

# THE UNIVERSITY OF ALABAMA GEOGRAPHY GAZETTE 2018-2019

## DEPARTMENT FACTS

The UA Geography Department was founded in 1903

The map library is a regional depository for the U.S.G.S. and D.M.A. and includes over 1,700 monographs, 270,000 maps, and 75,000 aerial photographs

Inside this issue:

Faculty and Staff News	3
Graduate Students	12
Undergraduates	20
Degrees	23
Awards	24
Map Library	25
Cartlab	26
Colloquium Series	26
Study Abroad	27
Conference Presentations	28



## Letter from the Chair

Greetings Geographers,

This has been another outstanding year for UA Geography, and it is exciting to be able to share some of our accomplishments and bring you up to date with some of the changes we experienced during the year. We had breakout experiences with undergraduate and graduate programs, personnel changes with staff and faculty, and record performances in research productivity.

After several years of planning and development, we offered our inaugural, semester-equivalent, study abroad program in Costa Rica. Eight students spent nine weeks at the Soltis Center for Research and Education, near La Fortuna. They took four courses that focused mainly on tropical environments. More on this program later in the Gazette. Our PhD program continues to grow, with 11 students now enrolled. This year Nishani Moragoda won the UA 3-Minute Thesis competition and Kevin Wilson won the UA Best MS Thesis competition. Two university-level winners in one year is a great accomplishment and the students and their advisors (Drs. Cohen and Hart, respectively) deserve our appreciation.

In the main office, Jackie Hayes left the department last summer to accept a promotion. She was replaced by Wanda Naranjo, who left this spring to accept a promotion. Clearly we are a springboard to success, and we wish them both every success. In the meantime, we will be joined by Elizabeth Singleton in June. She comes to us with a decade of experience in the College of Engineering and a commitment to stick around for a while! Dr. Caroline McClure comes to us from her Ph.D. work at Texas State University. She is replacing Steven Ericson and has become responsible for his outreach efforts, including the production of this newsletter. Professor Hongxing Liu joined the department in August, coming to us from the University of Cincinnati, where he had been department Head, among other things. Assistant Professor Abby Shao also joined us in August, moving here from Auburn University-Montgomery. More information on Dr. Liu and Dr. Shao and the rest of our faculty can be found further on in this newsletter.

On the research front, our faculty published 50 journal articles last year, the best annual performance yet, representing an average of more than three

papers per person. The faculty also won \$1.6 million in external funding to support their research programs. This is also a departmental record. Accomplishments like these almost make it sound like this is easy. Please let me assure you it is not. To make this happen requires great effort from all quarters: the students, staff, and faculty, and support of our administration.

2019-2020 looks like it will be another banner year for Geography at the University of Alabama. If you are reading this Gazette, please understand that one of our motivations is to make you proud of what your department is doing.

Cheers, *Douglas J. Sherman*

## Faculty and Staff News

**SETH APPIAH-OPOKU** has just entered his 17<sup>th</sup> year at The University of Alabama. A number of significant milestones were recorded in his work this past year. Seth served and continues to serve on the editorial board of two journals – *Environmental Impact Assessment Review* and the *Environment and Social Psychology Journal*. He continued serving as the College of Arts and Sciences' Ombudsperson assisting faculty in finding equitable, just, and timely resolutions to contentious administrative issues.



In the past year, Seth's research focused on exploring the role of transit-oriented development in reducing urban sprawl. The result has been submitted for publication in the *Journal of Planning and Development*. Other areas of his work focused on using the Generalized Two-Step Floating Catchment Area Method (GTSFCAM) to assess spatial accessibility of health facilities in Kumasi. The results have been resubmitted for publication in the *African Geographical Review*. Seth also collaborated with colleagues at the University of Cape Coast in Ghana to study the land use land cover changes in the Densu River Basin and the implications for land use planning and management. In addition, he accepted an invitation from InTech Publishers to edit a book titled "Land Use". Work on the book is still in progress. Finally, he participated in two professional conferences – the Alabama/Mississippi American Planning Association Conference in Oxford, M.S.; and the BIT's 7<sup>th</sup> Annual World Congress on Food and Nutrition held in Singapore.

In the classroom, Seth continued to teach Land Use Regulation, World Regional Geography, Regional Geography of Africa, and a study abroad in Ghana course titled "UA in Ghana: Service Learning." The last course is in its 15<sup>th</sup> year at the University of Alabama. Designed for all majors at UA, the course provides students with the opportunity to participate in service-learning internships in Ghana.

Outside the university community, Seth served and continues to serve as a resource person to both the Tuscaloosa Housing Authority and the City of Tuscaloosa Sister-Cities International. For the second time since 2012, he will lead a 15-member delegation from Tuscaloosa for a two weeks cultural and business trip to Ghana. Similar collaborative efforts are being forged between UA and three universities in Ghana.

**BENNETT BEARDEN's** legal, political, and negotiating experiences have placed him squarely in the center of one of Alabama's most important natural resources issues: water policy. Bennett is the former founding Director (2013-2018) of the Water Policy and Law Institute at The University of Alabama and is currently an Adjunct Professor in the Department of Geography. In April 2012, the Governor appointed Bennett chair of the Alabama Water Agencies Working Group (AWAWG), the task force charged with developing policy options and recommendations for a comprehensive state water management plan. As chair from 2012-2013, he provided the AWAWG with constructive resolution of emerging challenges at the intersection of water policy and law, emphasizing data-driven policy making, strategic counseling, water diplomacy, water conflict mediation, crisis management, creative dispute resolution, and enhanced relations with stakeholders and community groups.



Bennett served as Special Counsel to the Governor on Water Law and Policy from 2013-2017. He received his B.S. (geography), B.S. (geology), and M.S. (geology) degrees from The University of Alabama. He received his Juris Doctor (J.D.) degree from Birmingham School of Law (ranked no. one academically in his class) and his Master of Laws (L.L.M.) degree in Commercial and Corporate Law (with honors) from the University of London. Bennett also has a post-graduate

# Faculty and Staff News

Certificate in Watershed Management from the University of British Columbia. He earned his doctorate (J.S.D. degree, legal education's counterpart to the Ph.D.) in water law and policy at McGeorge School of Law, University of the Pacific, in Sacramento, California, where he was the recipient of the 2008 Slater International Water Law Award. Bennett is a member of the Alabama State Bar, the Washington, D.C. Bar, and is admitted to the Roll of Solicitors in England and Wales. He is a member of the American Bar Association (ABA) Section of Environment, Energy, and Resources (SEER) Water Resources Committee, the Alabama Section of the American Water Resources Association (AWRA), the Organizing Committee of the Annual Alabama Water Resources Conference and the International Water Association (IWA), and a former member of the Executive Committee of the Environmental Section of the Alabama State Bar. He is the co-author and co-editor of a leading national casebook on water law and policy, *Cases and Materials on Water Law*, now in its 10<sup>th</sup> edition, published by West Legal Publishing Co.

In 2018 Bennett completed a book on water policy and law in Southeast Asia, entitled *Following the Proper Channels: Tributaries in the Mekong Legal Regime* (published in the Brill International Water Law series of BRILL/NIJHOFF) in which he offers in-depth policy and legal analyses of the marginalization of tributaries in the context of the 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, law of international watercourses, hydrosovereignty, and the national economic development interests of the Mekong riparians.

He is the Associate Editor of *Water Policy*, the official journal of the World Water Council and leading publication in the field of water policy. In 2014, Bennett received the Governor's Award-Certificate of Recognition for advancing water policy in Alabama. In 2017 he received the E. Roger Sayers Distinguished Service Award from the President's Council of The University of Alabama for his work in advancing water policy and law in Alabama. Bennett teaches Water Resources Management, Law and Policy, and Public Policy Development in Water Resources. He is currently developing courses in Water Diplomacy and Interstate Water Conflict. He is the author/co-author of over 100 publications and four books.

**SAGY COHEN** spent this academic year as a Visiting Scholar at the University of Hawaii at Manoa (UH). He worked at the UH Hydrology Lab (led by Dr. Yin-Phan Tsang) on sedimentation issues at the state. Back in Alabama, this academic year was busy as usual at the Surface Dynamics Modeling Lab (SDML). Dinuke Munasinghe, advancing his PhD research on "Morphological Changes in Global River Deltas", was awarded the prestigious Graduate Fellowship from the UA Grad School. Nishani Moragoda finalized her MSc candidacy on "The Effect of Climate Change on Global River Water and Sediment Fluxes". She won 1st place in the campus-wide 3 Minute Thesis (3MT) Competition, was awarded the 'Outstanding Graduate Student' award by the Geography Department and received a full scholarship to attend this year's Community Surface Dynamics Modeling System (CSDMS) Conference in Boulder CO. Nishani is will defend her thesis this summer and will start a PhD candidacy at the SDML. We welcomed Afriin Anni, who has transferred from a different group to finalize her MSc candidacy on "Identifying controls on and potential solutions to storm water flooding on the University of Alabama campus". She will also defend her thesis shortly. Austin Raney has transitioned from an undergrad research assistant to a graduate student this Spring Semester. His research will focus on continental hydrological modeling. For his outstanding work as an undergrad research assistant, he was awarded the UA Randall Undergraduate Research Award. We welcomed a new undergraduate research assistant, Anuska Narayanan, this spring semester. She will commence an accelerated MSc program in the fall.



# Faculty and Staff News

This academic year was also a very productive year for SDML, with five journal publications at *Global and Planetary Change*, *Applied Geography*, *Journal of Hydrology*, *Journal of the American Water Resources Association*, *Science of The Total Environment*; a book chapter and a conference paper. SDML members presented or co-authored over 20 conference papers at multiple conferences including AGU, EGU, CSDMS, SEDAAG, Global Flood Partnership Conference and OCEANS 2018. SDML was awarded or collaborated on three new grants by CUAHHSI/NOAA, UCAR, and EPA.

**KEVIN M. CURTIN** is a Professor of Geography and Director of the Laboratory for Location Science at UA. Dr. Curtin received his Ph.D. in Geography from the University of California-Santa Barbara, with a dual focus on GIS and optimal facilities location. He performs primary research in the field of Geographic Information Science with specializations in location science, transportation and logistics, urban resource allocation, spatial statistics, and network GIS. Application areas for his research include autonomous vehicle logistics, transportation geography, crime studies, health and nutrition, and geospatial intelligence. He teaches extensively at both the undergraduate and graduate university levels.



**LISA DAVIS** conducted research on the paleoflood history of the Tennessee River Basin during the last academic year. She is in the process of developing manuscripts for publication based on the findings and a white paper report she submitted to Electric Power Research Institute, who provided research funding. She was the lead guest editor on a special issue of the journal *Geomorphology* devoted to paleofloods published in 2019. Lisa was awarded funding from the Tennessee Valley Authority (TVA) in 2019 to continue paleoflood research on the Tennessee River with Ph.D. student Ray Lombardi and to integrate paleoflood data into ongoing and upcoming dam safety assessments being conducted by TVA.



*Dr. Davis lecturing about historic floods on the banks of the Vltava River in Prague.*

Lisa was honored to be an invited panelist at a workshop held in May 2019 by the Nuclear Regulatory Commission and the USGS to help develop guidelines for using paleoflood analyses in flood frequency analyses. In addition to the paleoflood research, Lisa has big plans for summer research with current Master's student Greg Shafer and incoming Master's student Jacob Ervin into the geomorphic effects of mussels living in the Sipsey River. This research is part of a long running research collaboration between Lisa's fluvial geomorphology research group and Dr. Carla Atkinson's lab in Biological Sciences. This summer's research will be conducted with research funds recently awarded to Davis and Atkinson from the Alabama Water Institute. Finally, Lisa enjoyed teaching May-term study abroad courses with Glenn Tootle about Climate, Rivers, and the Physical Geography of Central Europe.

# Faculty and Staff News

**JOHANNA ENGSTRÖM** joined the department in September 2017. Her role as Geospatial Services Manager is multifaceted and includes managing the GIS Certificate Program, managing the Map Library, supporting researchers with map production, outreach, and teaching GY 101: Atmospheric Patterns and Processes. Milestones from the last year include: serving as PI/co-PI on four pending grant applications adding up to over \$800,000 (keep your fingers crossed!), organizing four Map Giveaways, publishing three peer reviewed papers, organizing GIS Day together with Dr. McClure, giving a workshop on GIS at the Gorgas Library, and putting together an Alabama state team (first time Alabama was represented in the competition for 5+ years) for the SEDAAG Geography Bowl trivia with students from three universities. Dr. Engström enjoys the outdoors and always welcomes opportunities to explore her new home state, Alabama.



**KRYSTAL FEIGLE** is going into her third year as the department's administrative secretary, and her 13th year overall at UA. As the departmental manager, she is the primary source for information regarding budgets and payroll, a resource for student financial information, and any other duties that she may be called upon to complete. She has three adult children and one grandchild. Krystal enjoys the outdoors, reading, and spending time with her family.



**LUOHENG HAN** was busy as Associate Provost for Academic Affairs this past year. He was involved in establishing the General Education Task Force and Undergraduate Council. He is UA system's representative to the Alabama Articulation and General Studies Committee (AGSC), which successfully hosted the first state wide transfer student success conference (ACHIEVE) in March 2019. UA will host the second ACHIEVE conference in spring 2020. As a faculty member, he is pleased to accept a new Master's student.



**JUSTIN HART** is Associate Professor, Director of the Environmental Science Program, Director of Graduate Studies, and Director of the Forest Dynamics Lab. The primary mission of the FDL is to improve the management of forest resources through applied research, outreach with an emphasis on practitioners, and professional and civic service efforts. The lab has ongoing projects based in the Bankhead National Forest and Talladega National Forest. Currently the lab supports four graduate students, two undergraduate researchers, and 15 undergraduate technicians.



**ANDRIES HEYNS** comes from Cape Town, South Africa, and joined the Laboratory for Location Science in September 2018 after completing a postdoctoral stint at the University of Pretoria, South Africa. He best describes himself as a geospatial optimization-focused humanitarian environmentalist adrenaline junkie. His current research focus is on the optimization of tower site selection for camera-based wildfire detection systems, inspired by his experiences as a volunteer wildland firefighter on numerous wildfires in the Cape Town region of South Africa. The research is conducted in collaboration with ForestWatch - the world's leading vision-based wildfire detection system, with systems in North America, Europe, Africa and Australia - and Andries has visited their detection centers in South Africa and Oregon to identify future

# Faculty and Staff News

research opportunities. He is currently revising a manuscript on the topic, which he was invited to resubmit to the International Journal of Wildland Fire. A second, related manuscript on the topic of terrain feature exploitation for improved optimisation is nearly complete. His research has already been implemented for the selection of a number of tower sites in South Africa.

Andries has recently begun a new project on the optimization of shark lookout sites in Cape Town and is currently collecting historical shark approach and exit route data from local authorities. The aim is to find the best sites for lookouts

on mountain slopes in order to maximize their shark visibility and early warning potential - shark attacks are a major concern in the area and Andries has had a few close calls himself while surfing in the region.

His other research activities include collective spatial cognition in refugee contexts (in collaboration with refugee coordinators in Bangladesh) and service delivery optimization in Nepal (in collaboration with the World Bank). This research is inspired by his experiences as a field worker in logistics and GIS for Doctors Without Borders in the Central African Republic (civil war, 2016), Mozambique (cholera outbreak, 2017), and Bangladesh (Rohingya response, 2017-2018).

Outside of academia and field work, Andries has worked as a radar software engineer in South Africa and as an English assistant in public schools in South Korea and Reunion Island. He is a certified snake handler and is trained in anti-poaching tracking and response. He enjoys exercising, running, and walking and swimming with his two dogs that came with him from South Africa. His dream is to save money to buy a large property to open a community upliftment-driven animal shelter in South Africa before 2025.

**DAVID KEELLINGS** has had a busy year! He continues to teach weather and climate courses and he taught a brand new class, Intro to Geostatistics using R, focused on learning R programming and applied spatial data analysis. He has been active across campus through giving a workshop on basic data analysis and visualization using R programming for the UA Libraries Data Services Workshop Series and in giving a seminar on climate change and extreme weather as part of UA's Take a Journey in Science series. Dr. Keellings has published four papers so far this academic year and has several more under review. He is currently working on numerous research projects including development of a new spatial methodology for tracking the size and shape of heat waves across the U.S. for which he spent several weeks working with researchers at the national Center for Atmospheric Research in Boulder, Colorado. David's recent publication on Hurricane Maria's rainfall across Puerto Rico and its attribution to climate change has received attention in the national press from multiple outlets including NPR. He also gave an interview to local WVUA TV on the potential for catastrophic flooding as Hurricane Florence made landfall in North Carolina.

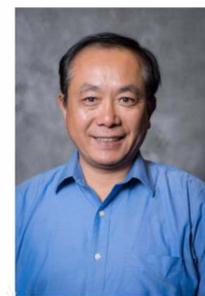


## Faculty and Staff News

**MATTHEW LAFEVOR** recently completed his third year as Assistant Professor. Over the summer of 2018 he worked in Mexico on hillslope agriculture and runoff management. In the fall he co-authored an article in *Water Resources Research* based on work in the USVI with longtime collaborator Carlos E. Ramos-Scharrón. Their collaboration will continue in the summer of 2019 in Mexico where they will examine soil runoff management in national parks and alpine meadows. This past spring semester (2019) Dr. LaFevor taught GY 345: Geography of Latin America in Costa Rica during the Department's new study abroad program. Here, he enjoyed zip lining for the first time and mapping the area with his UAV. Fortunately, he was not bitten by any bullet ants.



**HONGXING LIU** is a professor in Department of Geography and the Director of the Environmental Remote Sensing Laboratory (ERSL). He has published over 100 peer-reviewed papers in various academic journals, and received a number of prestigious awards, including two NASA Group Achievement Awards, John Davidson President's Award for Practical Papers from the American Society for Photogrammetry and Remote Sensing (ASPRS), the Best Paper Award from Computers & Geoscience, and Editor's Choice Award from *Water Resources Research*. The expertise of his research lab includes remote sensing, inland water quality, eco-hydrology, polar and cryosphere studies, coastal geomorphology, and natural hazards. His research group has extensive experiences in processing and analyzing hyperspectral, LiDAR, synthetic aperture radar (SAR), passive microwave, and radar and laser altimetry data. In the past decade, various innovative techniques, algorithms and software tools have been developed to handle remote sensing and GIS data for a wide range of geoscience studies and practical applications. Those include object-oriented image analysis, image-matching based ice flow analysis, spatio-temporal data assimilation, multi-scale spatial representation, linear feature extraction, localized inversion models, and multi-predictor ensemble models, with a U.S. Invention Patent (U.S. Patent No. 10096154). The research projects of his lab have been funded by NASA, NSF, NOAA Sea Grant Program, USGS, USACE, NOPP, and other state and private funding agencies. The ongoing research projects include water quality remote sensing of inland lakes and rivers, CubeSat constellation for bathymetry and water quality, and polar ice dynamics. Currently, the ERSL is collaborating with NSF NEON program and UA biogeochemistry research group to investigate the drivers (i.e., climate change, land use, invasive species) and responses (ecohydrology, biogeochemistry, biodiversity) of aquatic ecosystems of inland rivers and lakes across large spatial and temporal scales, using NEON airborne hyperspectral and LiDAR data, satellite multispectral remote sensing data, and field observations over Black Warrior River and Tombigbee River Watersheds. The undergraduate and graduate students are strongly encouraged to explore and participate in the research activities of the ERSL



**NICHOLAS MAGLIOCCA** completed his second year in the department. Major highlights from this year included contributing to the UA in Costa Rica study abroad program, exciting progress on an existing project and securing funding for a new one, and several successful publications produced through those projects.

As one of four instructors supporting the Costa Rica program, Dr. Magliocca adapted the existing course GY 202: The Water Planet to Costa Rican water systems. One major change was adding a



# Faculty and Staff News

module on water-energy-food nexus issues in Costa Rica, which proved to be the ideal place to study these topics. The highlight of the course was a field trip to Guanacaste Province, which included stops at irrigated farms, fields of wind turbines, and a restored wetland – all connected by water sourced from Lake Arenal.

Dr. Magliocca is a co-investigator on a multi-institutional NASA-funded project charged with conducting a global synthesis of the causes associated with land-use changes and consequences of large-scale land acquisitions (LSLAs). The project will fuse remote sensing products detecting the timing and rate of LSLA-related land-use changes with geospatial and case study data synthesis to construct generalizable trajectories of LSLA caused-land conversion-consequences. LSLAs were a global reactionary phenomenon prompted by the flood and financial crises of 2008 and 2011, and this research will support the design of policy interventions to manage LSLAs in the event of future crises. Preliminary results from the research team's work in Cambodia were presented at AGU, AAG, and the Global Land Programme's (GLP) Open Science Meeting (OSM) in Bern, Switzerland. We have also submitted to manuscript under review in *Ecology & Society* and *Nature Geoscience*.

Dr. Magliocca is also secured funding from the National Science Foundation through an EAGER award to study the adaptive responses of cocaine smuggling, or narco-trafficking, supply networks to counterdrug interdiction in Central America. This project relates to previous and on-going work investigating the role of narco-trafficking in deforestation in Central America. Working with Dr. Kevin Curtin in the Department of Geography and Dr. Diana Dolliver in the Department of Criminology and Criminal Justice, the team is constructing coupled narco-trafficking and interdiction models to understand the spatial adjustment of traffickers to alternative interdiction strategies. Preliminary modeling work was published in the Proceedings of the National Academy of Sciences. This work was presented at the 2018 Conference of Latin Americanist Geographers in San Juan, Costa Rica, and at the GLP's OSM in Bern, Switzerland.

**CAROLINE MCCLURE** is completing her first year as an instructor for the UA Geography Department. She teaches World Regional Geography; People, Places, and the Environment, Cultural Geography, and Introduction to GIS. Caroline has found that she enjoys teaching the GIS course, and seeing what types of questions and projects her students can create/answer using GIS technologies and skills. Outside of the time spent in the classroom, Caroline loves to be outdoors, hiking, playing ultimate Frisbee, or enjoying Tuscaloosa with her dog, Gypsy.



**MARY WALLACE PITTS:** Over the last eleven years in her role as instructor and advisor, Mrs. Pitts has taught and advised a lot of fantastic students. Her regular course load includes Earth Surface Processes (GY 102), Natural Hazards (GY 317), and Natural Resources and the Environment (GY 339). However, her favorite course is Watershed Management (GY 385), a Service Learning field-based class offered regularly during May interim.



She serves on the Editorial Board for Environmental Geosciences, and also as a committee member on the City of Tuscaloosa Floodplain Management Plan Committee and the Tuscaloosa County Natural Resources Planning Committee. Her interests include water resources, watershed management, and water policy.

## Faculty and Staff News

A graduate of Trinity College Dublin and University College London, Mrs. Pitts has decided to add a degree from UA to her resume. Currently her research focus is water policy in Alabama and is being conducted in furtherance of an Interdisciplinary Ph.D. in Watershed Science from the University of Alabama.

Her 19-year old triplets have just completed their second year at UA!

CRAIG REMMINGTON has worked as the Director of the UA Cartographic Research Laboratory since 1984. He received both his degrees from Florida State, earning a bachelor's in geography in 1976 and a master's degree in geography in 1981. In his spare time Craig enjoys camping and traveling.



JASON SENKBEIL is a climatologist/meteorologist with primary research interests in atmospheric hazards and applied climatology. Specifically, Dr. Senkbeil hopes to improve the ways in which we communicate severe weather information so that people better understand their risk and take appropriate actions. This year he continued work on a NOAA Vortex SE Grant, "Improving Accessibility and Comprehension of Tornado Warnings for the Deaf, Blind, and Deaf-Blind." For this research, members of these vulnerable populations were interviewed to gather information about their needs for the development of targeted tornado warning systems and technology so that they can efficiently receive valuable time-sensitive information. Working with Dr. Darrin Griffin in The College of Communications, he helped develop technology to show television severe weather forecasts live with split screen technology including an ASL signer. He continues to examine how accurately evacuees perceive the risk from geophysical hurricane hazards, traveling into the aftermath of Hurricane Michael in late 2018 with Dr. Laura Myers from the UA Center for Advanced Public Safety. His goal for hurricanes is to develop forecasts and graphics that find the right balance between over and underestimation of risk. Other research projects continue to explore climatic variability and change in the eastern U.S.A. This spring he was one of four UA professors to teach a course for the Costa Rica study abroad program. In his spare time, he loves being outdoors doing anything active and coaching youth sports.



WANYUN "ABBY" SHAO has been busy in her first year at UA. In the first year, she has been involved in 4 proposals that had been submitted to the National Academies of Sciences Engineering and Medicine Gulf Coast Program (NASEM GRP), National Science Foundation (NSF), and National Oceanic and Atmospheric Administration (NOAA). She is on 3 collaborative proposals that will be soon submitted to the NASEM GRP.

In the meantime, Dr. Shao has published one lead-authored article on the *Journal of Hydrology*, and a second lead-authored article has been accepted by the *Environmental Research Letters*. Two other lead-authored articles along with three co-authored articles are under review. In addition to publishing on peer-reviewed journals, Dr. Shao has been very active publishing policy articles for public consumption. She has published one article about FEMA's flood maps on the *Conversation* and one article about public perceptions of extreme weather and climate change on the *Washington Post*. She has also been interviewed by journalists from the *United Press International* about flood maps, *Medium* about Hurricane Florence, and *The New York Times* about extreme weather.



## Faculty and Staff News

Since Dr. Shao came to UA, she has been affiliated with the Center of Complex Hydrosystems Research and Alabama Water Institute, through which she has built a collaborative network. She was also invited to participate in the 2018 NASEM GRP Networking and Idea Development Workshop in Mobile, A.L., and in the 2019 NASEM GRP Fellow Collaboration Workshop, through which she found more collaborators for research projects.

**DOUGLAS SHERMAN** is Professor and Chair of the Department of Geography at the University of Alabama (since 2011) where he moved after being Head of the Department of Geography at Texas A&M University from 2001. Prior to that appointment he was on the faculty of the Department of Geography at the University of Southern California for eighteen years. He obtained his Ph.D. from the University of Toronto and was a post-doctoral scholar in the Ocean Engineering Department at Woods Hole Oceanographic Institution. Dr. Sherman's research interests are in coastal and aeolian geomorphology and sedimentation. He has published more than one hundred scholarly articles, and recently edited or co-edited volumes of the *Treatise on Geomorphology on Coastal Geomorphology* and *Aeolian Geomorphology*, and co-edited a volume of *Coastal and Marine Hazards, Risks, and Disasters*. Much of his recent research involves human impacts on coastal sedimentation, hydrodynamics in the vicinity of coastal structures, and the physics of sediment transport, especially wind-blown sand. He is a Fellow of the American Association for the Advancement of Science, the American Association of Geographers, and the American Geographical Society and has twice been a Fulbright Senior Scholar.

**MICHAEL K. STEINBERG** is a professor in the New College and Geography at the University of Alabama. His research is focused on the human-dimensions of environmental conservation, endangered species, and conservation mapping. He is the author of *Stalking the Ghost Bird: The Elusive Ivory-billed Woodpecker in Louisiana*, 2008 LSU Press, and *Dangerous Harvest: Drug Plants and the Transformation of Indigenous Landscapes*, Oxford University Press 2004. His work has also been published in journals such as the *Geographical Review*, *The Professional Geographer*, *Conservation Biology*, *Conservation and Society*, *Mississippi Quarterly*, *FOCUS on Geography*, and the *Bonefish and Tarpon Journal*.



**MATTHEW THERRELL** just completed his sixth year at The University of Alabama. He spent much of the past academic year carrying out fieldwork and lab analysis in support of several external research projects including two new projects supported by the EPA and NSF focusing on using tree rings to study streamflow in southeastern rivers. These projects are being carried out in collaboration with colleagues in Geography and Engineering as part of a larger collaborative Research group called Collaborative Research of Paleoenvironments and Society (CoRPS), which is focused on improving the interdisciplinary understanding of hydrological and climatological variability and past extreme events to inform and improve the prediction of future socioecological impacts. He also presented findings of his research at the American Geophysical Union annual meeting in Washington D.C., last December. Dr. Therrell also served on the search committee for the Vice President for Research and Economic Development and the Honors College Internal Review Committee.



# Faculty and Staff News

**JOE WEBER** has been finishing up a book on the geography of the National Park System. It has been a fun experience and a great opportunity to spend time reading up on one of his favorite topics. Dr. Weber also had a great time teaching the Geography of National Parks in the fall, and look forward to it teaching it again in the future.



## Graduate Students

### Ph.D. Students

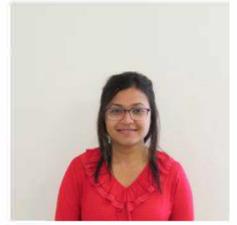
Jinsu Bae  
Jordan Cissell  
William Elkins  
Jonathan Kleinman  
Yang Liu  
Rachel “Ray” Lombardi  
Penelope Mitchell  
Dinuke Nanayakkara Munasinghe  
Qifan Nie  
Daniel Turner  
Min Xu  
Pei Zhang

### M.S. Students

Afrin Hossain Anni  
Bradley Barrick  
Jayla Blanke  
Devyn Boatright  
Robert Butler  
Joni Corbin  
Joshua Dugat  
Alexander Fries  
Davis Goode  
Anna Holland-Levine  
Katherine Jack  
John Lee  
Alexandra Logan  
Aubrey Loria  
James Misfeldt  
Nishani Poorna Moragoda  
Judith Oppong  
Kory Pilet  
Austin Raney  
Jacob Reed  
Gregory Shafer

# Graduate Student Profiles

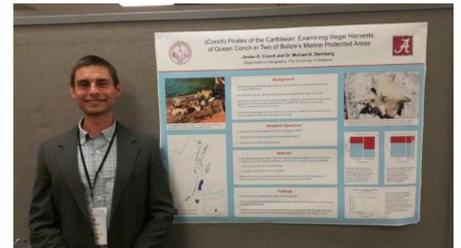
**AFRIN HOSSAIN ANNI** is a second-year Master's student, with research interests in urban hydrology. Before coming to UA, Afrin completed her undergraduate degree in Urban and Regional Planning at Bangladesh University for Engineering and Technology (BUET). In her research, Afrin is working on identifying the reasons behind urban flood, using the UA campus as a case study as it experiences frequent flooding. She is using the MIKE URBAN flood modeling software to produce flood maps and to identify the flood locations and further investigate factors behind flooding in those locations. The University Authority is also interested in using the flood maps to prepare a flood risk and mitigation plan to avoid any unexpected future occurrence.



**JINSU BAE** is a first-year Ph.D. student working with Dr. Sherman. He earned a Master's degree in South Korea, focusing on coastal geomorphology. Jinsu's research focus includes coastal geomorphology and aeolian sediment transport.

**JAYLA BLANKE** is a Master's student from Houston, Texas. In August 2018, she completed her B.S. at the University of Alabama, double majoring in Biology and Marine Science. Her thesis work focuses on quantifying coastal debris along Belize beaches and understanding the social perceptions behind solid waste disposal. She is looking forward to collecting field data in May of 2019, serving as a teaching assistant for Dr. Michael Steinberg's field course. Jayla hopes to pursue her love of the ocean with a marine management career after graduate school. In her spare time, she enjoys cycling, hiking, rock climbing, and reading Stephen King novels.

**JORDAN CISELL** is a second-year Ph.D. student from Keel Mountain in Gurley, Alabama. His dissertation research integrates remote sensing and field observations to examine human modification of mangrove ecosystems in Belize, Cuba, and Mexico. In the summer of 2018, Jordan did fieldwork in Belize while serving as a teaching assistant for Dr. Michael Steinberg's Belize field course, and he participated in a field workshop in Transylvania on the archaeological applications of ground-penetrating radar (GPR). Jordan will be back in Belize this summer as a teaching assistant for Dr. Steinberg's field course.



*Cissell presenting at AAG 2019 in Washington, D.C.*

**JONI CORBIN** is a first year master's student originally from Bellevue, Washington. She graduated from UA in 2011 with a M.S. in Civil and Environmental Engineering and spent the last 4 years teaching for the Tuscaloosa City Schools. Her thesis research focuses on recreating paleofloods for South Sauty Creek, in Buck's Pocket State Park, Al to mitigate future flood hazards along the Tennessee River, under the guidance of Dr. Lisa Davis. Joni hopes to continue to merge her scientific research and K-12 education outreach moving forward. Outside of school, she enjoys hiking and roller skating.

# Graduate Student Profiles

**JOSHUA DUGAT** is a Master's student originally from Austin, Texas. Having graduated from the University of Virginia back in 2008, Josh is now researching methylmercury advisory awareness among anglers in Tuscaloosa County. He is simultaneously pursuing an MFA in Creative Writing through the Department of English. He is working under Dr. Michael Steinberg.

**ALEXANDER FRIES** is a first year Master's student originally from Dothan, Alabama. He completed his undergraduate degrees in Geography and History at The University of Alabama in 2018, during which time he was also introduced to the world of cartography by working in the Cartographic Research Lab under supervisor Craig Remington. As a Master's student, Alex's primary research interests have revolved around effective mapping and geovisualization of historic phenomenon as well as the history of Alabama. His thesis topic combines these interests by attempting to create an exploratory model that can be used to correlate historic city growth in Alabama with various geographic phenomena in the state and, in turn, be used to effectively map out distinct stages in the urbanization of Alabama. As a cartographer in the Cartographic Research Lab, Alex's works for a wide clientele has gone on to be published in various books and publications across multiple disciplines. In October 2018, he was selected for the "Best Cartographic Design" award in the Student Design Competition of the North American Cartographic Information Society (NACIS) for his map "Alabama: Its Landforms and Natural Features."



*Alex at NACIS with his map for "Best Cartographic Design"*

**DAVIS GOODE** will begin his PhD in the fall in the Forest Dynamics Lab after earning his M.S. in the spring of 2019. He co-led two studies as an undergraduate in the Environmental Science program that have since been published and presented at various conferences. Davis presented his thesis research that analyzed edge influence on Longleaf Pine woodlands at the Society of American Foresters Conference last fall and will present at the North American Forest Ecology Workshop this summer. For his dissertation, he plans to research silvicultural methods to establish and maintain Oak-Pine woodlands. Davis also served as the vice-president for Club Geography and as the president of the Forest Steward Guild UA student chapter in the 2018-2019 academic year.



**ANNA HOLLAND-LEVINE** has completed her first year of work toward a Master's degree and is excited to get out into the field this summer, having combined her passions for natural and social sciences with her love for wildlife and wild lands in her thesis project, "Mapping coexistence and conflict between sheep herders and carnivores in Blaine County, Idaho." Originally from Vermont, she studied anthropology and biology as an undergraduate before working in natural resource management in Alaska. At UA she continues to build and apply a diverse skill set in social, ecological, and GI sciences as she uses mixed-methods approaches to model and quantify the relationships of human and natural systems. She works toward a vision of sustainable community-based resource management as a member of the Laboratory for Human-Environment Interactions Modeling and Analysis led by Dr. Nicholas Magliocca. She loves to read, cook, hike, and travel and came to Tuscaloosa via an 8-week road trip.

# Graduate Student Profiles

**KATHERINE JACK** is a first-year Master's student from Albany, Georgia. She participated in the Accelerated Master's Program for Geography at the University of Alabama, completing her Bachelor of Science degree in Geography with a minor in Anthropology in fall 2018 and transitioning to a full time graduate student in spring 2019. Her thesis is centered on environmental justice in Alabama, specifically looking at the spatial relationships between pollution and demographics, and their cultural origins and manifestations in affected areas.

**JONATHAN KLEINMAN** joined the Department as a Master's student in 2015 and is now in his second year of the PhD program. Prior to his time at Alabama, Jonathan studied Ecology and Evolutionary Biology at the University of Colorado and worked as a field technician on public lands in Idaho, Georgia, and Tennessee. His research focusses on the ecological consequences of natural and anthropogenic disturbances in forest ecosystems. This summer will be Jonathan's fifth field season with the Forest Dynamics Lab monitoring the interacting effects of wind disturbance, salvage logging, and prescribed fire on pine woodland recovery in the Talladega National Forest.



**YANG LIU** is a first-year Ph. D. student in the Environmental Remote Sensing Laboratory. He received the B.S. degree in geographic information system from Sun Yat-Sen University, Guangzhou, China, in 2015, and the M.A. degree in geography from the University of Cincinnati, Cincinnati, OH, USA, in 2018. His research interests include image fusion, spatiotemporal analysis, LiDAR applications, and satellite hydrology. Yang won the first place in the Student Illustrated Paper Competition of the Remote Sensing Specialty Group in the 2018 Annual Meeting of the Association of American Geographers (AAG) in New Orleans, Louisiana; and also the second place in the Student Oral Presentation Competition of the Landscape Specialty Group in the 2019 Annual Meeting of the AAG in Washington D. C.

**ALEXANDRA LOGAN** is a first-year Master's student working in the Forest Dynamics Lab. She completed her BS degree from Syracuse University in May 2018 with majors in Geography and Biology, with a focus in Environmental Science. Alexandra is currently working on a project that utilizes General Land Office records to reconstruct past forest conditions of Alabama. She is also planning her thesis that will analyze the role of coarse woody debris on plant species composition in longleaf pine stands.

**RAY LOMBARDI** is a doctoral student in the Department of Geography with a specialization in fluvial geomorphology at University of Alabama. Prior to beginning her Ph.D. work, Ray earned her M.S. in Geography from UA, and a B.S. in Environmental Science from Longwood University in Farmville, Va. Ray's research interests include paleoflood hydrology, flood frequency statistics, and human-riverine interactions. More specifically, her work examines the spatio-temporal relationship of flood deposits preserved



*Ray describing a soil core*

# Graduate Student Profiles

in floodplains to improve prediction of future floods. Her research combines a passion for river systems, watershed management, and playing in the dirt.

**AUBREY LORIA** is a second-year Master's student who returned to UA after completing her undergraduate degree in Environmental Science here in 2017. Her thesis research on the effects of Hurricane Irma upon Florida Bay seagrass required that she spend the past summer doing field work in South Florida. There, she worked with Everglades National Park and the South Florida Natural Resources Center as an intern for their marine ecologist. She also had the privilege of actively participating in round-table discussions with the region's leading conservation experts during the Preliminary Strategies Workshop to write the wilderness stewardship plan for Everglades National Park. After her summer experiences, she is excited to take a few years to focus on conservation research (hopefully with a focus in remote sensing!) before she begins searching for a PhD program. As her time here draws to a close, she is beside herself with gratitude for the department's faculty and staff who have made her years at UA so rewarding.



**JAMES MISFELDT** is a second-year Master's student from Wisconsin. He received his bachelor's degree from the University of Alabama right here in our department where he was awarded undergraduate of the year in 2017. James served one of the most illustrious and big-league terms as president of Club Geography this past year and likes to play basketball in his free time.



**PENELOPE MITCHELL** joined the Ph.D. program in January 2019. She is working under the research guidance of Dr. Curtin in the Laboratory for Location Science, specifically on the Collective Spatial Cognition research initiative. Prior to starting with UA, Penelope was an instructional designer for the University of West Florida, as well as an online adjunct lecturer teaching Cartographic Design for Johns Hopkins Online Master of Science in GIS program. She received her M.S. in Environmental Studies, a graduate GIS certificate, and B.S. in Environmental Policy from the University of West Florida.



**NISHANI POORNA MORAGODA** is a second-year Master's student and a member of the Surface Dynamics Modeling Lab, with research interests in impacts of climate change and anthropogenic activities on water resources, and global scale sediment flux modeling. Her thesis research, under the guidance of Dr. Sagy Cohen, is focused on climate-induced trends in global riverine water discharge and suspended sediment dynamics in the 21<sup>st</sup> century. In summer 2018, she completed the CUAHSI-National Water Center Innovators Program-Summer Institute, held at the National Water Center in Tuscaloosa. She was placed first at the University of Alabama 3MT competition held in November 2018 and represented UA at the Southern Regional 3MT Competition. For



*Nishani Poorna Moragoda presenting at the UA 3MT competition 2018*

# Graduate Student Profiles

her overall contribution, she was awarded the Outstanding Graduate Student Award of the Department of Geography in 2019. After completing her Master's degree, Nishani plans to pursue a Ph.D. in Geography starting from fall 2019.

**DINUKE NANAYAKKARA MUNASINGHE** is a PhD student and member of the Surface Dynamics Modelling Lab (SDML), Department of Geography, with research interests in Remote Sensing Applications in Flood Inundation Mapping, Computational Hydrology, Hydraulic Modeling, and Sediment Transport and Monitoring. Currently, he is working on constructing a novel methodology to estimate future flood risks on global river deltas using a hydrological and remote sensing approach.



**QIFAN NIE** is working on his M.S. in Geography with a thesis titled “Spatial Analysis of the Accessibility of the National Highway Network in India.” He is also working on his Ph.D. in the Department of Civil Engineering at the University of Alabama. His research focus includes GIS, social media related transportation issues, machine learning and deep learning applications for transportation, traffic crash modeling, and safety analysis.



**JUDITH OPPONG** completed her undergraduate studies at the University of Ghana with a Bachelors in Geography and Resource Development. Her interest in Resource Development and Regional Planning brought her to UA. She is in the final year of her Master's degree and made a poster presentation at SEDAAG last year!



**KORY PILET** is a second-year Master's student originally from New Orleans, Louisiana. He attended the University of Alabama for his undergraduate studies in geology and environmental science. Being from Louisiana and having the Mississippi River in his backyard drove him to continue his graduate studies in hydrology and river systems. Kory's hope is that his research work helps better understand the human interaction within river basins to improve flood forecasting and water security. At UA, Kory served as treasurer of Club Geography. In his downtime, Kory enjoys attending any Alabama athletic events.

**AUSTIN RANEY** is a first year's Master's student here at the Capstone working under the guidance of Dr. Sagy Cohen in the Surface Dynamics Modeling Lab. Austin recently received his B.S. from The University of Alabama in Geography whilst receiving a minor in Computer Science. During his undergraduate studies, Austin completed research involving floodwater depth estimation using GIS and remote sensing techniques. His current research focuses on modeling bank-full discharge conditions at a global scale. Aside from research, Austin loves the outdoors; if he isn't in the lab he is likely climbing somewhere or blazing a trail on his bike.



*Austin presenting at SEDAAG 2018 in Johnson City, TN*

# Graduate Student Profiles

**JACOB REED** graduated from Mississippi State University in 2012 with a B.S. in Geoscience and a concentration in Broadcast Meteorology. Prior to attending UA, Jake worked for five years as a broadcast meteorologist in Wichita Falls, Texas; Jackson, Mississippi; and most recently in Huntsville, Alabama. His on-air work has received honors from the Associated Press, the Alabama Broadcaster's Association, and the National Academy of Television Arts and Sciences. While working in Huntsville, Jake received three Emmy nominations for severe weather coverage and science-related reporting. Jake is a second-year Master's student working with Dr. Jason Senkbeil on ways to improve weather forecast communication and delivery, specifically through the lens of television weather broadcasts. Outside of school, Jake enjoys spending time hunting and fishing. He also helps coach high school competitive speech and debate teams for local and national competitions.



**GREGORY SHAFER** is a first-year Master's student working with Dr. Davis, and his research investigates the reach-scale geomorphic impacts of freshwater mussels. Greg is a student veteran with 6 years of active duty in the Marine Corps before attending West Virginia University, where he earned a dual B.S. degree in Wildlife Fisheries Management and Geology.

**DANIEL TURNER** is a PhD student in the University of Alabama's Department of Geography, where he is a Research Assistant in Dr. Kevin Curtin's Laboratory for Location Science. He holds an A.B. in History from the University of Chicago and a M.S. in GIS from the University of Texas at Dallas. His research interests include complex systems, spatial optimization, network analysis, human-environment interaction, conservation, and software development.

**MIN XU** is a first year Ph.D. student. In May 2015, she received the M.A. degree in Geography from the University of Cincinnati (UC). In August 2015, she was admitted to the PhD program of Geography and spent another three years at UC. She transferred to The University of Alabama (UA) in August 2018 and is currently pursuing the Ph.D. degree in Geography at UA. Her research interests include remote sensing, inland water quality, harmful algal blooms, and spatiotemporal analysis of remote sensing images. Her dissertation research focuses on the development of numerical algorithms for deriving water quality parameters for inland water bodies using the state-of-the-art remote sensing technology. As a graduate research assistant, she is currently working on the NASA funded project "Remote Sensing Research for Harmful Algal Blooms in Inland Waters" led by her advisor Dr. Hongxing Liu. In the past four years, she has participated in the extensive field campaigns to collect inland water quality data in Harsha Lake and Caesar Creek in Ohio, Taylorsville Lake in Kentucky, Brookville Lake in Indiana, and the Ohio River. In February 2019, she was awarded the Graduate Council Fellowship (Category 2: Research and Creative Activity) at UA to support her ongoing dissertation research.

**PEI ZHANG** is a second-year PhD student from Henan Province in China. She earned her Master's degree in physical geography from Beijing Normal University and Bachelor's degree in science education from Harbin Normal University. Her research interests are aeolian sediment transport processes. She joined the University of Alabama in 2017.



# Environmental Science Majors and Hometowns

<u>Student</u>	<u>Hometown</u>	<u>Student</u>	<u>Hometown</u>
Neil Amato	Charlotte, NC	Luke Ferrell	Jasper, AL
Mitchell Anderson	Ada, MI	James Francis	Birmingham, AL
Abigail Askew	Florence, AL	Taylor Gangwish	Roseville, CA
Jacklyn Barnes	Tuscaloosa, AL	Kierra Geer	Hoover, AL
Nathan Barron	Owens Cross Roads, AL	Kathleen Goins	Murfreesboro, TN
Spencer Bartle	Homewood, AL	Shelley Gossman	Hoover,eAL
John Berg	Tampa, FL	James Green	Huntsville, AL
Laney Brager	Hawesville, KY	Emily Grojean	Yorktown, VA
Dylan Brotherton	Mooresville, NC	Philip Hall	Orange Beach, AL
Emma Callanan	East Greenwich, RI	Joseph Hamilton	Acworth, GA
Jennifer Campbell	Pike Road, AL	Terry Hancock	Berry, AL
Jordan Cantrell	Deatsville, AL	Andrew Harrington	Wellesley, MA
Patrick Carpenter	Harrisburg, NC	Ashley Harrison	Killen, AL
Samuel Cartee	Tuscaloosa, AL	Clark Hoell	Madison,eAL
Evan Cass	Decatur, GA	John Hofmann	Palm Beach Gardens, FL
Alexandrea Collins	Downingtown, PA	Hannah Hostetler	Columbiana, OH
Robert Comas	Tuscaloosa, AL	Leilani Johnson	Marietta, GA
Gavin Conley	Suwanee, GA	Kenna Jordan	Winthrop Harbor, IL
Garrett Cooper	Guin,eAL	William June	Roswell, GA
Kathryn Crawford	Dothan, AL	Kira Keaslov	Columbus, OH
Jack Dailey	Lakeville, MA	Madeline Kehler	New Cumberland, PA
Trevor DeLaere	Suwanee, GA	Samuel Kirkland	Coker,eAL
Ethan Dennis	Prattville, AL	Caylin Kliner	Tuscaloosa, AL
Mark Dimilia	Woodstock, GA	Lacey Kohler	Pittsburgh, PA
Gabriella Dwyer	New City, NY	Benjamin Kopriva	Louisville, KY
Tana Early	Northport, AL	Alexander Kracker	Amherst, NY
Audrey Eaves	Simpsonville, SC	Jonathan Kressuk	Franklin, WI
Sara Ellington	McCalla,eAL	Jane Kunberger	Franklin, TN
Skyler Ellis	Hemlock, NY	Corinne Lamanna	Ridgefield, CT
Raien Emery	Sheridan, WY	Caroline Lawery	Pinellas, FL
Kristin Fair	Northport, AL	Catherine Layfield	Gulf Shores, AL
Abby Ferguson	Tuscaloosa, AL	Nora Leonard	Saint Charles, IL

# Environmental Science Majors and Hometowns

<u>Student</u>	<u>Hometown</u>	<u>Student</u>	<u>Hometown</u>
Jessica Lewis	Tuscaloosa, AL	Daniel Risman	Buffalo Grove, IL
Sarah Lewis	Point Clear, AL	Jack Robinson	Tuscaloosa, AL
Jasmine Longmire	Grayson, GA	Samuel Rogers	Melbourne, FL
Erin Lopez	Cullman, AL	Karsyn Routh	Mahomet, IL
Jared Lotfi	Tuscaloosa, AL	Claudia Santiago	Franklin, TN
Brianna Lowery	Tuscaloosa, AL	Carrie Schmitt	Bellbrook, OH
Alton Maddox	Fyffe, eAL	Cameron Schuler	Indianapolis, IN
Alaina Makowski	Howell, MI	Rachel Schwalb	Mequon, WI
Robert McNatt	Ashland, eAL	Cassidie Sedam	Las Vegas, NV
Philip Meric	New Orleans, LA	Emily Seviour	Port Charlotte, FL
Michael Miller	Auburn, eAL	Spencer Simonetti	Maylene, eAL
Marcus Mizerany	Tuscaloosa, AL	Sydnee Smith	Milford, OH
Mya Montrella	Tuscaloosa, AL	Rosemary Smyth	Pensacola, FL
John Morgan	Russellville, AL	Sommer Spencer	Antioch, IL
Katelyn Morris	Enola, PA	Veigh Kaye Spencer	Marion Junction, AL
Rebecca Mueller	Lebanon, TN	Ashley Spiller	Bowling Green, KY
Donovan Murphy	Golden Valley, MN	Lydia Stanley	Tuscaloosa, AL
Anuska Narayanan	Huntsville, AL	Jason Swanner	Camden, eAL
Zachary O'Donnell	Bele Air, eMD	Matthew Turner	Fort Payne, AL
Maxwell Oswalt	Northport, AL	Christal Varanyak	Trenton, NJ
Neah Patkunas	Palatine, IL	Vanessa Vaughn	Maryville, TN
David Phillips	Calera, eAL	Kevin Vermillion	Mason, OH
Phillip Pitts	Tuscaloosa, AL	William Wade	Mountain Brook, AL
Luke Plescia	Crestwood, KY	Tate West	Hoover, eAL
Jared Priesz	Crystal Lake, IL	Miller Wilkinson	Trussville, AL
Carrie Ragsdale	Richmond, VA	Jennie Wilson	El Segundo, CA
Bailey Rast	Phoenix, MD	Katherine Wilson	Tuscaloosa, AL

# Geography Majors and Hometowns

<u>Student</u>	<u>Hometown</u>	<u>Student</u>	<u>Hometown</u>
Chelsea Aaron	Quinton,eAL	Thomas Milstead	Sheffield, AL
Samuel Andrus	Acworth, GA	John Mueller	Louisville, KY
Christian Barger	Elburn, IL	Reece Neathery	North Richland Hills, TX
John Bell	Tuscaloosa, AL	Zachary Nelson	Fairhope, AL
Kenan Brackin	Semmes,eAL	Joseph Omer	Labadie, MO
William Bridges	Dothan,eAL	Riley Palasak	Rogers,eAR
Sloane Buschman	Crestwood, KY	Michael Parris	Birmingham, AL
Amber Chan	Norman, OK	Isaac Posey	Haleyville, AL
William Christian	Huntsville, AL	Amica Rapadas	Homewood, AL
Cara Clay	Hoover, AL	Hannah Reid	Mobile,eAL
Mary Clements	Chattanooga, AL	Michael Rice	Montgomery, AL
Alexis Clouser	Little Rock, AR	Terrance Rutledge	Tuscaloosa, AL
Brian Daniels	Camden,eAL	Dana Sheetz	Alexandria, VA
Raul De Velasco	Prattville, AL	Carrie Schmitt	Bellbrook, OH
Catherine Ecker	Edmond, OK	James Seay	Pelham,eAL
Raien Emery	Sheridan, WY	Colton Selman	Mountain Brook, AL
Emilie Ferguson	Rainbow City, AL	Joshua Sims	Helena,eAL
Benjamin Hand	Las Vegas, NV	Zane Thomas	Cedar City, UT
Jacob Hathaway	Kennesaw, GA	Cameron Thompson	Moneta, VA
William Hughes	Louisville, KY	Adam Tillery	Brookwood, AL
Cameron Joyce	Woodstock, AL	Milton Tucker	Saint John, IN
Brooke Kenney	Boise, ID	Emmanuel Walker	Tuscaloosa, AL
Brenden Knight	Deatsville, AL	Aaron Watkins	Heber City, UT
Rolf Konrad	Mobile,eAL	William Whitman	Cottondale, AL
Scarlet Martin	Atmore,eAL	Margaret Woodward	Carmel, IN
Melissa Meyer	Monroe, NJ		

## Geography Bachelor's Degrees Earned

### Spring 2018

Amy Anderson  
Alexander Fries  
David Herder  
Jillian Jarrett  
Connor Kirkland  
Wesley Martin  
Tyler Mathews  
Maranda McMillian  
Andrew O'Shields  
Benton Polasky  
Andrew Tyndall  
Claude White

### Summer 2018

Madison Blanchard

### Fall 2019

Thomas Augeri  
Kimberly Brothers  
Noah Coon  
Sean Fordham  
Shelbi Francescon  
Katherine Jack  
Austin Raney  
Austin Rettinghouse  
Michaela Senft

## Environmental Science Bachelor's Degrees Earned

### Spring 2018

Lydia Blount  
Jonathan Burrows  
Daniel Glaus  
Hunter Hemphill  
Alexander Hunt  
Alexander Lamore  
Lennon Luckadoo  
Tyler Mathews  
Mary-Margaret Miller  
Jessamy Moore  
Tyler Morrison  
Justin Napolitano  
John Olinger  
Benton Polasky  
Kathryn Shay  
Taylor Simpson  
Erin Smyth  
Zachary Spivey  
Piper Stone  
Taylor Watkins  
Christopher Weaver  
Daniel West

### Summer 2018

Cali Capela  
Danielle Courtney  
Holly Gellis  
Colton Green  
Taylor Hornsby

### Fall 2019

Dalton Asper  
Nicholas Bolton  
Kevin Covington  
Hunter Gibson  
Stephanie Hedin

# Geography Master's Degrees Earned

## Spring 2018

Carson Barefoot  
Alysa Delgado  
Walker Skeeter  
Brenna Sweetman  
Kevin Wilson

## Fall 2019

Deep Gurung  
Mariam Khanam  
Matthew Koerner

# GIS Certificates Earned

## Undergraduate

Stephanie N. Hedin  
Mark A. Henry  
David G. Herder

## Graduate

Afrin Hossain Anni  
Emily J. Brown  
Travis M. Sizemore

# Departmental Awards

## Outstanding Undergraduate in Geography

2015: Bradford L. Bates  
2016: Anna B. Davis  
2017: James Misfeldt  
2018: Alexander Fries  
2019: Amber Chan

## Outstanding Undergraduate in Environmental Science

2015: Monica Standohar  
2016: Sydney D. Shaefer  
2017: Davis Goode  
2018: Kathryn Shay  
2019: Raien Emery

## Chairperson's Award

2015: Allison M. Tarbox  
2016: Monica H. Stone  
2017: Dinuke Munasinghe  
2018: Mariam Khanam  
2019: Jonathan Kleinman

## Outstanding Graduate Research Assistant

2015: Lauren E. Cox  
2016: Shawn M. Carter  
2017: Scott Ford  
2018: Rachel Lombardi  
2019: Davis Goode

## Outstanding Graduate Teaching Assistant

2015: Michelle E. Saunders  
2016: Sandra L. Almayeda Zambrano  
2017: Jordan Cissell  
2018: Alysa Delgado  
2019: Jordan Cissell

## Outstanding Graduate Student

2015: Matthew D. Meko  
2016: Lauren E. Cox  
2017: Jonathan Kleinman  
2018: Kevin Wilson  
2019: Nishani Moragoda

# Map Library Update

The Map Library downsizing project was completed in the early fall of 2018, according to plan. Now the focus of the activities in the library have changed to making the Map Library more attractive to visitors. New maps will soon decorate the walls, the Southern Collection, a room dedicated exclusively to southern books and maps opened in March, and since January the Map Library service desk is open 12-3 every day, manned by the excellent student workers Jinsu and Mark. Since April the Map Library is also on Facebook, go ahead and like our page!

## 2018-2019 Map Giveaway Events

September 20-21, 2018: 1,756 maps

November 12-13, 2018: 189 maps

March 25-26, 2019: 476 maps

Total maps given away at 2018-2019 events:

2,421 maps!



Service Desk Hours:

Monday – Friday 12-3 pm

Or by appointment

<https://maplibrary.ua.edu>

Department of Geography presents:

## GIS Day Wednesday November 14<sup>th</sup>, 2018

Russell Hall 354, University of Alabama

### Program

- 1:00 pm **Opening Remarks**  
Luoheng Han, Department of Geography and UA Office for Academic Affairs
- 1:05 pm **Remote sensing of water quality in inland lakes and rivers**  
Honxing Liu, Department of Geography
- 1:35 pm **Applications of LiDAR in Geologic Research and Mapping at the Geological Survey of Alabama**  
Sandy Ebersole, Geological Survey of Alabama
- 2:05 pm **Presentation of Geocaching Challenge winners**, James Misfeldt
- Refreshments**
- 3:00 pm **Center for Advanced Public Safety: GIS Applications and Projects**  
Laura Myers, Center for Advanced Public Safety
- 3:30 pm **GIS and Voting Rights Law**  
Craig Remington, Cartographic Research Lab
- 4:00 pm **Getting Stuff from Here to There: Using GIS and Optimization for Unmanned Deliveries**  
Kevin Curtin, Department of Geography

**GISday**  
November 14, 2018

# Cartlab Update

The Cartographic Research Lab is in the midst of very busy time. The Lab has contracted with Elsevier Academic Press to produce 196 river basin maps for the second edition of *Rivers of North America*. We await the completion of an agreement with the Alabama Alcoholic Beverage Control Board to provide maps concerning demographic, marketing and public safety issues for areas surrounding their 174 stores in the State. The Geological Survey of Alabama has agreed to combine their substantial collection of aerial photography with the collection presently held by the Geography Department. This arrangement doubles the number of photographs available to customers of the Lab. The new U.S.D.A. Census of Agriculture has been recently released, which provides countless mapping opportunities for this important part of the State's economy. After 35 years, Craig Remington remains the director of the Lab. Mr. Remington anxiously awaits the results of the 2020 Census. Political redistricting season, like football, can't arrive soon enough.

## 2018-2019 Colloquium Series

October 5, 2018: **Jeffery McDonnel**, Professor and Associate Director of the Global Institute for Water Security, University of Saskatchewan; President of the AGU Hydrology Section

November 2, 2018: **Anwar Sounny-Slitine**, Lecturer in the Department of Geography, University of Florida.

November 8, 2018: **Kendra McSweeney**, Ohio State University

November 9, 2018: **Mark Lorang**, former Research Professor and current Chief Science Officer of Freshwater Map.

January 29, 2019: **John-Michael Davis**, Postdoctoral Fellow, Social Sciences and Humanities Research Council of Canada. Seminar Topic: "Towards Equitable and Sustainable E-waster Economies"

January 31, 2019: **Annah Zhu**, Department of Environmental Science, Policy, and Management, University of California, Berkley. Seminar Topic: "Global Paradoxes: from the Malagasy forest to the modern Chinese home"

February 4, 2019: **Jared Margulies**, Postdoctoral Research Fellow, Department of Politics at the University of Sheffield. Seminar Topic: "Scaling the Political Ecology of Conservation"

February 6, 2019: **Michael Acheampong**, Visiting Assistant Professor, Oklahoma State University. Seminar Topic: "Neoliberal Economic Policies and the Oil Industry in Ghana: A Threat to Sustainable Development Goal (SDG) Number One for Farmers?"

March 1, 2019: **Andries Heyns**, Postdoctoral Research Associate, University of Alabama.

March 22 and 29, 2019: Graduate Student presentations.

# UA Geography Study Abroad Courses

## BELIZE

The 2018 UA in Belize course was a resounding success. This, the 7<sup>th</sup> rendition of the field course included 22 students from across campus. Topics investigated included the impact of poaching on conch numbers in marine reserves, patch reef “island” biogeography, and wrack line ocean derived pollution.



## COSTA RICA

The Department of Geography has successfully completed its first semester of an intensive study abroad program in Costa Rica! The program was based at the Soltis Center, a field research station perched on a volcanic mountain slope in Costa Rica’s rugged interior, within a richly biodiverse, tropical cloud forest ecosystem (<http://soltiscentercostarica.tamu.edu/>). From January 9 to March 7, geography professors Senkbeil, Magliocca, and LaFevor; with political science professor Chris Hale, taught GY101 (Atmospheric Processes and Patterns); GY202 (The Water Planet); GY345 (Geography of Latin America), and PSC321 (Politics of Latin America) to its first cohort of students. The courses combined classroom lectures and labs with fieldwork and field trips that centered on experiential learning. Doctoral candidate Jonny Kleinman (Geography) served as teaching assistant and, especially while in the field, brought valuable perspectives on forest ecology to bear. Students received between 12 and 15 hours of credit for



*Students working on a lab about topographic maps and watershed boundaries in the Soltis Center*



*Students mapping out the interconnections among water, energy, food, and environmental systems in the Tempisque River basin in Guanacaste Province*

the two months of intensive work, and also completed a variety of supervised and individual research projects. Both students and faculty worked hard and played hard, but had moments to relax. After the day’s formal learning experiences were over, the rhythmic echoes of howler monkeys could be heard harmonizing with Kleinman’s fine guitar playing, while students and faculty reflected on the day’s activities and enjoyed the fine dining and recreational activities provided by the Solits Center. Hoping to make these experiences available to all, plans for year two are currently underway and interested students should contact Jason Senkbeil ([jcsenkbeil@ua.edu](mailto:jcsenkbeil@ua.edu)) for details.

# Conference Presentations

\* UA Geography Department Faculty

\*\* UA Geography Department Graduate Student

## Invited Talks and Panels

**Davis, L.\***, 2019. Panelist for Workshop on: The development of a framework for technical review of paleoflood information, Nuclear Regulatory Commission Headquarters, May 29-30, Rockville, Maryland.

**Davis, L.\***, 2018. Paleoflood studies on the Middle Tennessee River. Paleoflood Workshop, Tennessee Valley Authority. Chattanooga, TN, Feb. 20-23, 2018.

**Engström, J.\*** 2019. Analyzing hydroclimate for hydro power management applications, using teleconnections and satellite data. National Center for Atmospheric Research, Boulder, CO.

**Engström, J.\*** 2019. What is GIS and how can it boost your research? University of Alabama Libraries.

**Magliocca, N.\*** 2019. Modeling cocaine trafficking and counterdrug interaction as a complex adaptation system. Global Land Programme Open Science Meeting. Bern, Switzerland, April 24-26, 2019.

**Magliocca, N.\*** 2019. Archetypical pathways of direct and indirect land-use change caused by Economic Land Concessions in Cambodia. Global Land Programme Open Science Meeting. Bern, Switzerland, April 24-26, 2019.

**Magliocca, N.\*** 2019. Archetypical pathways of direct and indirect land-use change caused by Economic Land Concessions in Cambodia. Invited oral presentation at the NASA Land-Cover/Land-Use Change Science Team Meeting. Washington, D.C., April 9-11, 2019.

**Magliocca, N.\*** 2019. Transnational and illicit economies as drivers of land-use change. Invited seminar, Human-Environment Systems Research Group, College of Innovation and Design, Boise State University. Boise, ID, March 1, 2019.

## Ecological Society of America Annual Meeting, August 5-10, 2018; New Orleans, LA

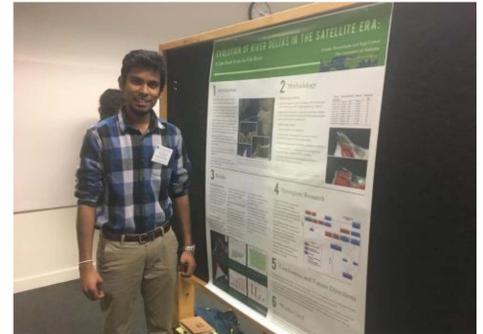
**Hart, J.L.\*** 2018. Canopy disturbance and mesophication, and succession in upland oak stands.

**Kleinman, J.S.\*\***, **Goode, J.D.\*\***, and **Hart, J.L.\*** 2018. Ground flora response to catastrophic wind, salvage harvesting, and prescribed fire in the Alabama Fall Line Hills

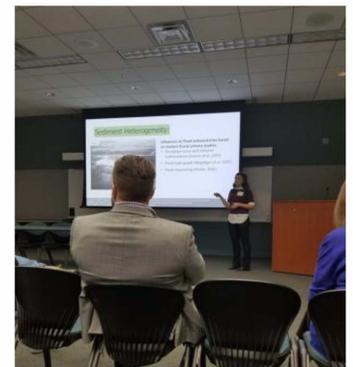
## American Sociological Association Annual Meeting, August 10-14, 2018; Philadelphia,

### PA

Lichtenstein, B., Pettway, T., and **Weber, J.\*** 2018. Sharecropper's Tuberculosis: Pathologies of power in a fatal outbreak.



*Dinuke Munasinghe poster presentation at SEDAAG 2018 in Johnson City, TN*



*Ray Lombardi presenting at SEDAAG 2018 in Johnson City, TN*

# Conference Presentations

## Alabama Water Resources Conference, September 5-7, 2018; Orange Beach, AL

**Moragoda, N.\*\*** 2018. Response of fluvial suspended sediment fluxes to future climate change on a global scale. Poster presentation.

## Society of American Foresters National Convention, October 3-7, 2018; Portland, OR

Emery, R.K and **Hart, J.L.\*** 2018. Flammability of available fuels in longleaf pine woodlands.

**Goode, J.D.\*\***, **Kleinman, J.S.\*\***, and **Hart, J.L.\*** 2018. Edge influence on composition and structure of longleaf pine woodland following wind disturbance.

**Kleinman, J.S.\*\***, **Goode, J.D.\*\***, and **Hart, J.L.\*** 2018. Prescribed fire effects on pine woodland recovery after wind disturbance and salvage logging.

## North American Cartographic Information Society, October 16-19, 2018; Norfolk, VA.

**Fries, A.\*\*** 2018. Alabama: Its landforms and natural features. Map presentation.

## Geological Society of America, Annual Meeting, November 4-7, 2018; Indianapolis, IN

Stewart, C.L., Stinchomb, G.E., Forman, S.L., **Davis, L.\***, **Lombardi, R.\*\***, Leigh D., Blackaby, E., and Hockaday, W.C. 2018. Late Holocene paleofloods and grain-size variability along the middle Tennessee River in northern Alabama.

Stinchomb, G.E., Stewart, C.L., Blackaby, E., **Lombardi, R.\*\***, **Davis, L.\***, Forman, S.L., Hockaday, W.C., and Leigh, D. 2018. Floodplains as repositories of information on carbon addition rates in depositional soil profiles.

## Southeastern Division of the American Association of Geographers (SEDAAG) Regional Conference, November 17-18, 2018; Johnson City, TN

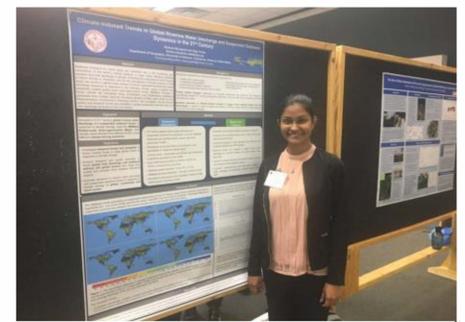
**Cissell, J.\*\*** 2018. Crocodile hybridization in Belize: Integrating field observations and remote sensing to examine the driving role of human landscape modification.

**Engström, J.\*** and **Keellings, D.\*** 2018. Drought in the Southeast: Future outlooks.

**McClure, C.\*** 2018. The National Geographic Alliance Network: Analyzing Success of the First 25 Years.

**Munasinghe, D.\*\*** 2018. Evolution of river deltas in the satellite era: A case study from the Nile River.

**Moragoda, N.\*\*** 2018. Response of fluvial suspended sediment fluxes to future climate change on a global scale. Poster presentation.



*Nishani Moragoda presenting her research poster at SEDAAG 2018 in Johnson City, TN*

# Conference Presentations

**Oppong, J.\*\* and Appiah-Opoku, S.\*** 2018. Ebola in West Africa: Assessing perceived risks and public health preparedness in Ghana.

**Raney, A.\*\*** 2018. Estimating coastal flood inundation using remote sensing and GIS techniques.

**Weber, J.\*** 2018. Commuting around the clock in a 24/7 city.

## American Geophysical Union Annual Meeting, December 10-14, 2018; Washington, D.C.

**Engström, J.\* and Keellings, D.\*** 2018. Drought in the Southeast: Future outlooks.

**Keellings, D.\*** 2018. Spatiotemporal evolution of heat waves across the United States. Extreme rainfall associated with Hurricane Maria over Puerto Rico and its connections to climate variability and change.

**Moragoda, N.\*\*** 2018. Role of climate change in the 21<sup>st</sup> century riverine water discharge and suspended sediment fluxes at a global scale.

## 99<sup>th</sup> American Meteorological Society Annual Meeting, January 6-10, 2019; Phoenix, AZ

**Reed, J.\*\*** 2019. PoP Problem: Understanding public perception and confusion.

## 17<sup>th</sup> Southeast Severe Storms Symposium, March 22-23, 2019; Starkville, MS

**Reed, J.\*\*** 2019. 7-Dayzed and Confused: Exploring a disconnect between broadcast meteorologists and their audiences.

## Association of Southeastern Biologists Annual Meeting, April 3-6, 2019; Memphis, TN

**Kleinman, J.S.\*\* and Hart, J.L.\*** 2019. Floristic indicators of wind, logging, and fire in longleaf woodlands.

## Annual Meeting of the American Association of Geographers, April 3-7, 2019; Washington, D.C.

**Cissell, J.\*\*** 2019. (Conch) Pirates of the Caribbean: Quantifying illegal harvests of Queen Conch in two of Belize's marine protected areas.

**Davis L.\*, Lombardi, R.\*\***, Stinchomb, G.E., Stewart, C.L., Forman, S.L., Leigh D., **2019**. A 2,200-year record of paleofloods on the Tennessee River.

**Heyns, A.\*** 2019. Exploiting terrain features for improved optimization of camera-based wildfire detection systems.

**Holland-Levine, A.\*\*** 2019. Human-carnivore dynamics in Blaine County, Idaho: A social-ecological systems approach to coexistence.

**Keellings, D.\*** 2019. Spatiotemporal evolution of heat waves across the United States.

# Conference Presentations

**Lombardi, R.\*\***, **Davis, L.\***, Stinchcomb, G., Stewart, C., **Therrell, M.\*\***, and Munoz, S., **2019**. Fluvial activity in river basins of the eastern U.S. during the Holocene: a regional synthesis.

**Lombardi, R.\*\*** 2019. A regional synthesis of fluvial activity in major river basins of the eastern U.S. during the Holocene. Poster presentation.

**Liu, H.\*** 2019. Spatio-temporal analysis of lake and reservoir water quality in USACE Louisville District with multispectral satellite remote sensing systems. Poster presentation

**Liu, Y.\*\*** 2019. Remote sensing of forest structural changes due to the recent boom of shale gas extraction in Appalachian Ohio.

**Magliocca, N.\*** 2019. Social contagion of risk perception in human-wildlife interactions.

**Magliocca, N.\*** 2019. Archetypical pathways of direct and indirect land-use change caused by economic land concessions in Cambodia.

**McClure, C.\*** 2019. The National Geographic Alliance Network: Measuring influence of a grassroots network.

**Misfeldt, J.\*\*** 2019. Resistance and relocation: Disparate reactions of two communities around commons facing enclosure in a small American city. Poster presentation.

**Shao, W.\*** 2019. Flood hazards and perception— a comparative study of two cities in Alabama.

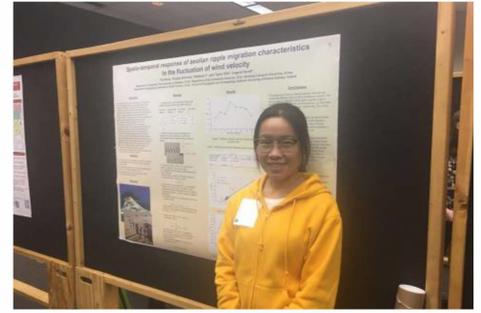
**Turner, D.\*\*** 2019. Unmanned vehicle logistics modeling: Results and integration for autonomous logistics operations family of tools.

**Weber, J.\*** 2019. Changing boundaries in the National Park System.

Sultana, S. and **Weber, J.\*** 2019. Missing African-American visitors at Great Smoky Mountain National Park.

**Xu, M.\*\*** 2019. A spectral space partition based ensemble method for improving the accuracy and spatial and temporal extensibility of empirical water quality remote sensing models.

**Zhang, P.\*\*** 2019. The characteristics about Aeolian ripple migration and shear velocity on the sand surface.



*Pei Zhang presenting her research poster at SEDAAG 2018 in Johnson City, TN*

# Conference Presentations

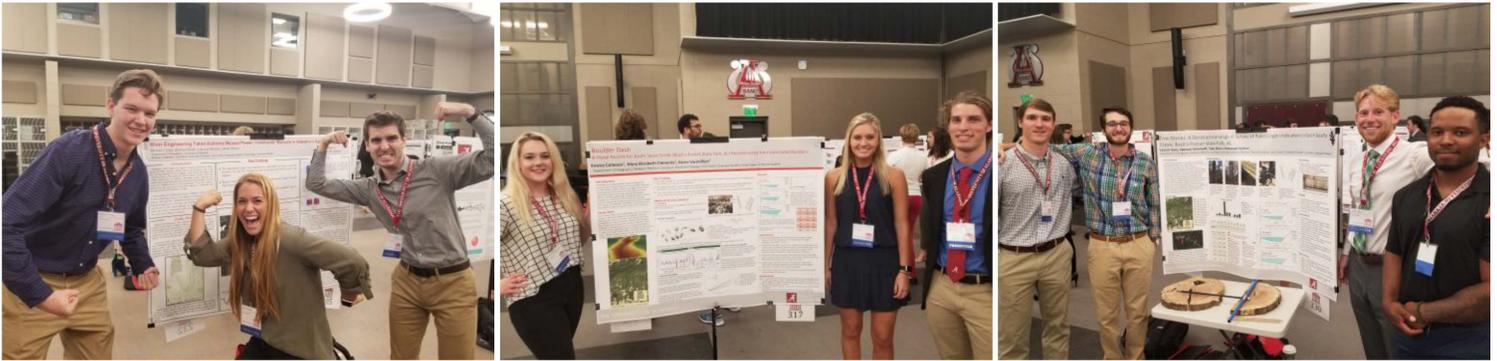
## University of Alabama Arts & Sciences Undergraduate Research Summit, April 12, 2019; Tuscaloosa, AL

**Comas, M., Morris, K., Murphy, D., and Wilson, J.** River engineering takes extreme mussel power: Freshwater mussels in Alabama's Sipsey River. Faculty Mentor: L. Davis; Graduate Student Mentor: Greg Shafer.

**Clements, M. E., Callanan, E., and Vermillion, K.** Boulder dash: A flood record for South Sauty Cree (Buck's Pocket State Park, AL) reconstructed from imbricated boulders. Faculty Mentor: L. Davis; Graduate Student Joni Corbin.

**Simonetti, S., Walker, E., Seay, J., and West, T.** Tree stories: a dendrochronological analysis of paleostage indicators in South Sauty Creek (Buck's Pocket State Park, AL). Faculty Mentor: L. Davis; Graduate Student Mentor: Joni Corbin; faculty co-mentor: Matthew Therrell.

**Vinson, B.** Application of CT scans to determine sediment bulk density. Faculty Mentor: L. Davis; Graduate Student Mentor: Rachel Lombardi.



*Dr. Davis's fluviogeomorphology group presenting at URSCA*



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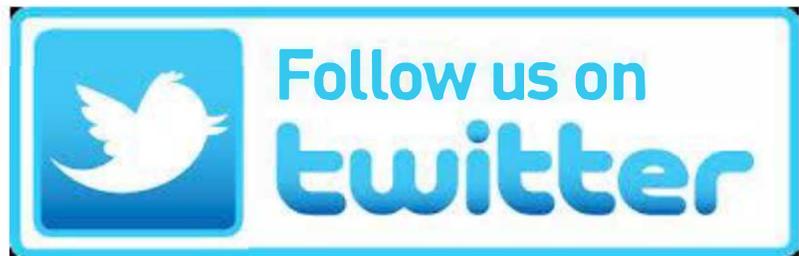


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