to feel sorry for him in his advancing age.

On a more somber note, I very regretfully must also acknowledge the loss of Dr. Robert

Thomas, who passed away last May at the age of 88. Bob began working at MSU in the late 60s and was very involved in issues related to geography in the Caribbean and Latin America. Although he retired before I arrived in 1995, he came to the office nearly every day, including his last, and was a great role model for junior faculty and graduate students alike as far as the dedication to hard work and geography is concerned. His loss follows the passing of Larry Sommers, David Campbell, Harm de Blij, and Jay Harman the past few years. For those of you who knew these stalwarts, you know how much they meant to the Department and the discipline as a whole. They helped set the foundation for the Department and I know they would be proud of the growth and vitality of the unit today. I hope you are too.

Alan F. Arbogast, Chair



Robert N. Thomas
(1926 - 2015)

PLEASE JOIN US IN SAN FRANCISCO

AND CELEBRATE THE LAUNCH OF OUR NEW NAME

**Department of Geography, Environment,
and Spatial Sciences**



Thirsty Bear
Thursday, March 31, 2016 @ 7PM
661 Howard Street
San Francisco, CA 94105

ALL ARE WELCOME!
Cash Bar | Appetizers Provided



Photo courtesy of Communications and Public Strategy

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. Currently funded research projects with which he is involved include a USDA National Institute of Food and Agriculture (NIFA) project examining the impact of climate variability and change on corn production in the Midwestern USA and the NSF Coupled Human Systems-funded Climate Change and International Market Systems project (led by MSU Geography colleague Julie Winkler) which explores the various impacts of climate change (including potential economic impacts) on tart cherry production both in the Great Lakes region and in European production areas. Collectively, the work in the Midwest region suggests that historical trends toward a wetter and warmer climate during the past several decades have resulted in increases in potential productivity (much of which is masked by concurrent changes in technology).

For perennial specialty crops such as cherries, which are susceptible to springtime freezes, a trend toward increasingly earlier onset of seasonal warm up in the spring since 1980 has led to an increasing number of damaging freeze events and to over all greater production risks for growers in the region (as evidenced by an almost total fruit crop loss during the 2012 growing season). Results from this research have been used by the fruit industry for strategic planning and recently in the development of a new federal crop insurance plan for tart cherries. Jeff also continued work on climate impacts on agriculture in East Africa, with a current USAID-funded project (with MSU Geography alumna Jenny Olson and MSU Geography colleague Nathan Moore) investigating the impact of large scale irrigation in Tanzania's Rufiji River Basin. Jeff began work last fall on a new USDA NIFA-funded project (led by Dr. Bruno Basso of MSU Geology), "Developing and promoting water-, nutrient-, and climate-smart technologies to help agricultural systems adapt to climate and societal changes".

As State Climatologist and 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 Co-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 decision-making from a network of 81 automated weather stations across Michigan. Since the inception of its www site in 2006, data requests and visitor 'hits' have grown from less than 500 per day initially to more than 20,000 per day during 2015. There is also increasing evidence of the value of detailed weather information. The Enviro-weather Program recently conducted a survey of approximately 1000 cherry and apple growers across Michigan regarding their perceptions of Enviro-weather and the use of weather-related information in fruit production. Enviro-weather users reported significant reductions in their use of pesticides and increases of more in both crop yield and quality as a result of the information provided by the system. Collectively, the yearly economic impact associated with the use of Enviro-weather-based information for Michigan apple and cherry production for a small sub-set of production decisions was estimated to be more than \$1.7 million dol-

lars. The system is available for free public access at www.enviroweather.msu.edu. Jeff is also a Co-PI in the NOAA-sponsored Great Lakes Integrated Sciences Assessment (GLISA), one of 11 NOAA regional assessment centers. With a geographical focus on the broader 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 is still teaching his GEO 402 *Agricultural Climatology* course (recently updated!) and currently serves as advisor to 2 Ph.D. and 1 M.S. graduate students. Daniel Dumba (Ph.D) is near completion of a project examining the feasibility of traditional crops such as sweet potatoes to increase local food security in Africa under a changing climate. Ishara Rijal (Ph.D.) is attempting to develop a water misting system to delay phenological development of tree fruit (through latent cooling) to increase the resilience of the crop to spring freezes. Lydia Rill (M.S.) is working with the CLIMARK project to better understand the role of spring freezes in tart cherry production and the potential impacts of climate change on international production.

Best Wishes for a Prosperous, Productive 2016 and Go Green!



► Jeff Andresen (far left) with MSU study abroad program faculty and students at Ha Long Bay, Quảng Ninh Province, Vietnam, March 2015.

Guo Chen

Associate Professor

Dr. Guo Chen is Associate Professor of Geography and Global Urban Studies at Michigan State University, and holds degrees in Geography (Ph.D., Penn State Univ.; M.S., Nanjing University) and Planning (B.S., Nanjing Univ.). Her research focuses on inequality, urban poverty, housing, urbanization and land use, urban governance and social and environmental justice, with a regional focus on China and other emerging countries. She has published close to thirty articles, book chapters, and edited a book. Her recent publications appear in journals such as *Environment and Planning A*, *Urban Geography*, *Urban Studies*, *Cities*, *Habitat International*, and *Acta Geographica Sinica*. She is a guest co-editor of a special issue on “Rights to the Chinese City” for *Environment and Planning A* (Dec. 2012) and co-editor of *Locating Right to the City in the Global South* (Routledge, 2012). Her projects have been funded by the National Geographic Society, National Natural Science Foundation of China, Urban China Research Network, and MSU (IRGP-New Faculty Grant, CASID and DFI). Guo served as secretary, vice-chair, and chair of the China Specialty Group of the AAG from 2012-2015 (Check the website hosted at MSU Geo at <http://cgsg.geo.msu.edu>). She has served as reviewer for over 30 academic journals and is an editorial board member of *Journal of Urban Affairs*. She has taught a wide range of undergraduate and graduate level courses on economic geography, globalization, inequality and justice, people and environment, theories in geography, Asia-Pacific and urban China, and is a recipient of the ISS teaching excellence award at MSU.

Her dissertation was on the changing landscape of urban poverty in post-reform China. Her prior and current projects include completed projects on urban expansion and inequality in coastal China, a book project on urban poverty in China, a research project on urbanization, inequality, and socio-environmental justice in coastal and western China, and a visual project on the slum geography in Mainland China and Hong Kong. She also has worked / collaborated on a number of other projects on topics ranging from global financial industry, city and neighborhood governance, and urban environmental issues, to rural-urban migrants and housing issues (stratification, inequality, for the poor, etc.) in China. Her work has continued to focus on poverty, inequality and injustice for the past ten years.

In her recent NGS-funded project on the geography of ‘hidden’ slums in China, Guo and graduate student Jia Feng led a research group including Chinese scholars and a Beijing-based environmental NGO to compile a visual documentary of the shifting geography of migrant workers in several protoslums in Beijing. Though China is not typically considered a country with slum problems, the living conditions of the millions of migrant workers in China’s largest cities like Beijing are not much different from those of slum dwellers in Mumbai or Rio. The major differences are first, migrants cannot self-build housing in Chinese cities and renting is the only option; hence most migrants live in ‘hidden’ communities on the rural outskirts of large cities where cheap rentals abound. Second, though slum dwellers elsewhere face similar demolition threats from urban redevelopment, China’s migrants probably face a greater level of challenge due to the impossibility to purchase rural rental housing and state/rural collective land ownership. They

often are subject to eviction with no compensation, disregarding of years of residence. The fieldwork is comprised of month-long intensive observations and interviews with dozens of stakeholders --- migrant workers (most recyclers), migrant business owners, villagers, migrant school principals, local officials, and Chinese scholars. This project also resulted in educational activities with migrant children schools, which we hope to continue in the long run (see Photo 1). This project will result in a documentary film to be publicized soon in the fall of 2016 and in venues such as the AAG conference 2017.

Guo also recently received MSU Discretionary Funding Initiative (DFI) to begin pilot work on socio-environmental justice in China. As clearly seen in the field, slum issues are often complicated with environmental problems. In both India and China, migrants and slum dwellers often live in the least environmentally desirable areas of the city. In China, for example, migrants working as garbage pickers or recyclers often live not far from open dumps. In India, relocated slum dwellers often have to live without tap water and electricity for years or decades, not to mention sewage and sanitary facilities, which significantly affect their health conditions. In this direction of work on socio-environmental justice, Guo will look at the notion of environmental justice and how injustice is perceived in China and the underlying processes leading toward both perceived and actual injustice. This project will involve collecting survey and environmental data and begin by examining cases of migrant communities and miners communities in China beginning summer 2016. More about her work at <https://www.msu.edu/~guochen>.

In her spare time, Guo enjoys traveling (and lots of fieldwork), photography and time with family and her daughter Mia.



► Migrant children participate in a mapping class to learn about their community as part of the NGS project educational component, Beijing, 2015.



► Guo with women in a slum in Mumbai, 2016.

Joseph Messina Associate Dean Professor

Greetings from the Deans' offices! During June 2014, I accepted the opportunity to become Associate Dean for Research for the College of Social Sciences at MSU. Some of you probably didn't even know that the department is in this college, but in most respects it makes a lot of sense. Geography always has been a discipline spanning human and environmental systems and thus sometimes it is hard to place within a traditional college in an academic institution. In my role as research dean, I work closely with all the units on promotion and tenure, hiring, academic program review, and strategic initiatives. That said, my primary day-to-day job is managing the college's \$25,000,000 research portfolio. Despite my 75% appointment with the college, I remain quite active in research with four continuing funded projects (DOD, USAID, NASA, and the Bill & Melinda Gates Foundation). My interests remain along the intersection of people (mainly poor people), the environment, agriculture, and disease. Some of this work occurs in Africa (including Malawi, Tanzania, Mali, and Ghana), South East Asia, and the Northwestern Amazon (Ecuador and Colombia).

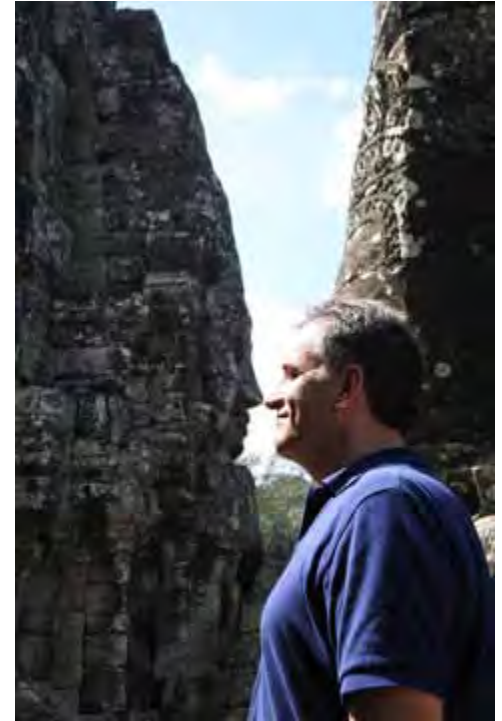
To highlight just one of these projects, I'll focus on the work in Africa supported by a \$1,500,000 grant from the Bill & Melinda Gates Foundation. This project is exploring the use of perennial grains as a hedge against climate change and also to supplement household nutrition and improve soils. In Malawi, my student Brad Peter traversed the length of the country setting up weather stations. We now have 5 (of 6) set up and collecting data.



He also sought to uncover some of the local decision making processes regarding agricultural choices. The perennial we are promoting there (and in Tanzania) is pigeon pea, not all that common in our cuisine, but very common in Indian food. In Mali and Ghana, we are promoting perennial varieties of sorghum, something not seen in Michigan, but in the

southern states it is quite widely dispersed. With my newest Ph.D. student, Leah Mungai, we are exploring the potential to scale these perennials across Africa.

Two of my Ph.D. students finished recently with Shaun Langley (December 2014) and Carolina Santos (December 2015) both working on core but no longer extramurally funded research interest areas of mine. Shaun designed and built a prototype volunteered geographic information system to model the infectious disease, sleeping sickness in Kenya. His work was funded by a special NIH Director's award I received some years ago. I continue to explore sleeping sickness related questions now with Anni Yang (MS student) who is working on similar questions, but more on cost-benefits of disease control in Tanzania. Carolina Santos completed her dissertation exploring crop substitution and drug war related issues in Colombia around the African Oil Palm. We published a paper on this topic but set in Ecuador some years ago. Carolina overcame difficult access issues in Colombia to complete her dissertation. She is a former NASA earth science fellow and hopes to intern at NASA again soon. April Frake and Nicole Smith are both working on Malaria questions. April is just beginning work on the increased risks of malaria associated with intensive irrigated agriculture in Malawi. Nicole is just finishing her thesis focusing on the population-environment relationships driving malaria risk in Kenya. Demetrice Jordan is just beginning her dissertation work exploring how policies across scales are influencing and driving the continued production of sleeping sickness across Sub-Saharan Africa. Mark DeVisser is close to finishing his work on the unintended consequences of the introduction of mesquite into Kenya on the risk of sleeping sickness. Last but certainly not least, Xue Li, who should graduate with her Ph.D. soon, is close to completing a dissertation focusing on the land-atmosphere interactions in far Northwestern China. I'm extremely fortunate to have such a great group to work with on these and many other projects.



- ▶ Left: field work near Bamako, Mali.
- ▶ Above: Angkor Wat in Cambodia
- ▶ Below: Weather station in Malawi.



Bruce Pigozzi Professor



The most recent version of the intro graduate class fondly called “meet the faculty”, currently orchestrated by Drs. Kyla Dahlin and Liz Mack, had students “ask” questions of the faculty members even before we got to the class. These questions were stimulated by readings assigned to the class from each of the faculty. In addition to a research article I’d directed them to a series of 3 “advice” essays on my web site:

<https://www.msu.edu/user/pigozzi/Advice.html>

<https://www.msu.edu/user/pigozzi/Plagiarism.pdf>

https://www.msu.edu/user/pigozzi/NSF_April.pdf

Well, one of the questions I got I found personally provocative, especially at this late time in my career. I can see retirement on the horizon after 38+ years here. The question was essentially *why would you take the time to write these advice pieces?*

This question got me thinking about where I find motivation and satisfaction in this job. Over the years, the best thing has been what I would describe as collegial scientific interaction and inquiry. This has, when everything works out, led to research, publications, presentations and more research. I have done solo research but find the collegial form multiplies the individual contributions and, frankly, is usually more fun.

Quite related to this, is another aspect of my career here that I’ve thoroughly enjoyed, that is the “teaching.” I’ve been known to argue that I see my role, especially when

involved with graduate education, is to help produce colleagues. This leads to research and publication (like the forthcoming piece with Heather Moody and Joe Darden, *The Racial Gap in Childhood Blood Lead Levels Related to Socioeconomic Position of Residence in Metropolitan Detroit*). But, it’s not just the PhD’s and those destined for “academic research” that I’ve come to treasure. I look with equal pride at those who venture into the real worlds of our governments and businesses; those who go out into the world with BA’s, BS’s, MA’s or PhD’s and use Geography for their own good and for the good of their communities and businesses. I’ve been very pleased by those, who after perhaps 15 years, might write to say that what they learned in one of my classes has been useful in their professional life. Most often it has been the *Intro Quant* course that gets this reaction, perhaps because so many have come through *Intro Quant*. And, those who learn “methods” sometimes don’t realize the importance of them for a decade or more.

A year or two ago, I had the pleasure of a student writing to me asking about sources for the content of a handout I’d given to her in *Intro Quant* a decade before (Fisher’s Transformation). She was publishing a research paper and had been working from/with my handouts. She thought a more “appropriate” citation was called for; not just citing Pigozzi’s handout. She was correct and I gave her one. I’m sure she could have found one for herself but she was sending a message. I was thrilled that a decade later she was still using my handouts and that she wanted to tell me so!! I reflect on the fact that I still have my *Introduction to Geography* notebook from many decades ago (Professors Huke and Sommer). The impact of a teacher is a cherished notion in both directions. The *Advanced Quant* class (865) garners some recognition too; a colleague here told me that one of their advisees had reported of *Advanced Quant* (865), “*I learned a sh&t-load in that class!*”

I try to figure out what I bring to these methods teaching experiences. When I came up in high school I was “advanced” in math, but it was abstract math, through calculus. For me it was very similar to what a Chinese student recently said to me: “*We all learn about calculus in China but we don’t learn what to do with it.*” I suppose, up to a point, I could appreciate the elegance of the math. But, it wasn’t until graduate school, when my Geography caught up with my math, that I began to see applications to real world issues using both my Geography and my Math. This synthesis has been crucial to the job and my enjoyment of it. Being able to move between the real world and the aca-

demie world is useful and a source of satisfaction. And, when I look at the successes of many of my former students it’s not just their publications or tenure; it’s where they have an impact on the world. I remember Harold “Duke” Winters would say “*Geography is that discipline which when found to be useful is called something else.*” So, when I know that former students currently carry titles such as *Head of Special Operations, Senior Statistician, Vice President, Transportation Planner, Senior Consultant or Business Manager* in a variety of real world entities such as Cambridge Systematics, Michigan DOT, Deloitte, Pitneybowes, or Plant Moran as well as top notch universities, I am satisfied that Geography has been translated. And, now we are on the threshold of a new Departmental major, a Bachelor of Science in Economic Geography. Thus, I can see the translation continuing.

Jiaguo Qi Professor

2015 got off to a big start for Dr. Qi and the Center for Global Change and Earth Observations, of which he is the Director. In February he hosted a workshop on **Future Earth and Science for Society**, with CASID, ESPP, and the International Studies, Social Science and AgBioResearch.



► Jiaguo Qi addressing Science for Society workshop attendees.

Photo: Jackie Hawthorne

This workshop brought to MSU researchers from across the US, as well as Brazil, China, and Europe, to foster interdisciplinary collaborations and develop joint research proposals. Along with 30 MSU attendees, these scientists explored ways to merge their individual areas of expertise to address the growing need to build research capacity to address the **Food-Energy-Water Nexus**, a key priority of the Future Earth.

Faculty Focus

The F-E-W Nexus was the focus of Workshops in Detroit in October, Germany in November; as well as Bangkok and Washington DC in January 2016. The issues of Southeast Asia in regard to watersheds and how climate change affects food production, hydropower dams and livelihoods of local communities, particularly those within the Mekong River Basin.

During 2015, Dr. Qi and his colleagues made several trips to the Lower Mekong countries of Myanmar, Laos, Thailand, Vietnam and Cambodia. On the Tonle Sap lake residents live in shacks that rise out of the water and straddle the shore, relying heavily on fishing for sustenance and livelihood. As weather pattern changes bring increased flooding and hydropower dams are constructed, an entire way of life is at risk. Without fishing, there is neither time nor tuition for children to attend school.

Over the summer, Dr. Qi also once again assisted with the “Exploring the Social Sciences” Program, in which students from Zhejiang and Sichuan Universities in China come to MSU for an introduction to the Social Sciences here at MSU (<http://socialscience.msu.edu/students/overview/ess/exploring-social-science-summer-program/>). Before the group heads to Michigan, they have a preparatory period at their home university.



Welcome New Faculty!



Liz Mack
Assistant Professor

My parents became Spartans long before I did. My mom and dad met and graduated with bachelor's degrees from Michigan State University many years ago. I am new to the department as of Fall 2015, but have lived in the Midwest most of my life and am excited to be returning to Michigan after working for four years as an assistant professor in the Department of Geographical Sciences and Urban Planning at Arizona State University.

I am an economic geographer by training and received my Ph.D. in Geography from Indiana University. My master's degree is in Applied Economics and my bachelor's degrees are in Finance and Spanish. I found geography as a master's student when I took a regional economics class and became interested in theories of firm location. My dissertation work examined the impact of information and communications technologies (ICTs) on firm location, with a focus on broadband Internet connections.

This interest continues to this day, but has branched into the area of entrepreneurship. Currently, I am working on topics at the intersection of broadband policy and entrepreneurship within metropolitan areas. Case study metropolitan areas of interest include de-industrialized locales such as Cleveland and Detroit. I also have a brand new National Science Foundation (NSF) grant examining economic geographic aspects of urban water, which began this fall.

In the Fall of 2016, the department's new major in Economic Geography will launch, and I am excited to be teaching classes for what promises to be an exciting new major for students. Currently, I am teaching GEO 113: Introduction to Economic Geography.

I am a huge college sports fan and am happy to chat about college football and basketball. My office is in the geography building. Feel free to pass by and chat if you find yourself in the neighborhood. Go Spartans!

Geography Awareness Week



Design by Brad Peter



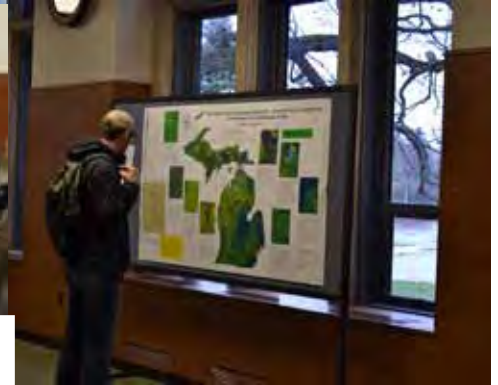
Above: Dr. Roberta Bondar presentation at the Business College Complex. Below: Dr. Bondar guest lecturing in Dave Luschi's Geo-324 Remote Sensing Class.



Poster Presentations. L to R: Sam Arcand, Victoria Breeze, Dee Jordan, Lisa-Marie Pierre, Lydia Rill, and Ameen Kadhim.



Geo Club Members hosted a Jeopardy Game at the Union: Haley Keefer, Sara Deslongchamps, & Paige Gebhardt.



The cake and the servers: Alan and Claudia Brown.



Over 700 attended the evening event.

So what has been going on at RS&GIS, you ask? Our focus continues to be research services and outreach in geospatial technologies on and off campus. In this dynamic field, we are always looking for innovative ways to lead and apply spatial tools to solve problems. Highlighted below are some of the exciting projects we have been working on in the Department.

Unmanned Aerial Systems (UAS)

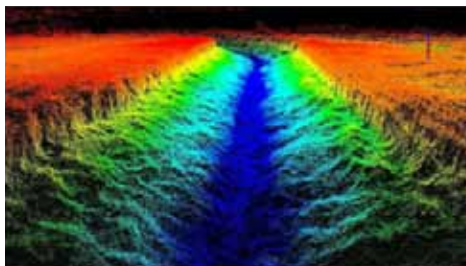


RS&GIS continues its work with UAS, partnering with researchers at MSU, as well as the private sector. One exciting application involves collecting massively overlapping photographs and using photogrammetry to extract a 3D point cloud of the landscape, this process is called PhoDAR, to distinguish it from point clouds created from LiDAR (light detection and ranging). Flying recently for Dr. Alan Arbogast, RS&GIS was able to extract 3D point clouds for a section of sand dunes in Ludington State Park.



► Colorized 3D point cloud of sand dunes in Ludington State Park. Data collected for Dr. Alan Arbogast.

We are also exploring applications in drain delineation and crop health assessment. This methodology is relatively inexpensive with important implications for industry and research.



► Colorized 3D point cloud of a section of drain. Precise 3D model allows for accurate measurements of slope and other items.

Dr. Dave P. Lusch to Retire Summer 2016



After more than 37 years of employment at MSU, Dr. Dave Lusch will be retiring effective June 30, 2016. Dave started with the Remote Sensing Project in September 1978 and has been a part of this group through its many name changes. In 2008, Dave received the Distinguished Academic Specialist Award from MSU and the Jim Living Geospatial Achievement Award from IMAGIN, the pioneer geospatial professional group in Michigan. He will be greatly missed at RS&GIS. Dr. Lusch will continue to teach and advise in Geography for the first few years of his retirement. Please reach out to Dave to congratulate him on his pending retirement (lusch@msu.edu).



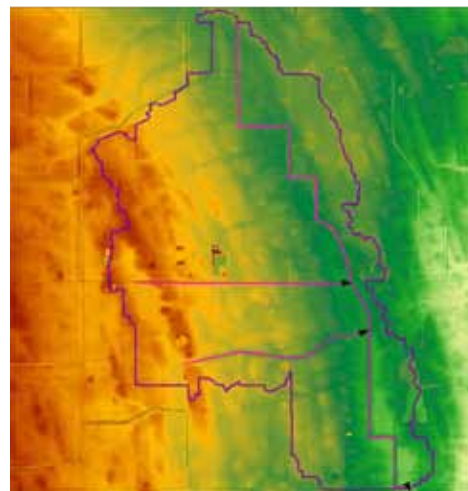
► The Remote Sensing Project team, 1978.

RS&GIS

www.rsgis.msu.edu

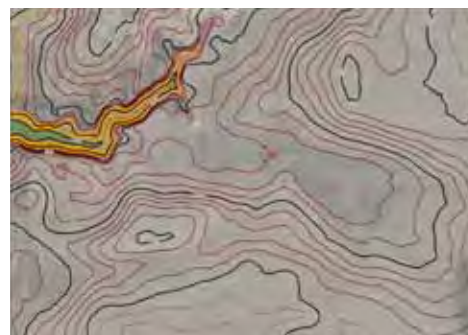
Airborne LiDAR Data Processing

In preparation for the immense influx of QL2 airborne LiDAR data into the public domain, RS&GIS has been developing tools and scripts for extracting actionable data from this valuable resource. Scripts and models written by RS&GIS will be used to extract cartographically-smoothed contours, drainage catchments around lakes and rivers, forest canopy details, building footprints, impervious surfaces and more.



► Catchment generated for drain systems from QL2 airborne LiDAR data.

It cannot be overstated how important derived products from LiDAR will be to resource managers and researchers in the coming years.



► 2-foot contours generated from QL2 airborne LiDAR data.

onGEO Certificate Program Growth

by Adrienne Goldsberry

For those of you who read the newsletter when it arrives each year, you know that the onGEO trio usually updates you on the status of our online offerings. We have decided this year to focus our update on the onGEO Professional Certificate in GIS and the significant growth it has experienced over the past year.

First, a little history. As you may know, the MSU Geography Department started a certificate program in Spring 2013 to reach a new group of students: professionals seeking additional training and education in GIS and other geospatial tools. When the program launched, we had one--yes, that's right--one--student enroll in our courses. Slowly but surely, with each passing session, enrollment climbed. We continued to market the program through a variety of means, including printing brochures, Google Keyword Advertising, and attending conferences such as the AAG Annual Meeting, ESRI Education Users Conference, and SXSWedu. And sure enough, our efforts are paying off. As of first spring session 2016, which began in January, enrollment is at its highest ever: 37 students are taking a certificate course this session! And, we have found that once a student enrolls in the first course (Introduction to Geospatial Technology), the retention rate is high, with most students eventually taking the next three courses and completing the certificate.

Along with the increase in enrollment, we are seeing an increase in student diversity with regard to age, academic and professional background, career goals, and geography. We currently have students working in the fields of archaeology, geology, environmental consulting, education, aviation, and forestry, among many others. We have a recent college graduate and a current student preparing for graduate school. We have a recently returned Peace Corps volunteer, as well as two active Americorps volunteers. As of this session, we can officially say that we are no longer a Midwestern-oriented program; students are taking certificate courses from all over the United States (even Alaska!), and around the world, including Canada, Norway, France, Germany, Portugal, Italy, United Arab Emirates, and Mauritania. Take a look at the map below--each pin represents an onGEO student's volunteered location (not all students choose to participate in this activity). You can see the full map here: <http://arcg.is/InNoIE0>.



► Screen capture of the ArcGIS Online map where our professional students voluntarily pin their locations.

We value the chance to help these students work toward their academic and career goals, and are excited to continue to expand the program, both geographically and academically (read the article that follows to learn more). Tune in next year for another update!

Professional Students Ask For More

by Juliegh Bookout

In 2014 I had the privilege of participating in the Online Learning Consortium's Online Teaching Certificate program. Working within a cohort of learners, professionals, academics, administrators, and so on, I navigated through a 10-week foundational course, building an interactive syllabus, designing an effective assessment strategy, writing assessments, among many other relevant topics in online education. But that was not the end of the program. From there I was able to narrow my focus, choose topics of most interest and most applicable to my work, and select courses specific to that--I was becoming an expert in one area and specializing my skills. When the need arises, who does not want to say, "Let me take a look and give you some advice--that is my area of expertise." Additionally, these courses demanded little of my time, less than a week for each of the three courses, but were still highly applicable and in line with what I wanted to achieve. In my mind, the format was brilliant, especially for a working professional.

You might be wondering what this means for MSU Geography, and more specifically, the onGEO program. So, here it is. Students enrolled in our Professional Certificate in GIS are motivated learners who desire to learn more about niche topics and gain advanced skills in specific areas. When asked on a survey just what skills they were looking for in continuing their education and training, many responded that they wanted more technical knowledge and experience in geospatial tools and technologies, including image processing, Python for GIS, and Digital Terrain Mapping. As we read through the survey results, none of the topics mentioned was slated for development into a full 7-week course. However, what we could offer, and what seemed even more appropriate for some of these topics, was the opportunity to spend one or two weeks raising their proficiency in these focused areas. And, MSU Geography has some of the most well-versed, well-trained faculty in these areas; our certificate students could have access to the best of the best!

As we all know, ideas don't become courses overnight. It takes a good bit of strategy, time, and planning, even developing content and assessments. Spearheaded by Adrienne Goldsberry, onGEO staff spent much of the Fall Semester 2015 in the planning phase for new short courses. Fortunately with the help of great support staff, former and current graduate students, and some pretty amazing faculty, two short courses, *Python for GIS* (written by MSU alumnus Jason Matney) and *Digital Terrain Mapping* (written by Ashton Shortridge), will be a reality within the coming year. We hope to collaborate with RS&GIS in the future as well.

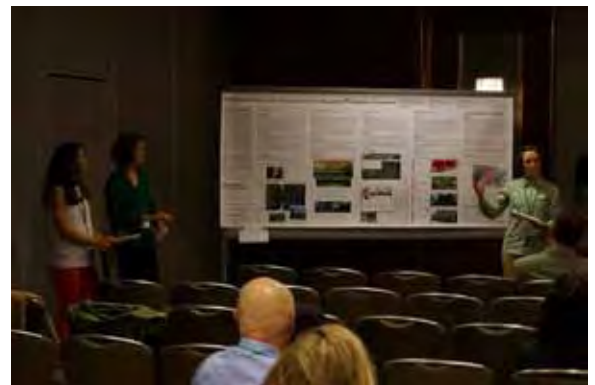
Like our other certificate courses, these short courses are available to anyone looking to expand their knowledge in this field--MSU student or alumnus status not required. Professionals, graduate students, and academics alike are welcome to enroll in any one of our certificate courses, and specialization is just around the corner. Maybe one of our future certificate students is reading this right now! If you (a colleague, employee, friend...) are interested in learning more about the Professional Certificate, or any of our onGEO courses, check out our website: ongeo.msu.edu.



AAG 2015 Highlights



Top L: Welcome Sign
Top R: Grad students
Yaun-Jauh Su, Lydia Rill, Victoria Breeze, Dee Apps & Daniel Ddumba. Lower L: Grads & Alumni in conversation. Lower R: onGeo staff presenting their poster on MSU online courses.





2014-2015



The undergrad Geography Club (above) is off to a great start this year! Club members have painted a map on a local elementary school playground, sold t-shirts, participated in the Red Cedar River cleanup, worked at the Department's big Geography Awareness Week event, and manned the fall Marathon of Majors! During GAW, they also paired with Triple G to really raise the profile of Geography around campus by having a "Geopardy" board in the Union and promoting a social media 'Green Out' on Friday.

Geo Camp (next page). We had a great time at GeoCamp this year! GeoCamp is an annual event that kicks off just before the Fall Semester gets underway: our incoming graduate students spend a few days getting to know more about each other, about the Department, and about the geography of Michigan. Grad students Dee Apps and Dee Jordan (the D-squared team!) did a lot of prep to make this a very successful experience. Grad Program Director Ashton Shortridge, along with Beth Weisenborn and Professor Sue Grady, took our largest class in several years up north to Camp Wa Wa Sum. This is an MSU-operated site on the Au Sable River just east of Grayling. We cooked, laughed, and played together. Weather was definitely on the cool side for late August, but we spent a lot of time enjoying the outdoors: tubing down the Au Sable (chilly!), exploring the grounds of the historic camp, visiting Deadman's Hill and the Jordan River Fish Hatchery, and checking out the old growth forest at Hartwick Pines.

Dr. Grady set up an outstanding meeting at the hospital in Grayling with Julia Terhune, Rural Community Health Program Coordinator, about the serious health challenges facing many rural Michiganders. On Friday we drove to Pyramid Point in the Sleeping Bear Dunes National Lakeshore; several of our most intrepid new grads scrambled to the bottom and climbed arduously back up. It was a fantastic trip and a great way to get prepared for graduate studies at MSU Geography!

Photos by Rajiv Paudel

2015



► L to R: Nafish Haghtalab, Sue Grady (faculty), Lisa-Marie Pierre, Ryan Nagelkirk, Cristina Gauthier-Hernandez, Sam Arcand, Jonah White, Nick Ronnei, Qiong (Joan) Zhang, Kelsey Nyland, Yachen Xie, Judith Namanya, Kevin Credit, Mattie Bene, Ashton Shortridge (Grad Director), Xiaomeng Li, Rajiv Paudel, Thania Dos Santos, Toni Walkowiak, Leah Mungai.

2015 GEO GTU SPRING RECEPTION



► Academic Advisor Gary Schnakenberg with four of the department's twelve 2014-15 graduating seniors: Hannah Deindorfer, Marie Holler, Jamie Boelstler, and Brianne Gerondale.



► Geography Club President Jamie Boelstler and Vice President Grace Deladurantaye.



► Triple G President Josh Vertalka and Vice President Dee Jordan.



► Left: Grad Director, Ashton Shortridge, and Right: Undergrad Academic Advisor, Gary Schnakenberg.



► Left: PhD students: Daniel Ddumba, Laura Johnson, Ellis Adams, Cadi Fung.

► Above: Marie Holler (Sr.), Victoria Breeze (PhD), Chris Connallon, (MS) April Frake (PhD) and Brad Peter (MS) enjoying the chocolate cookies



► Left: One of our photographers, Professor Lifeng Luo.
► Right: Dee Jordan (PhD), Professor Emeritus Robert Thomas, Professor Bruce Pigozzi, and Professor Morris Thomas.



Photos by Lifeng Luo & Yahn-Jauh Su

Student News

Undergraduate of the Year



► Above: Recipient of the Undergraduate of the Year Award, Hannah Deindorfer.

► Right: Recipient of the Graduate of the Year Award, Ellis Adams. These awards were established by the late Professor Harm de Blij in 2008 in honor of Dr. E. James Potchen, a special Friend of Geography.

Graduate of the Year



Cultural Geographer



► Above: Award winner Paige Gebhardt pictured with Professor Bruce Pigozzi. The Cultural Geographer Scholarship was established by the family of Professor Daniel Jacobson, Professor of Geography and Education at Michigan State University.

Marjorie & Lawrence Sommers Graduate Fellowship for International Research and Travel



► Above: Award winner Jia Feng pictured with Professor Bruce Pigozzi.

2015 GTU Initiates



► Above: Professor Leo Zulu, GTU Initiates: Brad Peter, John Del Tufo, Paige Gebhardt, and Professor Sue Grady.

Graduate Research Presentation Winners



► L to R: PhD students Josh Vertalka (1st place), Mike Luehmann (2nd place), Laura Johnson (3rd place), and Professor Catherine Yansa.



► Professor Jeff Andresen explains the history and symbolism of Gamma Theta Upsilon as Gary Schnakenberg holds the symbolic key.

Not pictured: Steve Schultze, recipient of the Owen Gregg Global Climate Change Research Award.

UNDERGRADUATE DEGREES 2015

SPRING

Bock, Kristen	BA Geography
Boelstler, Jamie	BS Geography
Celusnak, Brianne	BS Geography
Deindorfer, Hannah	BA Geography
Gerondale, Brianna*	BS Geography, BS GISci
Harrison, Ian*	BA Geography
Holler, Marie*	BS Geography, BS GISci
Johnson, Benjamin**	BS Environmental Geography
Scott, Carly	BS Environmental Geography
Steen, Blair	BS GISci
Van Dyken, Nicholas	BA Geography

SUMMER

Beasley, Brandon	BS Geography
Kelly, John	BS GISci
Thorland, Elin	BA Geography

FALL

Bunting, Michael	BA Human Geography
Cook, Jeffrey	BA Human Geography
Klovski, Matthew**	BA Geography
Liu, Shiqian	BS GISci
Logan, Jacob	BS Geography
Logan, Jared	BS Geography
Mazorowicz, Edward**	BS Environmental Geography
Ralph, Connor*	BA Geography
Renforth, Vance**	BA Geography
Reynolds, Michael	BS Geography
Wolfe, Christopher	BA Human Geography

* Additional Major

** Second Degree

GRADUATE STUDENT DEGREES COMPLETED IN 2015

Baylis, David, PhD (Kyle Evered), "Governmental Narratives of Health, Gender, and Place in the Early Turkish Republic."

Butvidas, Eric, MS (Sue Grady), "The Global Dracunculiasis Eradication Campaign."

Connallon, Christopher, MS (Randall Schaetzl), "Mapping and Characterizing a Relict Lacustrine Delta in Central Lower Michigan."

Grevstad-Nordbrock, Ted, PhD (Igor Vojnovic), "An Analysis of Diverse Gentrification Processes and their Relationship to Historic Preservation Activity in three Chicago Neighborhoods."

Kettle, Jennifer, MS (Catherine Yansa), "A Paleoclimatic Interpretation of Southeastern Lower Michigan over the last 2000 years Inferred from the Fossil Pollen Record of Otter Lake."

Luehmann, Michael, PhD (Randall Schaetzl), "Relict Pleistocene Deltas in the Lower Peninsula of Michigan."

Michalek, Michael, MS (Alan Arbogast), "Historic Channel Changes in the Muskegon River, North-Central Michigan, USA."

Santos, Carolina, PhD (Joseph Messina), "Complex Land Use and Cover Trajectories in the northern Chocó bioregion of Colombia."

Schultze, Steven, PhD (Lifeng Luo), "Effects of Climate Change and Climate Variability on the Michigan Grape Industry."

Tang, Ying, PhD (Shiyuan Zhong), "Climate Change Impact Assessments for Regions of the United States."

Yang, Zutao, PhD (Jiquan Chen), "Spatial and Temporal Variations of Ecosystem Characteristics: Updates from three Case Studies."

Deanna Apps

After a fun-filled first year at MSU, I am now in my last semester working toward completing my Master's degree. I have been mainly focused on my thesis research during the last couple of months. My research is about understanding the spatial variability of soil moisture-precipitation feedback across the continental United States.

In early January, I presented this research at the American Meteorological Society Conference in New Orleans. I completed my coursework in the fall semester and I am very fortunate to have broadened my horizons in this Geography Department. These two years have gone by fast, but I am looking forward to the rest of this semester and the next step in my journey.



► Deanna at Pyramid Point -during GeoCamp 2015.

Sam Arcand

Last year I received my Bachelor's degree in meteorology from St. Cloud State University, and I'm now in the first year of my Master's degree here at MSU. My current research combines weather and climate, and for my thesis I will be looking into the effects of agricultural irrigation on low-level jets (LLJ) throughout the central United States. I had the opportunity this past summer to be employed as a field scientist through the University Corporation for Atmospheric Research (UCAR) chasing storms in an effort to better understand nocturnal convection in and around the Great Plains where LLJs play an important role. I am excited to apply what I learned during this project to my Master's research. Outside of academic life I enjoy playing all sorts of sports as well as spending time outside hunting, fishing, and running.

Fatima Barry

Over the last year, I've been working steadily to complete my PhD. I passed my comprehensive exams in February 2015 and passed my dissertation proposal in December 2015. My dissertation is titled, *"Flooding Oil: Investigating Poor Health in Vulnerable Communities in the Niger Delta region of Nigeria."* The Niger Delta is a region that is known to have an annual flood season, but in the last few years, these floods have become more severe. Therefore, I am using a case-control study to determine if there is a difference in the health status of women and children in two communities (oil v. non-oil) that have dealt with severe floods. I am grateful to the College of Social Science that provided funding for my preliminary dissertation research trips to Nigeria for the past three years through the Research Scholars Fellowship Program. I am also thankful to the Geography Department as they've provided much financial and emotional support during my time at MSU. My last trip to Niger Delta region in Nigeria in October 2015 was to pre-test household surveys and to develop a sampling strategy. This was a critical piece to my work because I work in a region where things are constantly changing and it is important to check in with community members and their leaders to keep them abreast of my research goals. I have three main goals for this next year: (1) conduct spatial environmental assessments of gas flares in the Niger Delta region, (2) implement household surveys to obtain important health and livelihood data in two communities in Delta state during the summer, and (3) analyze the data and begin writing my dissertation. Let's see how things go! Wish me luck!



► Fatima interviewing community members in the Niger Delta of Nigeria.

Mattie Bene

I am Mattie (From Matlhogonolo). Well, let's not dwell on how to even pronounce that! I am from Botswana and am a first year PhD student. My research interests are HIV/AIDS and its prevention and treatments in Botswana. I am an aspiring Medical and Health Geographer. My advisor is Dr. Grady. I graduated with a Master's degree in Geography from SUNY Binghamton in 2014 and have a Bachelor's degree in Environmental Science from the University of Botswana. My country is landlocked and geographically located just north of South Africa. There is where we find the Kalahari Desert. Most people would assume that I do not like the cold weather of the northern hemisphere, but that is not true. I love snow! I even complain that we did not get enough snow this year. I lived in upstate New York for two years and I loved the snow days! One thing though that I miss about the southern hemisphere is the beef! Botswana beef is incomparable, trust me. It is the staple food there, yes, we have steak for breakfast!

When I graduate, I would love to go back to Sub Saharan Africa and help HIV patients. HIV is still killing people at very high rates. With the education that I will acquire here, I am sure I can contribute to my country as well as the continent. MSU Geography is a great place to be, we have supportive faculty, and the flexibility of courses to choose from. I am really happy to be here!



► Mattie and Sparty.



► Victoria on top of the North Peak of Mt. Hua in Shanxi, China.

Victoria Breeze

2015 was apparently my ‘Year of International Travel,’ as I had the opportunity to travel both to Lilongwe, Malawi and Xi’an, China for GEO-related activities. In March, I spent a week at Lilongwe University of Agriculture and Natural Resources as a TA for Dr. Moore’s statistics short-course. I then spent most of the summer studying Mandarin at Shaanxi Normal University as part of the US State Department’s Critical Language Scholarship program. Continuing on the language-bent, I started my second year here at MSU as an Asian Studies Center FLAS fellow. Now officially a straight-to-PhD student, I hope to finish most of my coursework this academic year and look forward to a research-filled 2016. This coming summer will also be the first I’ve spent in Michigan; I’m doubly looking forward to the chance to explore the state more!

Kevin Credit

I’m a second-year Ph.D. student studying economic geography and urban planning with Dr. Elizabeth Mack. My research interests are primarily in economic development, public transportation, urban design, and entrepreneurship. My ongoing dissertation work looks at the impact of public transit investment and urban design features on the rate of new business formation, as well as their spatial distribution, and success (survival and productivity). From a methods perspective, I’m primarily focusing on

quantitative econometric and spatial analysis approaches.

I transferred from Arizona State’s Urban Planning Ph.D. program to MSU in 2015. Before pursuing my doctorate, I worked as a long-range planner for two years in Manhattan, Kansas. I was the Staff Liaison to the Historic Resources Board, and worked on many GIS, demographic, and economic analyses. I received my AICP certification in May 2014.

Outside of work/research/studying, I love traveling, sports, and cooking at home for my wife Meghan (and our cat Rocky). I was born in Detroit and grew up in the Kansas City suburbs. Go green!

Jeanette Eckert

It’s impossible to write about what I’ve been up to this last year without first noting the passing of my best friend and significant other, Mike, who passed away suddenly and unexpectedly last April. Mike was my anchor in the craziness that grad school can be, and as I progress towards wrapping up my PhD, I treasure the time we had together and everything he taught me about life and scholarship.

In 2015 I successfully completed my comprehensive exams and defended my dissertation proposal. I am currently in the writing stage of the dissertation, and I’m working on wrapping up a few other writing projects as well. I also added to my teaching experience in 2015, serving as an instructor for a large lecture course and a smaller, more interactive course, and I feel that my time here in the GEO department has provided opportunities to gain experience in several different types of teaching environments.

In addition, I am currently serving as the Social Media Editor for the *Journal of Urban Affairs*, which has provided insight into the “other side” of the world of academic publishing. I have also been assisting a community action agency in my hometown of Toledo, Ohio, with program management and data reporting. My goals for the rest of 2016 revolve almost exclusively around writing, writing, and more writing.

April Frake

Over the course of 2015 I continued making steady progress toward examining how agricultural land use modifications are impacting the primary malaria vector’s (the *Anopheles* mosquito) habitat in Malawi. In between preparing manuscripts for publication, serving

as a reviewer for a few academic journals, being selected for and attending the NCAR/CDC Infectious Disease workshop, and working toward completing my coursework, I happily morphed into an entirely different role all together: becoming a Mom. Our son, Ezra Michael was born at home on October 4th, 2015 to two overjoyed and completely smitten parents. Looking ahead, the to-do list for the year is long and exciting, most notably beginning my fieldwork in Malawi this spring.



► April and her son Ezra Michael.

Yankuic Galvan

This past year I spent part of the spring and summer in Mexico finishing my fieldwork. I traveled to several places in the country interviewing managers and CEOs from feedlots and companies trading with maize, as well as government officials from the agricultural sector. They are very busy people and with all the conflicts going on in Mexico they don’t easily agree to meet with strangers. So, it was a challenging and novel experience for me. But all in all, I had a great time and it was also an excellent opportunity to get back in contact with some of my former colleagues.

Now that I am back in the States, I spend most of my time working hard to complete my dissertation, which I expect to do soon. The rest of my time and energies are devoted to assembling a research program at the University of Florida that builds upon my research findings. Our aim is to understand what drives the reorganization of the production geography of agri-food systems in Mexico and how their evolving character relates to deforestation, forest transitions, and poverty. I’m working on this with my adviser, Dr. Robert Walker, Dr. Barney Warf from KU, and colleagues from two universities in Mexico. Earlier this year we published a paper on this matter in a special issue of the journal *Land*. In April, I’ll be presenting more results at the AAG. Hope to see you all there.

Dee Jordan



As a 2nd year Doctoral Student, Dee Jordan has spent this year as both the President of the Geography Graduate Group and the Vice President of External Affairs for the Council of Graduate Students (COGS). Dee is the first African American female and the first Geographer to serve in the Executive Board of the COGS. She is responsible for planning and coordinating many of the Geography Awareness Week activities including the State of Michigan's Proclamation for the Department of Geography - naming the Department the official home for GAW activities for the State, the GAW Poster Gallery, and the Geo Department Family Photo. She has also been instrumental in coordinating the COGS reduced price meal plan for graduate students and planning the special town hall discussion with the Flint City Council, residents and Dr. Robert Bullard so that grad students, faculty and others in the MSU community could better understand the Flint Water Crisis and coordinate an appropriate response.

Libbey Kutch

During this past year I have been involved in numerous interesting projects involving maternal and infant health. I have been working in conjunction with the Michigan Public Health Institute on evaluating birth defects and the location of genetic service providers for the Midwest Region. Importantly, I have been working on my dissertation research investigating UV radiation in Michigan.



► Libbey with MSU basketball coach, Tom Izzo post-win against Maryland January 23, 2016.

Wei Liu

2015 is my third year in Geography as a Ph.D. student. I think one of the most exciting things that happened last year is that I passed my comprehensive exams in December, so I can call myself a Ph.D. candidate now. The preparation for comps was frustrating but also rewarding. Many thanks to my advisor Dr. Arika Ligmann-Zielinska, my committee members Dr. Igor Vojnovic, Dr. Sue Grady, and Dr. Ken Frank (College of Education), who helped me A LOT.

Another experience I would like to share is my working as a student volunteer at 2015 ESRI Users conference in San Diego. I am the only one from Michigan among the volunteer cohort last year. It's fascinating to see all kinds of new development and applications of GIS and to communicate with GIS'ers coming from all over the world. I also displayed a poster of our GEO871 (taught by Dr. Randy Schaetzl) group project about loess in southwestern Michigan at the conference's Map Gallery. It's an unforgettable memory in a beautiful city with many cool people.



Leah Mungai

This photo was taken at the 2015 AAG meeting just before my presentation in the session "Agriculture in a Changing Climate - Part I: A Look at Climate Impacts on Crop Productivity and Sustainability across Sub-Saharan Africa". During this session, I had the privilege of meeting with Dr. Joe Messina in person for the first time (even though we had communicated on emails). Dr. Ashton Shortridge may also recall that I had traveled from Boston to MSU a few days prior to AAG 2015, where we had an opportunity to meet and travel to Chicago.

Judith Namanya



I am a first year PhD student from Uganda. I have a master's degree in Public Health-Health Promotion from Leeds Metropolitan University (now Leeds Beckett University). I am also an Environmental Science and Policy Program fellow. I have immense experience in infectious disease research and enjoy working and interacting with rural communities. My research interests are in water scarcity, human health, infectious diseases, human-environment interactions, social networks and food insecurity in sub-Saharan Africa. It took me a long time to believe that Geography was not only about maps, but now I am enjoying my work in the Department of Geography. I am so glad I made the right decision to study geography. I look forward to learning more about GIS and other geospatial tools and skills that will help me understand disease patterns and outbreaks.

Ryan Nagelkirk



I joined Geography over the past summer and was lucky to start off my experiences in Geography with Dr. Arbogast's High Plains field trip. Being able to walk a portion of the Oregon Trail and visit the geographic center of the United States was a fun way to gain a new perspective on U.S. history and geography. Shortly afterward, I bought my first house and I've enjoyed having my own place. Academically, I've been researching the relationship between megaherbivores, vegetation and climate. Dr. Kyla Dahlin, my advisor, has helped me narrow the project down. The African savanna elephant is our current candidate species to study because of the potentially large role it plays as an ecosystem engineer in the savanna ecosystems that dominate much of Africa.

Kelsey Nyland

Kelsey Nyland is a first year PhD student and recipient of the University Distinguished Fellowship. Kelsey received both her Bachelor's and Master's degrees in Geography from The George Washington University, in Washington D.C., where she studied the impacts of climate change on permafrost (perennially frozen ground) in the Arctic. For her PhD she will continue to focus on the Arctic in a geomorphology project in the Beringian Uplands of central Alaska under the direction of Drs. Fritz Nelson and Randy Schaetzl. Specifically, her work will examine the geomorphic processes behind the formation of cryoplanation landscapes and test if this is a climatically controlled phenomenon. This academic year she has presented some of her past work conducted in Siberia at a

conference in Norway and initial findings from what will be her dissertation project at the American Geophysical Union in San Francisco. Kelsey was also recently appointed the Young National Correspondent for the U.S. in the Global Terrestrial Network on Permafrost (GTN-P). In working with GTN-P she will be contributing to the assembly of climatic and permafrost variables at the global scale. She looks forward to collaborating internationally on this open-access database while pursuing her own work in the Alaskan Arctic.



► Kelsey and a Norwegian King Crab

Rajiv Paudel

While working in the field of GIS for more than a decade, I have always been interested in contributing to a wider society. From cleaning polluted city rivers, protesting against air pollution in the streets of Kathmandu, to helping protect wild Red Pandas in the Himalayas through my maps, I have tried to get my hands dirty wherever I could. However it was only after I joined a USAID 'Feed the Future' project in Nepal that I realized the main suffering of poor people. Quality air and polluted city rivers were non-issues for these people suffering from hunger and malnutrition. Food security was in fact a real issue in Nepal. The remittance-dependent economy, political instability, traditional subsistence farming practices, and effect of global climate change were just a few factors straining the nation's food security. While using my expertise in the project to analyze and map the complex food security issues, I

developed an interest in using spatial computational modeling to further understand the multiscale aspects of food production and food security. I hope that my research will shed some light on its complexity, and I believe slowly but steadily we will address food security issues and there will be no hungry people in the world. But you may say I'm a dreamer.....♪

Brad Peter

Graduate Student Brad Peter from GCF-SI's Population Growth, Climate Change and Pressure on the Land team visited Malawi a second time to construct and install a weather station at the Bwanje Valley Irrigation Scheme in the central region of Malawi. This weather station accompanies four others that were constructed in other regions of Malawi last year and will be used primarily for relating growing season weather data with satellite imagery. In addition to weather station construction, a land cover assessment was conducted spanning the entirety of Malawi. Two hundred farm sites were assessed and interviews were held with farmers and agricultural extension officers in order to inquire about crops grown, limiting factors for yield, land-use history, and other geographic data. The data collected from this assessment will be related to agricultural productivity models developed using remotely sensed data. Field elevation data from this initiative will be used by others in the department interested in assessing the accuracy of modeled elevation data.



Lydia Rill

I am working on completing my master's degree and will be graduating in the spring. I presented my research, "*Spatial and temporal variability of springtime freeze events and their impact on tart cherry production in the Great Lakes Region*", at the American Meteorological Society 96th Annual Meeting in January. I have enjoyed working as a research assistant throughout my studies at MSU. After graduation I will be looking for jobs that involve weather, climate, or GIS!



GEOGRAPHY CAREER DAY & JOB FAIR

**Friday, February 26, 2016
2:30PM - 4:30PM
BESSEY HALL - ROOM 108**

DOOR PRIZES AND GIVEAWAYS

Snacks provided
Handicapper accessible
Questions: geo@msu.edu

MAP your FUTURE

MEET POTENTIAL EMPLOYERS

Hear about job prospects, what people in geography careers do, and more!

Meet in Bessey Hall Room 108 at 2:30 pm for a brief introduction of each participant, followed by the selection of door prize winners. Then talk one-on-one with participants of your choice. If you are actively seeking a position, either job or internship, please bring copies of your resume!

Past participants have included:

<ul style="list-style-type: none"> • Anderson Economic Group • Blue Water Satellite, Inc. • Remote Sensing and GIS Research and Outreach Services (RS&OIS) • Lansing Office of Emergency Management • Con-way Freight • Electric Power Research Institute (EPRI) • FarmLogs • GeoNexus • OHM Advisors • Resource Systems Group (RSG) • Michigan Department of Natural Resources (MDNR) • Michigan Department of Agriculture and Rural Development (MDARD) • USDA Farm Service Agency • U. S. Forest Service • TomTom • Tango Analytics, LLC • Environmental Data Resources (EDR) • Skywatch Services, LLC • IDV Solutions • Pitney Bowes Software • Prain & Newhof • OnStar, General Motors • Student Conservation Association (SCA) 	<ul style="list-style-type: none"> • Tri-County Planning Commission • Michigan State Police (MSP) Emergency Management and Homeland Security Division • East Lansing Planning Department • Michigan State Historic Preservation Office • U. S. Geological Survey (USGS) • Center for Shared Solutions and Technology Partnerships (CSSTP) • Michigan Geographic Alliance • Michigan Department of Transportation (MDOT) • National Geospatial-Intelligence Agency • MSU Institute of Water Research • Michigan Tech Research Institute (MTRI) • Ducks Unlimited • MSU Map Library • MSU Career Services • MSU College of Social Science Study Away and Internship Programs • MSU College of Social Science Domestic Internship & Service Learning • MSU Geography Department Advising
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Adam Cinderich MS 2012

I don't have any major updates that are geographical in nature, but did recently accept a promotion from Academic Program Coordinator to Assistant Director of TRIO Student Support Services at Kent State University in Kent, OH. Additionally I was nominated and awarded the Louis M. Brownlowe New Professional Award for the state of Ohio in April and was recently elected Secretary of the Ohio TRIO Association in November. TRIO promotes student academic success.

Dan Cole MS 1979

Aside from working on maps and GIS projects for our scientists, I have been working more on maps for exhibits around the Smithsonian during the past two years and will continue to do so during the coming year. Since September 2014, the National Museum of Natural History (NMNH) has on display a commemoration of the 50th anniversary of the passage of the Wilderness Act. In this temporary exhibit are static maps related to some museum collections from Wilderness areas, plus two kiosks set up by ESRI with story maps on those areas (see also <http://www.wilderness50th.org/smithsonian>). Replacing that exhibit will be a similar one dealing with the 100th anniversary of the National Park Service, which opens in August of this year. Meanwhile, I researched and produced a number of maps detailing the ancient Inca Road system in South America for an exhibit that opened in June 2015 at the National Museum of the American Indian (see also <http://www.nmai.si.edu/inkaroad/>). At the end of June 2016, I will be displaying a collection of unique and iconic maps produced over the past 175 years at the Smithsonian along with current GIS projects at the ESRI International Users Conference. And planned for 2018 is an exhibit at NMNH titled "Outbreak" where I'll be mapping the Spanish Flu of 1918 along with other more recent outbreaks of diseases around the world.

Jamie Boelstler BS 2015

I am a recent alumnus who graduated in May 2015. Over the summer, I worked in the Southwest Conservation Corps, a branch of the Conservation Legacy. This was an amazing experience that I highly recommend to anyone willing to get their hands dirty in real conservation work. While living out of my tent, I worked in the wilderness of Colorado planting willow trees along the Upper Arkansas River, making a hiking trail in the Rio Grande National Forest, and completing many other environmental-related projects. I also had the chance to network with people that work in the National Parks, local farms, and other AmeriCorps employees. I returned to Michigan in the fall and worked at Howell Nature Center in environmental education. Here I was given the chance to teach children about native Michigan animals and plants, and play games with them that kept them outdoors and enjoying nature while learning about the effects humans have on the environment. Currently I am living in Spain. I am working as an au pair and teaching the kids of my host family English while at the same time I am learning Spanish. I am doing this to experience living in a new culture and learning a new language. Cultural geography is just as important as physical! In particular, I want to learn Spanish to broaden my skills and give me the ability to apply for jobs in more places, such as conservation positions in Southern Colorado. Spain is a beautiful country and becoming a temporary resident is a great feeling. Geography has already provided me with such great opportunities and I cannot wait to see what is to come!

Cindy Brewer (PhD 1991)

I'm continuing in my second year as head of the Department of Geography at Penn State University. The second edition of my book *Designing Better Maps* (ESRI Press) came out in January 2016: <http://esripress.esri.com/display/index.cfm?fuseaction=display&websiteID=293&moduleID=0>

Lisa Dershowitz BA 2012

Hello everyone. A few months ago I decided to become certified to teach English as a second language and I moved to Thailand. Currently, I am living in the Trang province of southern Thailand, not far from the Andaman Sea. Here I am the only foreign English teacher at my school, and one of only two in my town. Even though I teach English, I try to incorporate geography into many of my lessons. After all, the landscape here is incredible! My students also love seeing pictures of a snowy East Lansing and watching clips of MSU sports. I am finishing up my first semester and I am looking forward to continuing to teach and travel more around South East Asia.

Brianna Gerondale BS 2015

I just became an AmeriCorps Member. I am serving in the Southeast Michigan Chapter of The American Red Cross, and my position is in Community Outreach. Our goal is to recruit and retain volunteers as well as to teach the community how to be prepared for disasters such as home fires, floods, or winter storms. Occasionally I will have the chance to work with the Disaster Action Team to respond to fires or other local disasters. The Detroit Red Cross Office responds to more fires than any other Red Cross Chapter in the country! And if there is a national disaster, I have the opportunity to be deployed to that location for several weeks to help out.

Darren Grafius BS 2004

Darren Grafius is entering the final year of his postdoc at Cranfield University, UK, as an environmental modeler on a large consortium project, studying urban ecosystem services (<http://bess-urban.group.shef.ac.uk/>). He recently published a paper out of this work looking at the importance of input data scale when modelling urban ecosystems (<http://link.springer.com/article/10.1007/s10980-015-0337-7>)

Owen Gregg BA 1964

I continue to be a huge supporter of the Geography Department at MSU; both the de Blij Scholars Fund and the Gregg Climate Change Endowment are of special interest to me. The more we understand how climate change is affecting our world, the more we can make adjustments as a global society to help people adapt to, and perhaps slow down, the inevitable warming patterns in the coming years. This is a huge challenge, and I feel honored that Michigan State's Geography Department can play some part in helping students to study and understand the integral role we all play.

So, with that said, what were my particular highlights in 2015? I would have to say that my visit to East Lansing in November to hear Dr. Roberta Bondar speak, as well as meet and converse with her personally, was a fantastic experience. I was glad to help support hosting her reception in Dr. Arbogast's home. Learning about her perspective on our globe from space was particularly enlightening.

I would also like to mention that I have become involved in Florida with the Sand Key Civic Association. Sand Key as aptly named, as we're always facing beach erosion in our community. I have teamed-up with another member to study the effects of both wind and Gulf of Mexico currents on our beach. I am just getting started on this assignment, and might call on Dr. Arbogast to help me further understand this subject as I become more deeply involved in my study.

Even though I graduated many moons ago (1964), I still retain a particular fondness for Michigan State, and especially, the Geography Department.



► Owen and Dr. Roberta Bondar after Roberta's great presentation during Geography Awareness Week last November.

David Kromm MA 1964; PhD 1967

My wife Bobbie and I both turned 77 years of age in September of 2015, and to observe that milestone we drove north from Manhattan, KS on Route 77 through Marysville, Beatrice, and Lincoln to where the highway now ends in Sioux City. We continued on Old 77 through Sioux Falls and Brookings and east to its former termination in Ortonville, MN. On our arrival, we were greeted by local officials and the publisher of the regional newspaper, *The Independent*, who wrote a fine article on the Kansas couple who drove north on U.S. 77 and Old 77 the month that they celebrated their 77th birthdays. While we are still 77 we hope to be able to drive south on Route 77 though Oklahoma City and Dallas to its termination at the Rio Grande River in Brownsville, TX. When we were 66 we drove from Chicago to Santa Monica on Route 66.

Chenxiao Ling MS 2011

I'm a 3rd year PhD student in the Department of Epidemiology at UCLA. The studies I've been involved with include the impacts of environmental exposures, particularly ambient pesticide exposure, on a range of chronic diseases such as Parkinson's Disease, childhood autism and childhood cancers. One of my ongoing papers focuses on the methodology of environmental exposure assessment, using GIS as an important tool.

Cathleen McAnney PhD 1995



I am in the midst of my 22nd year here at University of Maine Farmington as a professor of Geography. I remain active in NESTVAL and organized a panel discussion for the fall meeting on the role of academics in their local communities. I continue to coordinate the Maine Geographic Alliance. We sponsored with a grant from ESRI a workshop on ArcGIS online for educators including university faculty. There are many interesting projects that teachers and university faculty are working on with their students.

I am honored to have been nominated to run for the AAG office of National Councilor. Also in this photo of me is Mark Pires, who is also an MSU alum.

Bryan Middlekauf PhD 1987

I recently retired from Plymouth State University, NH, after 28 years here. I will relocate to Fort Myers, Florida soon. I recall my years at Michigan State vividly and fondly. My experience there was remarkable, interesting, fun, and difficult all at the same time.

Ryan Shadbolt PhD 2009

The past year was an exciting one! I am in the midst of year five teaching at Central Michigan University. My department recently acquired a new major in Environmental Studies and for the past two semesters I have been on the front lines teaching the major's large, team-based introductory course. Stepping back from lecture and creating a class time filled with tasks and exercises is something foreign for most of us. It has been a lot of work, but I have learned a great deal about new teaching strategies throughout the process. I am now applying some of these approaches in my other classes that have been traditionally lecture-based.

Following the Spring, 2015 semester I made my semi-annual return to Great Smoky Mountains National Park to continue toward my goal of completing all trails in the park. My wife Kerry and I then spent much of the summer of 2015 camping and hiking through the Four Corners states, hitting as many of the national parks as our time would allow. There are too many memories to summarize here, but Zion and Bryce stood out as the highlights for both of us.

During this past fall we were pleasantly surprised to learn that my wife, Kerry, would be awarded Michigan's Art Educator of the Year and High School Art Teacher of the Year. The proudest moment of my life to this point was when she received her award to a standing ovation from her peers at the Michigan Art Education Association awards banquet this past October.

Although I am working at Central Michigan University I continue to live in the East Lansing area. In my spare time I am still song-writing and performing occasionally around the area. Last year I formed a new band named *Ryan Shadbolt and The Weathermen*. You can track our upcoming performances at [facebook.com/ryanshadboltmusic](https://www.facebook.com/ryanshadboltmusic).

Karsten Shein PhD 2005

When I was ABD and took a stint as an assistant professor, it was with the intent of a career as an academic geographer. But fate had other plans, and the broad training I received in geography at MSU prepared me well. Two years later I was working as a climatologist for NOAA, contributing to cutting edge climate assessments, leading international delegations, and helping guide national policy. The job was stimulating but hectic, and I turned to underwater photography as a way to destress. Dismayed at the state of the once vibrant coral reefs I remembered from scuba diving in the 1980s, I knew I needed to research patterns and drivers of reef degradation and recovery.

Though still working for NOAA and living in the mountains of western North Carolina with my lovely wife and 2 great kids, I recently was invited to be Climate Fellow to the Central Caribbean Marine Institute (CCMI) in the Cayman Islands. CCMI is a non-profit with a mission of coral reef research and education. There I joined a broad research program on the connections between climate and reef vitality, and this past summer I installed a network of water temperature and light profilers on the reefs around Little Cayman Island. These profilers monitor conditions associated with coral bleaching, and are helping to improve the accuracy and resolution of NOAA's satellite-based ecological forecasting. I also have the pleasure of mentoring students from universities around the U.S., who are getting their first taste of field research by studying the impacts of climate change on corals as part of an NSF Research Experience for Undergraduates program (<http://reefresearch.org/research/research-experience-for-undergraduates/>). My first student from this program will be presenting her work at the Ocean Sciences Meeting in February and the International Coral Reef Symposium this June.

On the home front, my wife left academia after 20 years to pursue her passion of tennis. We just opened a retail tennis store in Asheville, NC called *The Tennis Professor*.

Phil Wernette MS 2012

Since finishing my MS in 2012, I'm now in my 3rd year of the PhD in Geography program at Texas A&M University. My dissertation focuses on the effects of geologic framework on the beach and dunes. I've been given the opportunity to be the instructor for a course about GNSS/GPS in the Geosciences, which I could not have done without the skills and experiences at MSU. Recently I had my first authored paper accepted to *Geomorphology*, and will have another two in review. This semester I have nine undergraduate researchers working under my guidance on two exciting research projects. It's been exciting getting to mentor undergraduates on active cutting-edge research. I will graduate in May 2017 and be searching for a job at a major research university where I can stay involved in cutting-edge research and teaching. My goal is to be an active part of coastal geomorphology, GIS, and geology/geophysics research while teaching courses that bring the new information directly to students.

Lody Zwarenstejn BA 1969, MA 1971

I have retired after spending 42 years with the Alliance for Health, a regional non-profit health planning agency. In my capacity there, I was able to employ most of what I had learned at MSU. Small area analysis, cartography, demography, regional economics, etc. all came to bear.



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 Geography Department funds listed.

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Geographic Literacy Fund

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

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.

The de Blij Geography Scholars Endowment

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

Ian Matley Memorial Fund

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

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

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.

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To support graduate study in Geography at MSU.

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