

THE GRATICULE

Macalester Geography Department Newsletter



Projections from the Chair

From the Desk of Professor Dan Trudeau

With a return to fully in-person classes, how are Geography classes different now compared to before the start of the pandemic? I often encounter a version of this question in my conversations with other academics, school teachers, and contacts in a variety of professions. The short answer is that it's complicated but really interesting. A longer answer is beyond the scope of this column and so I've aimed for a middle-length discussion here.



Dan Trudeau
Geography Professor & Chair

A key message is that my colleagues and I in the Geography Department at Mac continue to adapt the curriculum, innovate how we facilitate learning, and cultivate a caring and inclusive environment. Of course, curricula and pedagogy are constantly evolving - or at least they should be. Yet, in this current moment, we have experienced many adjustments rather quickly, and it's worth taking stock of the changes as we transition out of a state of emergency.

This academic year, we have been eager to return to field-based learning experiences. Field excursions and field-based practica have been a signature part of the Mac Geography curriculum for decades, and for good reason. These are high-impact learning experiences that also help participants bond as a community.

This year, we embraced field-based activities with gusto. There will be 22 field-based excursions in 18 different Geography courses during the 2022-23 school year. This is easily the most engagement across the curriculum that I have witnessed during my 17 years at the



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college. And still, we see some instructors who prepared online field-based experiences during remote learning times continue to use these materials to supplement in-person activities. That's a recurring theme that applies to other facets of the curriculum.

The foray into remote learning helped many educators appreciate the value of asynchronous learning [a term with which I wasn't familiar until 2020!]. As we've invested substantially in preparing quality electronic materials, my colleagues and I have continued to use some of these in our present situation. For my own part, it's enabled me to embrace a "flipped classroom" to greater and lesser extents, which in turn has allowed a focus on supporting learning activities that take advantage of people being together in the same place. For similar reasons, other faculty have developed new online learning modules to facilitate significant learning experiences in their courses. For instance, [Dr. Xavier Haro-Carrión](#) is working with students to create an online module in tropical biology for his course, Neotropical Landscapes. It will be published and made available in an open source educational website (<https://qubeshub.org/>) for anyone to use it. He has also embraced creating a podcast as an alternative way to complete summative assignments in his introductory courses. Offering multiple ways to achieve a learning goal is part of another broader shift in the Geography curriculum.

Geography faculty and staff are involved with ongoing efforts to address challenging situations that have been revealed as well as caused by the pandemic. As part of being a supportive community, we are employing different approaches to support our students. This manifests in multiple ways. These include: offering different ways of completing assignments; making more materials available for asynchronous learning; introducing activities to develop comfort and capabilities with oral communication skills [which have diminished during remote learning]; and, creating opportunities for social engagement outside of class, to name a few. We have held community listening sessions to help understand dynamic situations and worked in collaboration with faculty, staff, and students to develop thoughtful responses. These may not always work as well as we would like, but we learn by trying and this informs the next efforts.

How are Geography classes different now compared to before the start of the pandemic? Many would probably say they are quite similar. Students still gather to work in the GIS lab, meet to interact with course materials, and participate in field-based activities. And yet there are subtle and perhaps striking differences in the experiences that learners have. Those differences emerge from collective efforts to meet students where they are, build an inclusive community, and offer flexibility in the ways that we now pursue an outstanding educational experience that enhances the capabilities to engage the wider world.

We're Heading to Denver!

After a 3-year break, several of our department members will be heading to the [American Association of Geographers Annual Conference](#) -- mark your calendars for **March 24th** and watch [Facebook](#) and your email for more details about a gathering!



SPRING 2023 Geography Lunch



The Geography Department was well represented by both people and dishes at the 4th annual Food, Agriculture and Society Program potluck.



While on sabbatical Professor Eric Carter took a trip to Washington, DC, where a big highlight was the chance to catch up with Sarah Aldama '18. Already an accomplished cartographer, she has a bright future ahead!

Rosie Chittick, they/them '20

Geography Major with an Environmental Studies and American Studies Minors
Interview by Cecelia Kaufmann '24

C: Hi, thanks for taking the time to talk with me. I want to hear about your time at Macalester! So, taking a look at your time at Macalester, do you remember any of your first impressions of the school?

R: My first instinct was... the brown sign on the freeway on I-94 that says “Macalester College” by the Snelling Avenue Exit. And I was like my first view of the college when I visited. I also went to a sampler where I met a bunch of people I was either going to college with or potentially going to college with and that’s probably the moment where I was like “Oh, I think this is where I want to go” because people there were so interesting and very curious. I felt connected and it was part of the city, there were so many places to go and do things and everyone around me wanted to go and do all those things.

C: What was your first impression of the Geography Department?

R: So my older sister did a joint study away program that a number of Macalester students were on and a Macalester Professor was leading it. She told people in the group that their younger sibling got into Macalester, and a new geography alum was telling her all about it. he told me, “Rosie, I think you would love this. I think you would super enjoy taking Geography classes, it’s a super cool program!” I ended up taking Geography of Africa with Bill Moseley, not because it was Geography but just because it was a super interesting topic. I think that was the only Geography course I took my first year because I wanted to check out a lot of other classes and I think it helped me realize that I did really like Geography. Bill ended up being my advisor for all four years and I ended up precepting a class for him.”

C: What were some of your favourite classes either within or outside the department?

R: Cultural Atlas Production. I really loved Ashley Nepp’s course in general, because I love GIS. I only took one semester of remote sensing and really enjoyed that too. I wish I could have taken more courses with Laura Smith too!



“ I was able to leverage all the skills I learned at Macalester and from working at the City of Brooklyn Park to be offered the job at Ecolab. I think the main skills that helped me most were a) having a strong background with ArcGIS Pro and b) having even the smallest bit of experience with using Python and other automation tools to support GIS work.”

~ ROSIE CHITTICK '20

C: What else were you involved in during your time at Macalester?

R: The rugby and hockey teams. I started Rugby my first year and hockey my second year. I was part of both teams until I graduated, which was absolutely amazing! Probably the best part... okay, I can't say the best part of college – there are a lot of great parts of college! But I didn't really do sports in high school and joining the rugby team and then later the hockey team was just an outstanding experience for my sense of self and my ability to learn new skills, and having a group of friends from my team. I also did the ethics bowl my first year which I had done in high school and really enjoyed. I was involved in Fossil Free Mac my junior year which came about because of a project for my human geography class. We had an end-of-semester project looking at Macalester's finances where we interviewed a bunch of people in the finance department and students who wanted to divest from fossil fuels and put funds elsewhere. It was a really amazing opportunity.

C: Any Professor Shoutouts?

R: I have lots of love for everyone in the Geography department. It was a team effort so hugs all around. I do want to specifically call out Ashley, I mean I am literally a GIS Analyst now!

C: What are you up to now?

R: I am currently a GIS Analyst at Ecolab, headquartered in downtown Saint Paul. I work as part of the GIS Center of Excellence, which provides GIS services for multiple different divisions within Ecolab. The primary focus of my role is improving route efficiency for our service reps using GIS. So I spend a lot of time in [ArcGIS] Pro, a lot of time talking with people out in the field about the geography they're covering, and a lot of time figuring out what the best workflows are between multiple stakeholders that all interact with the same data (like users, analysts, administrators, field reps, and other divisions).

C: How did your time at Macalester help you to get to where you are now?

I wound up in this role in the fall of 2021, after graduating in the spring of 2020 at the beginning of the COVID-19 pandemic. I was looking explicitly for GIS-related internships after graduating, but a lot of those were cancelled or permanently frozen during the first year of the pandemic. So I wound up working for the Macalester IT Help Desk for a while, then worked at a kindergarten/daycare in Como Park, before I got an internship with the City of Brooklyn Park in early 2021. Shoutout to John Nerge, the GIS Coordinator at the City of Brooklyn Park, who is an amazing mentor and who does a terrific job helping his interns step into the professional GIS world! I would highly recommend that Mac geographers who are interested in GIS apply to that role when applications reopen; he hires 1-2 new interns every year.

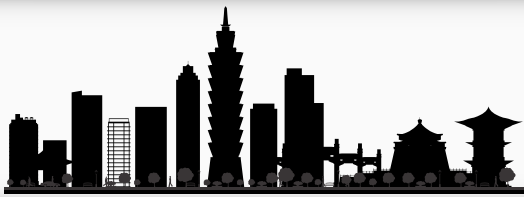
From there, I was able to leverage all the skills I learned at Macalester and from working at the City of Brooklyn Park to be offered the job at Ecolab. I think the main skills that helped me most were a) having a strong background with ArcGIS Pro, and b) having even the smallest bit of experience with using Python and other automation tools to support GIS work.

C: Any advice for a current Macalester student?

R: Get a bicycle early in your Macalester career if you have the opportunity. I did not buy one until my senior year and...bikes are underrated. Also, don't be afraid of your professors. They are very helpful and knowledgeable. Be real with your professors and use them as a resource, get to know them personally!



Catherine is back! Professor I-Chun Catherine Chang has been on sabbatical and parental leave for the past 3 semesters, and The Graticule is happy to welcome her back with an introduction to all the new faces that have joined our department in that time. Catherine has been a professor here at Mac since 2015, teaching classes including GEOG 115 Thinking Geographically: The Fundamentals of Human Geography, GEOG/ENVI 203 Introduction to Urban Ecology, GEOG/ASIA 244 Geography of Asia, GEOG 261 World Urbanization, GEOG/ASIA 320 Asian Cities, and GEOG 472: Global Urbanism, to name a few. Catherine received her B.A. in Geography from National Kaohsiung Normal University, her M.Sc. in Geography from National Taiwan University, and PhD in Geography, Environment and Society from the University of Minnesota. She specializes in global urbanism, urban sustainability, policy mobilities and Asia.



Catherine grew up in Kaohsiung, Taiwan where at an early age she was exposed to geography. The Taiwanese education system places an early emphasis on geography during elementary school before kids choose tracts in 11th grade that place them into more curated curriculums. Catherine chose the humanities and social sciences track which prominently featured geography and introduced her to a 12th-grade teacher who showed the dynamic, multi-scalar and complex interactions of geography. If you want an interesting conversation ask Catherine why she thinks Taiwan, and more generally Europe and Asia, place a greater emphasis on geography than the American early education system.



After her undergraduate degree, Catherine worked as a high school teacher in Taiwan, until she was motivated to change the curriculum prescribed to her by the Ministry of Education by pursuing her M.Sc. In doing so, two University of Minnesota professors invited her to the Twin Cities. After confirming that there was a fellowship, Catherine accepted. Catherine's research has focused on urban sustainability and policy mobility in Asian cities. Her sabbatical was devoted to this endeavour, exploring how smart-eco urbanism models are circulated and implemented in Taiwanese cities.

In her free time, Catherine enjoys soaking up the sun with her cats, playing piano and volunteering with local Asian community non-governmental organizations (NGOs).

First-year courses are classes meant just for freshmen to introduce them to the college experience. Last semester the Geography Department had two offerings; GEOG 243 Geography of Africa: Local Resources and Livelihoods in a Global Context taught by Professor Bill Moseley and GEOG 254 Population 8 Billion: Global Population Issues and Trends taught by Professor Holly Barcus. Below are some of the experiences of first years who took these courses.

Ella Williams (she/her) '26

Ella is a first-year student from Austin, Texas, who took Bill Moseley's Geography of Africa FYC last semester. Ella misses the extraneous winter coats of Texas but besides the cold, has really enjoyed Macalester. She appreciated her FYC and how the entire class was devoted to Africa, a topic that was not normally covered in her high school. She also felt that her FYC prepared her well for her other classes. Discussions allowed Ella and her classmates to talk and process what they learned. Ella's favorite part of the FYC was the final paper she wrote on commercialization of cacao in Cote D'Ivoire. That assignment helped her feel confident in her writing skills.



Ella Williams '26

Tim Delventhal (he/him) '26 and Rishika Kundu (she/her) '26

Hailing from Yamhill, Oregon, Tim enjoyed The Geography of Africa course immensely. It was, in his words, "My favorite class, though don't tell my other professors." He left with a better understanding of the economics and geographies of agriculture and the disparities in the global agricultural system. Rishika concurred, explaining how growing up in Delhi she had a very casual understanding of geography through intro classes but that changed after her FYC and now she is a geography major! Both first years appreciated the built-in community of the FYC. With everyone in the class living on the same dorm floor, they knew they had at least one shared experience to build off of and get conversations started. And nothing builds community like preparing for a midterm all together too! But their highlight of the experience was the class dinner at Professor Bill Moseley's house, which offered a break from Mac, a delicious home-cooked meal, and a chance to enjoy each other's company.

Tim and Rishika at the end of the interview insisted that I include that they "really really really really really really really loved this class".



Tim Delventhal '26 and Rishika Kundu '26

Freeman Boda (he/him) '26

Freeman is a Saint Paul native and took Population 8 Billion. Freeman has always been interested in the area around him and in high school did projects on the redlining of St Paul. Because of this, Freeman came into Macalester drawn to GIS and geography and decided to take the class with Professor Barcus. In it he learned how to understand global population dynamics through maps, population pyramids, and migrations before applying it all in his final project on St. Paul's population. Freeman loved how Professor Holly Barcus weaved her research experience in Mongolia into the class and brought lessons to life with concrete examples. Freeman is now taking Intro GIS with Holly and is loving the community he was first introduced to in his FYC. The lab is a perfect example of this community where the near constant presence of GIS lab assistant and the popping in of helpful upperclassmen creates an atmosphere that is welcoming in and supportive.



Save The Date

Mac Geography community, you're invited to attend the **Midwestern Undergraduate Geography Symposium (MUGS) on Saturday, April 29, 2023**, hosted by the Department of Earth, Environment and Society at the University of Saint Thomas.

MUGS is an excellent conference for undergraduates. For many, MUGS provides the first opportunity to present research. It also helps students experience an eye-opening range of papers and posters on a variety of topics including Geography, GIS, Earth Sciences and Environmental Studies. The conference webpage can be [accessed here](#) and it will be updated in the coming weeks to include a registration form for abstract submissions.

Students will have 3 ways to present research: 1) A poster session, 2) 5-minute lightning round talks, or 3) 15-minute paper presentations (consisting of a 12-minute talk followed by 3 minutes for questions)

Abstracts (max. 200 words) are due by April 3rd and are required for both paper and lightning presentations.

The Geography Department cover the registration fees of Macalester students who elect to share their research.

Mapmaker, Mapmaker, Make Me a Map!

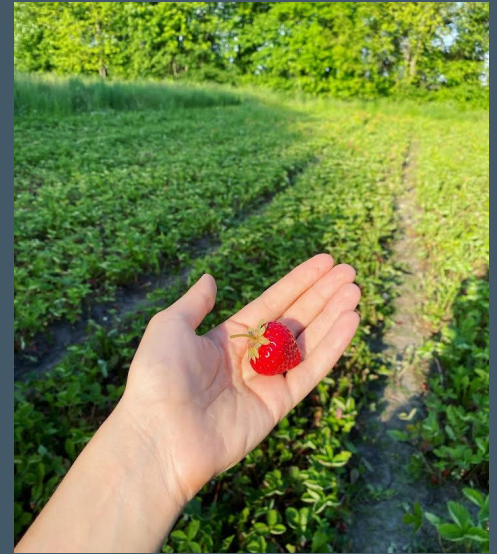
We are happy to announce that after more than a decade, the Geography Department has installed a new wall map in our Carnegie 108 geospatial lab. Feel free to drop by and see it in person some time -- it makes a great photo background!



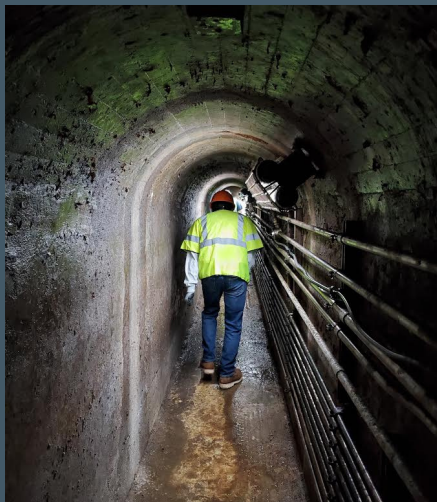
Tala Tabishat '23

Urban Gardens: Understanding the Potential of NatureBased Solutions for a Resilient Future

My project examines discussions surrounding environmental justice and sustainable development and transitions to a more people-centered idea of sustainability and resiliency. I explore different urban/community gardens and present a new understanding of these spaces and how the systems that they find themselves within affect their foundational motivations and goals. Climate change is the most pressing issue facing humanity today. As societies have tried to navigate mitigating and adapting to the inevitable issues caused by climate change, theories of productive change have emerged, failed, and been revised over and over. I introduce key valuable theories and approaches for understanding the role of community gardens in larger urban systems. I provide case studies that demonstrate these frameworks in application. I draw on personal experiences in these spaces to further examine these concepts. Finally, I discuss the role these spaces play within larger political systems and their potential for change. I argue that in the larger context, urban agriculture is one of the elements that will lead to building more resilient cities of the future.



Through the application of heterogeneous, place-based solutions these spaces create social and ecological resilience that affirms the importance of a human-focused sustainability. The full capstone can be read [here](#).



Corgan Archulata '24

Is Daylighting just Sustainable? Realizing Just Sustainabilities at Phalen Creek

Water flows all around us, though often unseen. While most underground pipes contain sewage, cities are now rediscovering natural creeks diverted into pipes by humans. Existing research has revealed ecological benefits of resurfacing buried water flow through reconstructed channels in a process called daylighting. However, I contend there's more to learn from these waters and the stories buried with them. Through my capstone research last semester, I investigated the ongoing daylighting of Phalen Creek in Saint Paul. The creek once nurtured plants and wildlife and supported Indigenous canoeing as well as the impoverished immigrant communities of Swede Hollow.

However, by the 1920's the creek was buried in a pipe and removed from the landscape. Today, the Indigenous led Lower Phalen Creek Project is working to rebuild Phalen Creek, restore water flow, and resurface human and beyond human stories of oppression and resiliency. Phalen Creek is so exciting as it's rethinking the role and rights of nature in cities. In doing so, it's facilitating environmental and cultural healing. Therefore, daylighting is a proactive response to climate change: a model revealing the possibilities of infrastructure in building relationships of respect and reciprocity among all beings human and beyond.

2023 Lanegran Days

Lanegran Days, celebrated by the department, school and community annually, honors Professor Emeritus David A. Lanegran, who was actively engaged as a teacher-scholar at Macalester College for more than 46 years. In recognition of his commitment to engagement with the community and work in geography, Lanegran Days supports a range of activities that dissolve the walls between the classroom and the broader world for geography students. This year the Geography Department had the privilege to host Dr. Emily Yeh as our 2023 keynote speaker. Dr. Yeh is a professor of Geography at the University of Colorado at Boulder. In addition, she is the most recent past president of the American Association of Geographers.



Professor David A. Lanegran



Professor Emily Yeh

Dr Yeh's main research interests focus on questions of power, political economy, and cultural politics in the nature-society relationship. Her keynote address, "Climate Change Injustice in Tibet; Impacts and Adaptation", provided an overview of years of research she and colleagues have done to better understand the multiscale and multifaceted climate injustice in Tibet. After familiarizing the audience with the Tibetan context, such as the importance of pastoralism which has been in the region for 8000 years and explaining Tibet's limited role in climate change, Dr. Yeh laid out the impacts of climate change on Tibetans. Tibet has been warming at a rate of 2-3 times the global average surface temperature increase causing a multitude of negative impacts; increases in extreme weather events, glacier and permafrost thaw, expansion of salty lakes into grazing land, later green up in the spring, and a loss of income from declining caterpillar fungus populations, an important and expensive medicinal. These impacts have been exasperated by adaptation decisions made by the Chinese government which enforced policies such as the privatisation of rangeland. This decision has worsened the environmental effects of climate change by removing Tibetan herd mobility and increasing pasture degradation through trampling. The adaptations put in place by the Chinese government have harmed the Tibetan people as much as the environment. Using climate change as a rationale, an ecological resettlement program has been put in place in the Sanjiangyuan area, Qinghai province to "protect" China's water tower where the Mekong, Yellow and Yangtze Rivers all begin.

This environmental securitization has resulted in the dislocation of thousands of Tibetans into poorly built settlements with few livelihood opportunities and little opportunity to practice and maintain their traditional knowledge and way of life. Importantly, Dr. Yeh also shared how the traditionally mobile and common-use pastoralism of Tibetans was not only resilient to climate change but also helped mitigate some of its impacts. Through her keynote, Dr. Yeh highlights an example of distributive climate injustice, where a region and people who have done little to contribute to climate change have borne the brunt of its impacts and costs of misinformed adaptations.



Lanegrans Day would not be complete without some Geography Bowling! With a chance to get out of Macalester, compete against professors, and enjoy some quintessential Midwest fried delicacies, the bowling alley was filled to the brim with geographers.



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