## **Indiana University**

### **Department of Geography E-Newsletter**

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# New Faculty Spotlight: Natasha MacBean



Professor Natasha MacBean is a physical geographer who studies the response of terrestrial ecosystems to climate change, rising atmospheric  $CO_2$ , and land use and cover change. She uses process-based models as her main research tool, but also analyzes in situ and satellite data to study the patterns and processes of environmental change. Natasha has always loved studying the drivers of changes in the earth

system. She studied her Bachelor's and Master's degrees in the Department of Earth Sciences at the University of Oxford in the UK, leading to a Master of Earth Sciences. The 4<sup>th</sup> year (Master's) research project allowed her to use remote sensing data and geochemical analysis to study the geomorphology and slip rates of active faults in Iran. This was Natasha's first experience with using satellite data, and it fascinated her to see how much we can learn about the earth when viewing it from space. This experience gave her the bug for research – for the "pleasure of finding things out". However, she realized her main scientific interests were in studying the effects of environmental change on the terrestrial biosphere. She, herefore, applied to do a PhD in the vegetation remote sensing group of Professors Mathias Disney and Philip Lewis in the Department of Geography at University College London. The initial scope of her PhD was broad; she joined an interdisciplinary group of researchers from around the UK who were studying the impact of natural and anthropogenic changes on the vegetation and carbon budgets of UK peatlands. Here, remote sensing was a useful tool, but she soon became inrerested in the use of process-based models, for two reasons: 1) models could be used scale-up plot-based estimates of methane and carbon dioxide fluxes to the landscape scale; and 2) models could be used to explore competing drivers of changes in peatland carbon stocks due to climate and land management. Increasingly however, she realized that combining models and data using statistical data assimilation techniques was the most powerful way to obtain realistic and rigorous model predictions.



### New Faculty Spotlight, continued:

Natasha's PhD allowed her to gain insight into the complexity of human and natural drivers of changes in the carbon cycle, but at small scale. After her PhD, she wanted to think bigger. She was attracted by research at the Laboratoire des Sciences du Climat et de l'Environnement (LSCE) in France using climate and land surface models to investigate carbon-climate feedbacks at global scales. She moved to Paris at the end of 2011 just after defending her thesis. During her years at LSCE, Natasha became a prominent scientist in the fields of carbon cycle data assimilation and terrestrial remote sensing. She very much enjoyed her time at LSCE collaborating with leading researchers across Europe on a range of different projects (she also enjoyed the cheese and wine in France!); however, after 5 years the US beckoned. Natasha first wanted to move to the US around the age of 8 when she learned about space and decided she that she wanted to become an astronaut (still a dream of hers!). More realistically, she had been thinking of moving to the US to be involved in its vibrant research community since the early days of her PhD. Natasha had a growing interest in semi-arid ecosystem carbon cycle responses to global change, so she was excited to have an opportunity to work with researchers in this field at the University of Arizona.

Natasha was delighted to join the faculty here in the Department of Geography this Fall. She continues to work on a range of different projects related to carbon cycle responses across scales to climate and environmental change. One particular project she is keen to work on with researchers here at IU – particularly given the range of expertise and ongoing research in this area – is how different ecosystems respond to water stress under elevated CO<sub>2</sub>. Competing complex interactions make this a hard topic, but that's part of the appeal! Outside work, Natasha enjoys traveling, hiking, reading, watching movies and photography. Please see her webpage <u>www.macbeanlab.com</u> for more information on her group's research.

Find your home in Geography



### New Faculty Spotlight: Kurt Waldman

Kurt Waldman is a new Assistant Professor within the Department of Geography. Kurt joins the department from a joint appointment as a Visiting Scholar at Princeton's Kahneman-Treisman Center for Behavioral Science and Public Policy and a Postdoctoral Fellow at IU's Ostrom Workshop. His research focuses primarily on the social and environmental aspects of agricultural decision-making. While his background is not explicitly in geography, he has shifted into the discipline through his collaborations with previous department faculty member Tom Evans. Once they began to work together, Kurt began to integrate more spatial analysis and more aspects of physical science, like climate change, into his own work. Essentially, he has transitioned from a pure economist to a decision scientist who collaborates frequently with physical scientists.

Now that he is a part of the department, Kurt has jumped headfirst into a number of collaborative research projects. He is currently a part of the Food System Studies research group, which just won a large award to fund studying food systems both domestically and internationally. Domestically, he will be studying how farmers in Indiana are affected by tariffs on top of all of the weather and climate issues they currently have to deal with. In Zambia, he is studying how weather shocks change farmer decision making. He is also starting to collaborate with Dan Knudsen and Angela Babb's Critical Food Studies lab, studying decision making among rural poor and what networks they use to procure food. Kurt is also teaching a number of classes within the department. This semester, he is teaching G208, Nature & Society, and G478, Global Change, Food, and Farming Systems. In future semesters, he will also introduce a new class on Environmental Decision Making.

Kurt did his undergraduate at Earlham College in Richmond, Indiana. His time at Earlham got him interested in pursuing international work, so from there he joined the Peace Corps and spent time working in the Philippines. After finishing with that, he pursued his Master's degree in applied economics at Cornell University, where he did his research in northern Afghanistan. He got his Ph.D. from Michigan State University from their Food & Agriculture Policy program. Outside of academia, Kurt is the son of a carpenter and enjoys working with his hands and spends a lot of time building and torch-welding. He also enjoys spending time outdoors hiking and canoeing.



Faculty Spotlight: Dr. Olga Kalentzidou

Dr. Olga Kalentzidou joined the Department of Geography as a Visiting Assistant Professor in Fall 2018. Her research focuses on food and memory, especially in terms of immigrant foodways, in her native Greece. Among her recent interests are issues of food accessibility and justice, especially in Bloomington. She is committed to connect foodways and food access issues in her classes through community-engaged learning. This semester she is teaching three courses: *Food and Poverty in America, Edible Education and Geography of Food.* In her own words, "Food does not only bring people together, it also creates structure and encourages self-sufficiency through cooking".

Therefore, she emphasizes cooking as a life skill that links individual, cultural and political preferences. She hopes at least some of her students will get more confident in utilizing fresh ingredients to make dishes that are local and seasonal.

Dr. Kalentzidou encourages her students to get involved with their broader Bloomington community through experiential learning in her classes. Her students work with organizations that focus on sustainable agriculture; community gardening; and poverty alleviation. Being an avid gardener herself, she frequently invites students to visit and study her sizable plot. She views her garden as a pedagogical laboratory, where she gets inspiration, as well as ingredients, for her *Geography of Food* class. It is the easiest way for students to understand the connection between a dish and its ingredients. Whereas her garden is small, she dreams about owing a farm in the near future, where she can experiment with heritage seeds and sustainable agricultural practices.

Dr. Kalentzidou's future research agenda items include the relationship between illegal immigration and NGO responses vis a vis unaccompanied children in Northeastern Greece, an area along the Evros river that separates Greece from Turkey; alternative agriculture initiatives, such as heritage seed banks and organic farming in Greece; and regional cooking practices in Thrace.

Work-life balance is very important to Dr. Kalentzidou. She finds that due to the different stages of life students enter graduate school, such balance is often hard to maintain. It is especially hard for graduate students who are married and have children. She understands that the academic job market is much more competitive and stressful now than when she completed her Ph.D.; however, she believes that students should "know what is important to [them]. It is really important to curve time to just not think about your research and to have a separation from what you do with what you are," even though those two things are often intertwined in academic life, and harder for women.

Dr. Kalentzidou hails from Northeastern Greece, a border area close to Turkey and Bulgaria. She completed her B.A. in Archaeology and History at Aristotle University, in Thessaloniki, Greece. She came to Indiana University as a Fulbright scholar in 1990, where she completed an M.A. in Classical Archaeology and an M.A. and Ph.D. Anthropology. After completing her PhD, she built a career focused on teaching and higher education administration at IU while raising a family with her husband. She also indulged her life-long interest in organic gardening and sustainable food practices by growing much of her own vegetables in her backyard; upholstering; landscaping, and cooking and teaching about food.



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## **Faculty Spotlight: Tekla Schmaus**

Tekla Schmaus joined the Department of Geography in January 2018 as a Visiting Lecturer. She is currently teaching sections of G208, Environment & Society, and G369, Geography of Food. Ideally, in some future semester, she would like to develop and teach a class that would expand the classroom and allow students to get outdoors as a part of their learning experience.

Tekla actually obtained her Ph.D. from IU, across the hall in Anthropology. She is an archaeologist by training, and her research focuses on prehistoric human/ land use interactions, focusing on mobile pastoral and agro-pastoral communities and using past climate and diet reconstruction to determine community

mobility. Recently, she has spent time excavating a multi-phase site in Kyrgyzstan as a part of her research. Tekla has found the transition from anthropology to geography to be relatively smooth, because archaeology, and her work in particular, is fairly spatially oriented.

Before joining the department, Tekla spent a number of semesters teaching at Loyola University Chicago (yes, the one from the last NCAA Tournament) and Harold Washington College in Chicago. She is actually originally from Chicago, and did her undergraduate work in Anthropology at the University of Chicago. Outside of academia, Tekla enjoys hiking and road biking, and has dreams of one day starting a vegetable garden in her back yard.



### Alumni Spotlight: Carmen Antreasian

Hello IU Geography! Greetings from NYC!

Well, suffice to say a lot has happened since I graduated in May 2016. The past two years have been years of self-discovery – of opportunities, crazy adventures and long periods of introspection.

I moved to Denver in the fall of 2016 to take a break from academia and then started teaching World Regional and Human Geography at the Community College of Denver (CCD) in the spring. I was an adjunct instructor and taught 3-4 classes a semester and two in the summer. What an amazing experience! I had some incredible students from all over the world, including many veterans who

had traveled around the world. Needless to say, my students were much more internationally experienced than I was. Teaching world cultures and geopolitics, my classes were mostly discussions, as I learned as much from them as they did from me. I still keep in touch with many of those students. Had CCD paid a livable wage and offered benefits, perhaps I would still be there today.

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### Alumni Spotlight, Continued:

Last spring I won a substantial grant from CCD to attend the AAG conference in New Orleans, where I was happy to see some familiar faces from IU and the psychoanalytic geography crew. I was also fortunate to have attended the AAG in Boston. In addition to presenting at the AAG every spring, I have continued to search for my place in the critical theory world. In the fall of 2017 I attended the LACK II Psychoanalysis and Politics NOW conference on Lacanian theory, where I chaired a panel on trans research. It was an intimate conference, and I met some wonderful people, including a couple geographers, and was audience to a very entertaining talk from the plenary speaker Slavoj Žižek.

In January, on a whim, I decided to apply to NYU's highly competitive Performance Studies graduate program and received admission. I accepted their offer and moved to New York City in August to pursue another M.A. The program is based in critical theory and the analysis of artistic as well as everyday performances. I currently study psychoanalytic theory (my Lacan is really coming in handy – thanks Dan!) and theories of movement and dance, which is unsurprisingly highly geographic. My advisor is psychoanalytic theorist and analyst Ann Pellegrini, and I also work with dance theorist André Lepecki. Although I had been doing research on trans identity during my time in Colorado, I am now turning back to thinking about dance, analyzing the unconscious performance of lead and follow in ballroom and Argentine tango. I am also a teaching assistant in the Drama Department at NYU's Tisch School of the Arts. I may not be in shows, but I did make it to Broadway!

In addition to going back to school, I've also gotten back into ballet. When I was living in Denver, I started taking classes at the Colorado Ballet and studied with the fabulous Jayne Persch, who is not only a ballet instructor but a physical therapist and teaches ballet technique through the anatomy. Since moving to New York, I've taken classes at Alvin Ailey, but school keeps me too busy to dance as much as I'd like to. I do, however, attend many dance performances and take advantage of free student tuition at all the major art museums. Hence, one of my many projects focuses on representations of flesh in the paintings of artists who learned to paint and draw figures from studying corpses.

In other news, my first publication is due to be out this coming year! It will be a chapter in *Into the Void, an anthology on psychoanalytic geography.* My chapter is called "Beyond the Feminine Void" and is based on a paper I presented at the AAG in Boston. I won't bore you with the details, but it essentially maps a theory of feminist psychoanalysis and demonstrates this theory through a viewer's relationship with an artwork. I'm excited and looking forward to pursuing more publications in the future. I suppose that's all for now. Wishing you all the best!



### Alumni Spotlight: Fr. Robert Barnell

Fr. Robert Barnell (class of 2010), was born and raised in Louisville, KY. Since his childhood, he has loved looking at maps. His brother used to quiz him during car rides about states and their capitals. His family traveled the country on road trips, and he ended up visiting forty-nine of the fifty states. His parents are from Indiana and met at Purdue University. His sister and her family live in Michigan, and his brother and his family live in Ohio.

His most memorable geography paper was in Urban Geography class, on the demographic changes in Louisville's West End over the 1900s. In addition to geography, Robert majored in Spanish and also studied some French and Portuguese. He spent one semester on the Arizona-Sonora border, which included living for a month and a half with a Mexican host family, from whose kitchen could be seen the U.S. border wall. During college summers he worked as a jail interpreter, a migrant education program recruiter (covering eleven counties in southeastern Indiana), and a counselor at

a summer camp for Somali refugee youth. Robert lived his first two years at IU at the Global Village Living Learning Center and the second two at St. Paul Catholic Center.

After college he moved to Indianapolis, where he worked as a job placement specialist for the Catholic Charities Refugee Resettlement Program. This was a dream job for him, since he had volunteered at a refugee English school during high school, and those summers were some of his favorite life experiences. While working in Indy, he felt drawn to serve people in a more directly spiritual way. He had first felt called to be a priest around eighth grade, and the thought persisted through college. So he moved back to Louisville a year later, in order to more actively discern this possible calling. During that time of discernment he spent eight weeks in Kolkata, India, with Mother Teresa's Missionaries of Charity.

Soon afterwards he applied to be a seminarian for the Archdiocese of Louisville and began six years of priesthood formation at Mt. St. Mary's Seminary in Cincinnati, OH. In March of 2017, he was ordained a deacon, and in May of 2018, he was ordained a priest. Now he is assigned to St. Bartholomew and St. Edward parishes in Louisville. The Spanish masses there draw people originally from Mexico, Guatemala, Cuba, Peru, El Salvador, Honduras, Ecuador, and Colombia. St. Bartholomew, where he resides, happens to be near a refugee resettlement neighborhood. Each month the local food bank distributes food from the parish parking lot, and the majority of the recipients are from Nepal.

Since graduating from IU, Robert has gone on mission trips to northwestern Haiti and Kingston, Jamaica, and has also visited Vietnam on a trip with some Vietnamese priest friends. Fr. Robert enjoys the diversity of the world's cultures and languages and is happy to now serve as a priest in helping unite our world in faith, hope, and love.

### **Undergraduate Spotlight: Kathleen Lich**



Kathleen Lich is a senior double majoring in Geography, with a concentration in Development & Justice, and Environmental & Sustainability Studies. She was also the recipient of the 2018 Robert N. Johnson Scholarship. Kathleen is originally from Indianapolis, and attended Bishop Chatard high school. She originally came to IU for the ESS program, because it incorporated ecological ideas into sustainability in a way she didn't see other universities doing. She discovered the Geography Department her freshman year. She took the "Environmental Change: The End of the World as We Know It" course, and from there started taking more and more Geography courses as

she realized this was where she was most at home, academically. She went back and forth between a number of the department concentrations, because they all appealed to her interests, but settled on her current concentration because she wanted to go further into the "Justice" aspects that got brought up in so many of her courses.

Kathleen is currently an undergraduate research assistant in the Critical Food Studies with Dan Knudsen and Angela Babb. She is specifically working on identifying service deserts in 11 Indiana counties. She hopes to present the results of her research at the 2019 AAG Annual Meeting in Washington, DC. She originally ended up in the Food Studies Lab as a result of a scheduling quirk her junior year. She was planning on studying abroad her junior year, but that ended up falling through and led to a weird spring semester schedule. To fill out her schedule, her advisor recommended getting involved in some research going on in the department and put Kathleen in touch with the Lab. She started working on a project involving the Emergency Food System, and has just continued on her own from there.

While much of her work within the department has focused on the social side of the discipline, outside of the department Kathleen is an ardent naturalist. Her summers have been spent working in the parks of Alaska, spending time as a forest ranger in the Chugach National Forest, an intern for the National Park Service and the Alaska Sea Life Center, and an environmental educator at the Kenai Fjords National Park. In Indiana, she has also spent time volunteering with the Department of Natural Resources working in local fisheries.

After she finishes her degree, she hopes to continue on to graduate school, but may take a short break in between degrees. Currently she's looking at continuing her studies within the Geography Department, or joining the University of Washington's Marine Affairs program.



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### **Undergraduate Spotlight: Esmeralda Martínez**



Esmeralda Martínez is a senior Geography major, with a concentration in Food and Agriculture, and a recipient of the Paul W. and Marie K. Baumann Endowed Scholarship Award. Originally from México, she grew up in Fort Wayne, Indiana where she attended South Side High School. Filled with students of different nationalities and upbringings, her favorite part of school was learning with and from fellow students. Aside from wanting to address social inequalities, she wasn't clear of what she wanted to major. Esmeralda started as a Political Science major and decided to try and create an individualized major to fit her interests before realizing the Geography Department was where she needed to be.

Her love for food and distaste in the lack of access to nourishing foods many have is what drew Esmeralda towards a concentration in Food and Agriculture. She plans to use her understanding of historically racist political frameworks to create better communally based structures and food-based businesses in underrepresented neighborhoods. Through Rebecca Lave's "Capitalism & Nature," Elizabeth Dunn's "Food & War," and Ishan Ashutosh's "Urban Geography" courses Esmeralda has found much courage, hope, and vision for the nourishment of the planet.

For Esmeralda, all of the theory provided in classes are great, but hands-on experience is far more invaluable. For her, the best course she's taken has been her Internship at Mother Hubbard's Cupboard, a local food pantry, food library, and community garden where she continues to volunteer. At "The Hub," Esmeralda helps in the garden, specifically maintaining the compost, interacts with patrons, and leads nutrition demos where nourishing and simpler meals are prepared and shared with shoppers for them to recreate at home.

Concerned with the eating habits of many college students and wishing to share a few traditional Mexican dishes, as well as experimenting with Indiana's seasonal crops, Esmeralda recently decided to start her first small business, *Salud y Vida*. Making each dish with gratitude for the workers who allowed each ingredient to be brought into her home and with the intention of physically, mentally, and socially nourishing those who eat from *Salud y Vida*. Esmeralda finds much fulfillment in talking with returning clients and hearing feedback. Besides, cooking is her preferred form of procrastination, so why not bring in additional revenue while doing so!

After graduating, Esmeralda plans to take a year off to reground herself and search for a non-profit she wants to invest herself into and apply her geographic information science knowledge.



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### Graduate Spotlight: Joshua Bregy



Joshua Bregy is a doctoral student in the Department of Geography at Indiana University Bloomington. He started his PhD in 2016 in the Department of geography. Now, he is planning to pursue double major both in geography and in earth and atmospheric sciences. In the Department of Geography, he works with Dr. Justin T. Maxwell of the Environmental Tree-Ring Lab. Joshua's research area focuses on paleoclimatology and climate change, especially prehistoric hurricanes. He studies changes in frequency and intensity of prehistoric hurricanes and long-term hurricane–climate interactions using proxies such as sediment, tree rings, isotopes,

and microfossils.

His interest in paleoclimate developed when he was conducting his MS research in geological oceanography at the University of Southern Mississippi. Joshua has diverse educational background; he completed his undergraduate studies both in environmental science and Spanish at the University of Central Arkansas.

In Joshua's most recent project, he extracted tropical cyclone precipitation (TCP) data from existing precipitation datasets for the last 68 years to characterize TCP climatology in the eastern United States. These data are both high-resolution and long-term. Most of the available data that are used in previous studies are either high-resolution or long-term. This high resolution and long-term data will produce a more accurate understand-ing of TCP climatology and can be used to calibrate paleoclimate proxies. This project is about to be submitted to the Journal of Climate.

Joshua has two publications, one of which he is first author. His first publication is focused on a 2500-year record of intense, Katrina-like storms in the Gulf of Mexico. In it, he used sediment to back-calculate storm surge heights over coastal systems. In his most recent publication, written with coauthors from the Department of Earth and Atmospheric Sciences, they examined changes in channel morphology in response to landslides caused by Typhoon Morakot in southern Taiwan.

Joshua promotes diversity and is a vocal supporter of underrepresented groups in STEM. In his own words, "climate change does not care who you are and what you do". He also enjoys communicating science through Twitter. Beside research Joshua loves reading, brewing beer, hiking, ultimate Frisbee, playing the piano, and video games.

### **Chair's Letter**

### Dear all,

This is a bit of a bittersweet year for me as it is my last as departmental chair and my last as an active member of the Department of Geography. It seems a good time to briefly reflect on the department over the last 40 years. I came to IU an eager graduate student in 1978. The department at that time was relatively large to my memory – perhaps as many as 14 faculty members. I joined the last generation of "space cadets" upon my arrival (or so my colleagues today kid me). We had a broad range of interests, interests reflected in the research of our faculty then – geomorphology, hydrology, climatology, regional science, cultural geography, transportation, and migration and circulation. I remember teaching Introduction to Human Geography to 200 students some semesters in those early years. I also remember running computer programs at night when the single CDC 6600 computer IU used for everything (it was slightly less powerful than your iPhone) was free and "long programs" could be run.

The Geography Department today has 10 faculty. Our graduate students today have arguably more narrow interests and those in human geography are perhaps less numbery. They are, however, no less eager and they still reflect the interests of our faculty, albeit a narrower range than in 1978. Introduction to Human Geography, largely because of advanced placement rarely enrolls more than 35 students each semester. My personally computer has 32 cores and 128 GB of memory. It can store 2 terabytes of data. The corporatization of the university means we must keep a sharp eye on the bottom line and the fractious history of the department has led to the integration of physical and human geography on our campus in ways we could not have anticipated 40 years ago.

Yet, I have not witnessed a time in my career where students are more interested in geography and where we have had the sorts of recognition inside and outside the academy that we enjoy today. I see that interest in our courses and in the new partnerships we have forged throughout the university and our surrounding communities. We have a glorious future ahead.

Best wishes,

Dan