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-By Dr. Pat Harris

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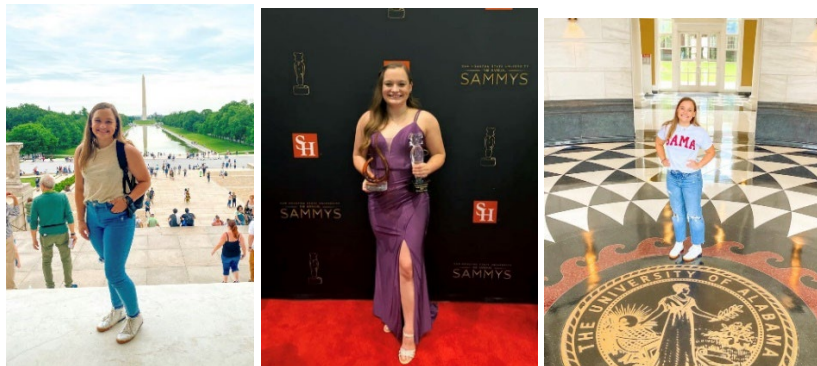


SHSU Environmental and
Geosciences group

This is my second and last newsletter as department chair. Dr. Joe Hill will be taking the reins as department chair beginning September 1st. GOOD LUCK JOE! I would like to welcome a new faculty member (Dr. Yaping Xu), who is joining us following a postdoc at Oak Ridge National Labs: his specialization is remote sensing.

Our faculty have been busy with many taking on additional responsibilities and some being recognized for their teaching. Congratulations to Dr. John Strait and Ava Fujimoto-Strait for receiving the American Association of Geographers Distinguished Teaching Award in March 2023. I would also like to congratulate Dr. Falguni Mukherjee for being promoted to a full-time administrative position in a dual role as faculty/staff ombudsperson, and as Associate Dean for Graduate Student Success. Dr. Samuel Adu-Prah has been elected to serve as the chair of the faculty senate at SHSU for the 2023-24 academic year.

Finally, I would like to brag about our students and the great things they are doing. If you want to learn more about our students, continue reading this newsletter to see reports of their experiences with summer internships, field courses, research projects, and our recent alumni endeavors.



The SAMMY Award, COSET Undergraduate Research Grant, and more...

Congratulations to Geography senior, **Hailey Richardson**, on receiving The SAMMY Award and the COSET Excellence in Service Award. The Sammy's is the official university ceremony that recognizes outstanding student leaders and organizations.

Hailey graduated summa cum laude and received the highest honors and academic distinction for her honors thesis titled, "Impacts of COVID-19 on Crime Activities in Houston, Texas". Just this past year alone, Hailey's list of accomplishments includes: a COSET Undergraduate Research Grant using geospatial technology to track data changes at the SE Texas Applied Forensic Science Facility; a student researcher on a National Geographic Society grant; lead *Weather and Climate* TA; President of GOSH (Geographers of Sam Houston); and a summer intern for the National Geospatial Intelligence Agency in Washington, D.C. Hailey will be in the Ph.D. program in Geography at the University of Alabama this Fall and was awarded the highly competitive Graduate Council Fellowship that covers her full tuition plus a generous stipend.



Senior Spotlight

Geology major and GIS minor, **Sophia Layman**, maintains a 4.0 GPA, is a *Historical Geology* TA, and a member of SHAGS. This past year, she received the Houston Geological Society scholarship, a few department scholarships, and a field camp award from the National Association of Geoscience Teachers. Sophia enjoys all her

classes and plans to pursue a hydrogeology internship after graduation and begin a graduate program in the Fall of 2024.

Graduate Student Commencement Spotlight

Melissa (Raup) Moya graduated with a Master's degree in Applied GIS this past Spring and was an undergraduate Geography alumna (2018). Melissa worked full-time throughout her undergraduate years and was also a TA for the *Geologic Hazards* labs. As a graduate student, Melissa had a graduate assistantship and assisted with 4 additional courses in our department - *Remote Sensing*, *Computer Cartography*, *Geomorphology*, and *Hydrogeology*.

When asked about her experience, Melissa said, "When I started at SHSU, I never imagined finding a family in the Department of Environmental & Geosciences. As a first-generation student in my family, the university was intimidating and unfamiliar, but the faculty and staff from our department were the best mentors who guided and encouraged me to be the best version of myself. They watched me evolve from a naive 19-year-old who was placed on academic probation and dropped out of school for a year, to a hard-working woman who fought hard to come back and succeed. I will never forget the memories I made with my geo family, both in class and in the field." Melissa is now employed as a GIS analyst for the City of Fulshear, TX.





Department and College Scholarships

Congratulations to all of our department and COSET scholarship recipients. These students are recognized for their high academic achievement, leadership, and service in our Geography, Geology, Environmental Science and Masters in GIS programs.

Geography Program Endowment Award - Douglas (Quinn) Black, Nicholas Flores, Cassidy Larsen, and Hailey Richardson

Baldwin Field Camp Scholarship - David Bickham, Mikaila Bolin, and Sophia Layman

Geology Endowed Scholarship - Nathan Atterberry, Sarah Cunningham, Caleb Harmon, Daniel Henderson, Jailan Hooker, Sophia Layman, Marissa McMinn, Zoe Pappas, Caeli Richard, Madison Sacco, Ashton Snyder, and Juliet Taylor

Environmental Science Endowed Scholarship - Jamie Bergeron, Amanda Broussard, Karolina Carreon-Garcia, Sophia Gump, Amber Hrynczyszyn, Caeli Richard, and Emilee Verner

COSET Graduate Achievement Scholarship - Priya Bansal, Eric Bowman, Ashley Butler, Jennifer Grove, and Tin Thanh Vo.

Please email geosciences@shsu.edu if you are interested in donating towards a scholarship or endowment fund.

Broadcast Meteorology Internship at KPRC-2 (Houston)

-By Sophia Cruz (Geography)

My name is **Sophia Cruz**, and I am a senior at SHSU. This summer I received the opportunity to intern at KPRC-2 Houston in the Weather Center. Prior to working here, my only experience with meteorology was *Meteorology, Weather & Climate*, and being an online TA for *Weather and Climate*. The storm tracker team here at KPRC-2 welcomed me with open arms! My first week consisted of mostly shadowing the meteorologists. The following weeks after, I got to write push alerts for the storm tracker app, update articles, learn how to use a graphic system called MAX, and practice with the green screen in front of the camera.

While most of the data given to KPRC-2 comes directly from graphs, models, and the National Weather Service, it was fun to see the concepts I learned about in *Weather and Climate*, such as high pressure - come to life. Houston has recently had a trend of extreme heat warnings and advisories because of a massive high-pressure system sitting over Texas. This hot, dry air is sinking and as a result, creating this heat wave that we are currently experiencing.

Not only have I gotten to view concepts learned in class, but I have also made connections in the TV industry and for graduate school. Many of the meteorologists at KPRC attended the same graduate school that I plan to attend - Mississippi State University. They have given me insight about what the program is like and how long my future goal of becoming a meteorologist will take. As for the TV industry, I have gotten exposure to different stations in Houston which has allowed me to meet and network with other meteorologists! This will help me in the long run when it's my turn to apply for jobs. Overall, I am so grateful for this opportunity, and my best advice to anyone considering a career in broadcast meteorology is to apply for an internship! This truly is the best way to figure out if you love the business and receive hands-on experience.



Use this QR code to see Sophia's forecast debut!



Martin Marietta Internship

-By Ashton Snyder (Geology)

My name is **Ashton Snyder**, and I am a senior Geology major and Mathematics minor. My internship experience is with Martin Marietta Materials, a lead producer and manufacturer of construction-based materials throughout the United States. They specialize in aggregate, cement, ready-mix concrete, as well as some magnesia-based products. My position is as an Aggregate Quality Control Technician at a concrete recycling yard in the Houston area. As a result, we primarily deal with the rock components which contribute to the structural integrity and design of both base materials and concrete mix designs.

From an educational perspective, my time in the classroom has helped in understanding the why's and how's attributed to each of the materials created and their intended level of performance. Moreover, my knowledge from both a chemistry and geological perspective has aided in my understanding of the aggregate's properties within each of the tests performed. Chemically, there are some common reactions that contribute to the structural detriment of the materials produced - sulfate reactions and Alkali-Silica Reactions (ASR).

Nurture Nature Center Internship

-By Ava Navarro (Environmental Science)

My name is **Ava Navarro**, and I am an Environmental Science major in my junior year. My summer internship was with the Nurture Nature Center, a science-based education center in Easton, Pennsylvania. I have grown as a student and as a person through this internship. As someone who is not the biggest fan of group work, I had a great experience working with my internship partner! I've become better at collaborating with others on ideas, working "smarter not harder" and communicating with others in a professional setting. The best part of this internship has been getting a deeper understanding of the social issues of severe weather/flooding, being able to conduct my own research, and finally being able to write about a subject I'm extremely passionate about!

NextGenPop Fellowship

-By Nicholas Flores (Geography)

My name is **Nicholas Flores**, and I am a senior Geography major. I joined the Next Generation of Population Scholars this past summer. NextGenPop works with the Population Association of America (PAA) to prepare students to conduct population research. The program is a fellowship that keeps us in contact and encourages us to create projects to present at the PAA conference in April. My experience as a member of the 2023 cohort was amazing. This year the program was held at Cornell University in New York. My 2-week experience at Cornell was phenomenal. I made connections with students from across the United States who are now my close friends.

The NextGenPop program introduced us to topics of study in the U.S. population, like health disparities and inequality; immigration; and migration. Most of all, it helped me learn a new programming language and formulate my own research paper topic. This program has allowed me to network with Cornell faculty, find potential jobs within the field of demography, and develop multiple pathways to graduate school.





Texas A&M Forestry Service in McGregor, TX Internship

-By Savannah Turner (Environmental Science)

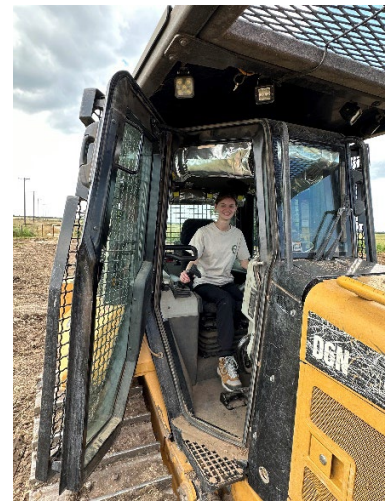
My name is **Savannah Turner**, and I am a senior Environmental Science major with a concentration in Sustainability. My summer internship was with the Texas A&M Forestry Services in McGregor, Texas. I have been fortunate to be able to learn many new skills and be able to work firsthand with the foresters. This internship has given me opportunities to see all the different jobs and tasks that the Texas A&M Forestry Service has to offer.

I went to an orientation class for new employees, TFS-101, and I learned about the history of the organization and what all the different jobs are within the agency. We went over conservation education, weather stations, our dispatch centers, foresters, biologists, and the timber industry. I visited different offices with woodland ecologists and foresters and learned about different tree diseases, like Oak Wilt, and how they go about diagnosing the trees and treatments. I also learned about the types of insects that might carry these diseases to the trees. I spent time with a few GIS mapping specialists and was able to create a few maps.

Since my major is Environmental Science, I have a little background on how ecosystems work and how disturbances might affect them. One major disturbance can be fires, and the Texas A&M Forestry Service is mainly fire based. I took the S 130-190, which is an introductory class that allows you to go in and fight fires. It teaches you all you need to know about fire behavior, fire safety and fire anatomy. I took a pack test and went on a field day to complete this course.

I've been to the state of operations center (SOC) and learned a bit about how they operate. I learned how they use the information they're provided with and advise the media on dangerous conditions. They increase the public's awareness of hazards. There are many people who work with different companies at the SOC. They all work together to provide aid, resources, information, and relief to the public during a disaster.

I am very thankful for my internship with the Texas A&M Forestry Services as it has shown me many more career choices in a field that I enjoy. The staff was very informative, supportive, and enjoyable to work with.



NSF-funded Data Science for Energy Transition Internship – Cohort 1

-By Roberto Verdezoto (Geography)



My name is **Roberto Verdezoto** and I am a senior Geography major. I was selected to be part of the first cohort for a NSF-funded grant entitled *Data Science for Energy Transition*. The first part of the program involved a 5-week summer research camp at the University of Houston that included seminars featuring people working for oil and gas companies such as ConocoPhillips, Shell, Exxon, and even Waste Management. Their goal was to introduce us to how data science and programming are used in their various fields and companies. In addition to these seminars, we had classes in programming, engineering, data science, geology, statistics, and some geosciences. This Spring 2024, we will regroup and begin a research project using real data from these companies. At the end of Spring 2024, we will present our research findings.

This has been an amazing opportunity to learn about the importance of data science in helping oil/gas companies optimize conventional energy and lead in future energy transitions towards a more sustainable future. It is a wonderful learning experience and networking opportunity that can easily lead to a possible job or internship with these companies and/or to build my research resume for graduate school. I am very thankful for this opportunity.

The Hitchin' Post

Love is in the air! Congratulations to our department newlyweds. We wish y'all a lifetime of love and happiness!

-Ryan Dawson (**Camy Dawson's** son) and Charlee Potts (student worker)

-**Amber Hrynczyszyn** (Environmental Science) and Michael Evans

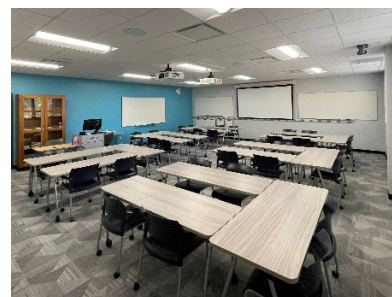
-**Camille Cotsakis** (Geography '15) and **Jon Weisner** (Geography '14)

-**Matt Purifoy** (Geography) and **Alicia Jordan** (Geography '21)



Engaging Classroom & New Equipment

Thanks to an Engaging Space grant, LDB 339 is finally complete and being put to good use. A big thank you to SHSU's PACE, STEM Center, and COSET for helping purchase an EM2 Stream Table and Wave Maker. And **Dr. Josh Gilliland** is all smiles about our new weather drone and 2nd weather station. Exciting things are happening!





National Geographic Society-funded grant

-By Dr. Velvet Nelson

In 2022, **Drs. Velvet Nelson, John Strait, Ross Guida, and Ava Fujimoto-Strait**, along with undergraduate geography student **Hailey Richardson**, wrapped up their National Geographic Society-funded project "Building an Engaging Place-Based Geography Learning Community in Metro Houston." In this project, SHSU geographers partnered with ninth grade *World Geography* and *AP Human Geography* teachers from Aldine ISD to expand ideas about geography, applications for geographic technology, and opportunities to study geography in higher education.

Over the summer, the research team led a cultural geography field trip for students in Houston, Texas. To overcome logistical field trip barriers for high school students, the team created a GIS Story Map highlighting diverse cultural locations in the city along with videos from student experiences and reflections of the sites. Geographers also offered a workshop for teachers at the Sam Houston Memorial Museum in Huntsville, Texas. The team created a GIS Story Map showing the geography of Sam Houston's life as an example on how to incorporate geographic technology into social studies lessons.

During the Fall semester, geographers hosted seventy ninth grade geography students at SHSU. These students toured the university campus and met with current SHSU geography students to learn about college-level geography classes, geography and environmental science degree programs, and geography careers.

The team is currently revising a manuscript based on project activities for resubmission to the *Journal of Geography*.

For more information, please visit our NGS grant website:
<https://www.shsu.edu/academics/environmental-and-geosciences/national-geographic/index.html>

Faculty-Student Research Grants

SHSU provides amazing opportunities for our students to work with our faculty on various research projects. Here are some funded projects in 2022-2023:

Dr. Don Albert - *History of Aircraft Encounters with the Pitcairn Islands*. ORSP Individual grant. Working with Mason Solomon (History).

Dr. Mark Leipnik - *GIS Use in Energy Infrastructure Security* - SHSU Institute of Homeland Securities grant. Working with Kerry Billington (Applied GIS) and Abigail Martin (Geography).

Ava Fujimoto-Strait and Dr. Sheree Hughes - *Using Geospatial Technologies to Track Data Changes at the SE TX Applied Forensic Science Facility (STAFS)*. COSET Undergraduate Research grant. Worked with Hailey Richardson (Geography).

Dr. Renjie Zhou - *The Impacts of Various Hydrological Processes on Dissolved O₂ in Barton Springs*. COSET Undergraduate Research grant. Working with Julia Rufener (Geology).

Dr. Samuel Adu-Prah - *Modeling the Spatiotemporal and Environmental Aspects of Malaria Disease Transmission and Patterns*. ORSP Pilot Studies grant. Working with Adrian Parada (Environmental Science).

Dr. Brian Cooper and Dr. Pat Harris - *Rare Earth Elements in Lateritic Soils*. COSET Undergraduate Research grant. Worked with David Bickham (Geology).

Ava Fujimoto-Strait - *A Hydroponics Indoor Growing System for Teaching, Learning, and Nourishment* - Mini-STEM grant. Worked with Matt Purifoy (Geography).

NSF-funded GET TX grant

-By Dr. Ross Guida

During the 2022-23 academic year, faculty members **Dr. David Moss** (PI) and **Dr. Ross Guida** (co-PI) continued to lead the NSF GEOPaths grant for Geoscience Exposure and Training in Texas (GET TX), with **Drs. Renjie Zhou, Pat Harris, Brian Cooper, Joe Hill,** and Lone Star - University Park geology faculty **Drs. Christa Spears** and **Bryn Benford**. The team continued to visit area high schools (e.g., Oak Ridge, Young Women's College Prep) to discuss geoscience opportunities with students and hosted two high school teacher workshops during the school year to introduce geoscience examples in STEM classes. As part of the project, the department hosted 100 high school freshmen from Conroe High School's Academy for Science and Health professions in January 2023. The group also hosted open house events with guest speakers **Peyton Lisenby** ('10; Brazos River Authority) and **Travis Presley** ('17; Fugro) giving talks on career opportunities in the geosciences, while **Anjali Khisty** ('22) and **Daniel Minke** ('22) gave talks on transferring to complete their degrees.

During June 2023, faculty led the third iteration of the Summer Bridge program with 11 student participants selected from over 60 applications. Students were able to learn about hydrology, geomorphology, sedimentology, and paleontology during the 10-day event that allowed students to stay on SHSU's campus and earn a \$1,000 stipend. As part of the program, students spent time at the Houston Museum of Natural Science, YMCA Camp Cullen, SHSU's Pineywood's Environmental Research Lab (field station), and in Central Texas where they visited Bastrop, Inner Space Caverns, Leander dinosaur tracks, Mt. Bonnell, and Barton Springs. As this grant comes to the end of its 3-year term, several GET TX alumni have enrolled as Geology majors at SHSU. Faculty look forward to mentoring these students and will continue to reach out to community partners and schools to discuss pathways students can pursue with geoscience degrees.

For more information, please visit our GET TX grant website:

<https://www.shsu.edu/academics/environmental-and-geosciences/get-tx/index>



Faculty-Student Publication

-By Dr. Don Albert



Geography major, **Matthew Purifoy** and I, co-authored an article with the *Okinawan Journal of Island Study*. Our research received support from a Faculty and Student Team (FAST) grant awarded by the Office of Research and Sponsored Programs. Since appearing online May 2023, 214 individuals have downloaded the article - including 135 from the U.S. and 53 from Japan. The following keywords indicate the important themes explored: bark cloth (tapa), female agency, islanders-empire, and Pitcairn Island. As faculty advisor (**Dr. Donald Albert**) to Matt, I was part of a EURECA FAST panel discussion held in conjunction with the 16th Undergraduate Research Symposium at SHSU on April 22, 2023. This open-source article is available from the link following its citation:

Albert, Donald Patrick and Matthew Purifoy. 2023. Repositioning Pitcairn's Tapa: Detecting the Voices of the Forgotten Women of Bounty. *Okinawan Journal of Island Studies*, Volume 4(1):19-34. <https://u-ryukyu.repo.nii.ac.jp/records/2019648>

New Study-Abroad to Ghana & Kenya

-By Dr. Samuel Adu-Prah

Dr. Samuel Adu-Prah, together with **Dr. Jeffrey Wozniak** (Biological Sciences) and **Dr. Willis Oyugi** (History), led a study abroad program to Ghana and Kenya this summer. The study abroad focused on the relationship between African environments and cultures (Ghana & Kenya). Using local guides and hands on experiences, the group made up of selected honors students traveled through Ghana and Kenya to learn about the diverse environments, histories, and cultures of these regions. The group stayed in a wide range of accommodations - hotels, research centers, camps, etc. The group also traveled by coaches and safari vehicles with professional tour guides on the cross-continent journey. The group also learned about how the African environments mesh with local cultures, explored slavery and its legacy, went on a safari to view African flora and fauna, and examined environmental history along the way. Participants had the opportunity to taste African foods in a unique way and learned about local cuisines. The course generated a treasure of lifetime experiences, paved initial collaboration for future trips, and fostered future research connections.



Reflections from the Field...

-By Nathan Atterberry (Geology and *Physical Geology* TA)

Field courses are the heart and soul of our department, providing a unique learning experience that cannot be found inside a classroom. This summer, I had the incredible opportunity to participate in two field courses: the *Hawaii Field Course* (GEOG 4075) and the *Geology Field Methods* (GEOL 3301) course, where I served as a teaching assistant.

The **Hawaii Field Course** was a truly exhilarating experience. Throughout the semester we spent time learning the history of the islands and how they eventually became unified under King Kamehameha, the rich history of food and how diverse cultures blended their unique cuisines to what Hawaiian food is today, and all of the different biomes and unique endemic species found on the Big Island. We learned about *aloha 'aina* - the Hawaiian outlook of loving the land and how it shapes the islands. Our field course highlight involved the ACE component of the course - where we got to help rebuild a rock wall with traditional Hawaiian methods along the rimlands of the sacred Waipio Valley - in addition to clearing invasive species and gathering rocks for an ahu. After spending the semester learning about Hawaiian culture and history, it was truly a once-in-a-lifetime experience to get to fly out there and experience it for ourselves.

During the *Geology Field Methods* course in New Mexico, I had the privilege of returning for a second time. The course teaches us a blend of soft and hard skills that are important to a geologist - from mapping and observation skills to communication and time management (things I don't believe I have ever learned more from a single class). Looking back out onto the field area where I had mapped the previous summer, I saw new folds and faults and new features in the rocks that I had completely missed the year before - it was humbling. But it just went to prove how there is always something new and exciting to see and how there is always something to learn.



-By Sophia Layman (Geology and *Historical Geology* TA)

The **Grand Canyon Trip** over Spring Break was quite a memorable experience. We saw active sand dune formation in Monahan's State Park, special gypsum sand dunes in White Sands State Park, ancient carvings at Three Rivers Petroglyph site, pahoehoe and aa lava flows at the Carrizozo Volcanics, giant fossilized logs in the Petrified Forest, a huge impact crater at Meteor Crater, the top of a cinder cone near SP Crater, and the south rim of the Grand Canyon all within the week. The sites were beautiful, and the Geology talks were fascinating. Although, I must admit my favorite part was spending time and making memories with my fellow students of geology, geography, environmental science, and other studies. The trip had some challenges to overcome, mostly with weather or

external circumstances. The Grand Canyon was covered in snow when we arrived, and it took a while for the weather to clear up enough for us to see down into the canyon, and we had planned on going to Carlsbad Caverns but weren't able to make it in time to go down in the caverns. Even with the setbacks the group kept up a good attitude, of which I am still quite proud of everyone. I would go anywhere with this group, and I can't wait for the next Geology trip.



-By Kiara Green (Geology minor and *Weather and Climate* TA)

I have had the amazing opportunity to participate in multiple field courses offered in the geography program at SHSU. These field experiences significantly enhanced what we learn in the classroom and enabled us to directly apply course content to the real world within which we live. The true “hands-on” experiences not only made course concepts come to life, but they also generated memories that will last a lifetime. During the **Blues Field Course** (GEOG 4360), we learned about the cultural relevance of music from the Mississippi Delta and how it has impacted the world. Our immersion in the region’s blues culture also helped me better understand how my personal family heritage was influenced by significant events that unfolded there. For example, one of the many impactful site-visits we shared was our stop at Black Power Park in Greenwood, MS. Events that transpired at this park in the mid-1960s were directly responsible for a major turning point in the Civil Rights movement, namely the emergence of the philosophy of black power. My fellow students and I were able to gather at the exact spot where Stokely Carmichael provided his famous speech calling for “black power,” a cultural declaration whose effects are reverberating to this very day. During our group discussion at this location, we learned how and why these events inspired two African American athletes to raise their black-gloved fists during a medal ceremony at the 1968 Summer Olympic Games in Mexico City. We also learned how their protests represented an appeal for unity in support of a global-wide call for human rights. Being immersed in the Delta made us appreciate how the region’s music functioned as a soundtrack for the Civil Rights movement, while at the same time serving to fuel the aspirations that motivated it. It has been many months since I participated in this course, yet I continually encounter situations where I am reminded of the places we visited and the things we learned. I will forever remember the many people I met during this course and the fantastic experiences we shared together. I will also be forever grateful that SHSU offered us such an impactful learning experience.



Congratulations to our 2022 and 2023 Graduates!



Recent Alumni Endeavors

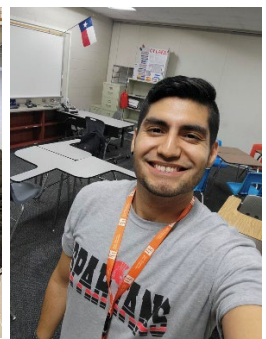
We love hearing from our alumni! Please feel free to send us an email at: geosciences@shsu.edu to update us on where you are and the amazing things you are doing! Featured below are a few of our recent alumni endeavors...

Graduate School Updates:

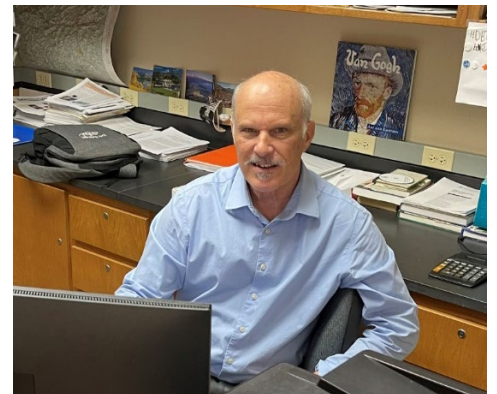
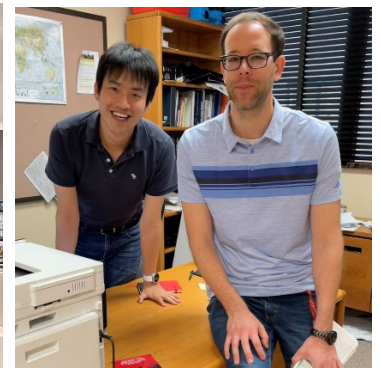
- **Michelle Harris** is in her final year of the Ph.D. program in Geography at the University of South Carolina
- **Hailey Richardson** is starting the Ph.D. program in Geography at the University of Alabama
- **Efren Mendez** completed his M.S. degree in Geology at the Missouri University of Science and Technology
- **Ileana Sanchez** is starting the M.S. program in Geography at the University of Illinois - Urbana-Champaign
- **Jordan Groff** is in the M.S. in Geosciences program at the University of Texas at Dallas
- **Meghan Puente** is in the M.S. in Geosciences program at Western Kentucky University
- **Paige Kempker** is in the Master's program in Environmental Management at Western Colorado University
- **Erali Miller** and **Allison Ingram** are in the Master's program in Geography at Appalachian State University

Recent Employment Updates:

- **Macy Horn** - U.S. Forest Service - Sam Houston National Forest
- **Melanie Quinchiguango** - City of Dallas - Water Utilities Department
- **Ray Luong** - Tesla
- **Efren Mendez** - Development Geologist at Chevron
- **Kate Chandler** - U.S. Department of Energy (Environmental Management Division)
- **Marcos Cortez, Darien Herzog, Makayla Mcilhaney, Maddie Rozycki, and Wesley Book** - TCEQ
- **Tristan Best** - GIS Technician with the city of Cleburne, TX
- **Melissa Moya** - GIS Analyst with the city of Fulshear, TX
- **Dr. Christina Lopez** - Texas State University - Department of Geography and Environmental Studies
- **Michel Salazar** - World Geography teacher - Cy-Fair ISD



Department of Environmental & Geosciences – Faculty & Staff





Welcome Dr. Yaping Xu

We are excited for Remote Sensing professor, **Dr. Yaping Xu**, to join our department this Fall 2023. Dr. Xu received his Bachelor's and Master's degrees in China (focusing on GIS) and received his Ph.D. in Geography from Louisiana State University. Following his doctorate, Dr. Xu worked as a post-doc associate at the University of Tennessee and as an early career fellow at Oak Ridge National Laboratory.

His research combines remote sensing, spatial analytics, big data analytics, high-performance computing (HPC), and cloud computing to examine agroecosystems at multiple scales using multisource data science and multi-level modeling. Not only does this provide detailed information, but also answers big picture questions, therefore leading to solutions and actionable science for environmental health issues related to droughts, floods, surface runoff, and non-point source pollution to water bodies.



Associate Dean for Graduate Student Success - Dr. Falguni Mukherjee

Congratulations to Geography professor, **Dr. Falguni Mukherjee**, on being selected as the Associate Dean of Graduate Student Success. Dr. Mukherjee will be promoted to a full-time administrator position serving as both the University Ombudsperson and Associate Dean for Graduate Student Success starting this Fall 2023. We will miss seeing her around our department.

Thank you for all that you do, Dr. Mukherjee!

Faculty Senate Chair – Dr. Samuel Adu-Prah

Congratulations to Geography professor, **Dr. Samuel Adu-Prah**, on serving as Chair Elect (2022-23) and Chair (2023-24) of our SHSU Faculty Senate. We appreciate your time and service!

In addition, **Ava Fujimoto-Strait** led a working group this past year that proposed the addition of non-tenure faculty representation to the Faculty Senate - which will begin in 2024.





2023 AAG Distinguished Teaching Honors

Dr. John Strait and **Ava Fujimoto-Strait** received the 2023 AAG (American Association of Geographers) Distinguished Teaching Honors for their joint teaching achievements. Their teaching is engaging, place-based, and student-centered. They've taught diverse courses, emphasizing community partnerships and service-based learning. They've coordinated immersive field courses, fostering passion for geography. Fujimoto-Strait has delivered workshops on "Engaging Classrooms" while Strait offers a popular seminar on Mississippi Delta blues culture and contributes to NEH teacher workshops. They both have worked on a NSF grant and National Geographic Society grant and received an award for their co-authored paper in *Geography Teacher* from the National Council of Geographic Education. Congratulations John and Ava - on receiving a national teaching award! For more information, visit: <https://www.aag.org/2023-aag-awards-recognition/>

Our Fortright & Dedicated Chair



truly appreciate your long hours and dedication to our department!

The faculty, staff, and students would like to thank **Dr. Pat Harris** for serving as Chair of our department for the past 3 years. Dr. Harris took the reins during a chaotic COVID time of hybrid classes and a lot of unknowns. Under his leadership, he oversaw the integration of our Geology, Geography, & Environmental Science programs, increased our outreach across campus and in the local communities and has fostered strong networks with alumni & community leaders. Thank you, Dr. Harris - we all

Rising Star in Research

Geology professor, **Dr. Renjie Zhou**, has had a very productive research year. This is a list highlighting just a few of his publications this past year:

Zhou, R., & Zhang, Y. (2023). Predicting and explaining karst spring dissolved oxygen using interpretable deep learning approach. *Hydrological Processes*, 37(8), e14948.

Zhou, R., & Wang, Q. (2023). Analytical Model for Heat Transfer in a Discrete Parallel Fracture-Rock Matrix System. *Groundwater*, 61(2), 183-192.

Zhou, R., & Zhang, Y. (2022). Reconstruction of missing spring discharge by using deep learning models with ensemble empirical mode decomposition of precipitation. *Environmental Science and Pollution Research*, 29(54), 82451-82466.

Zhou, R., & Zhang, Y. (2022). On the role of the architecture for spring discharge prediction with deep learning approaches. *Hydrological Processes*, 36(10), e14737.

Zhou, R., Wang, Q., & Qi, C. (2022). Heat transfer in a fracture embedded in a finite matrix: On the role of geometries and thermal dispersivity in the fracture. *International Journal of Thermal Sciences*, 178, 107602.



Geology at SHSU - Episode II

Like a Phoenix

-By Dr. Brian Cooper

At the end of Episode I, the Old Main Building burned to the ground and the Geology Program lost everything and was without a home (February 12, 1982).

Dr. C. Allen Williams of Geography came to the rescue by providing office space and classrooms. **Dr. Dwight Brown** and **Dr. Gregory Conrad** officed in the Geography Program office complex on the third floor of the Math and Foreign Language Building (MFL, now AB1). One classroom was dedicated to all the advanced geology classes and historical geology labs. Physical geology labs were taught in a classroom shared with Geography. This enabled them to finish the Spring 1982 semester. I started at Sam in August 1982 and taught two physical geology lecture sections plus economic geology Fall 1982. I also coordinated the physical geology labs. I was allowed to use the top of a desk and a chair in the office of a biology faculty member who was on faculty development leave. Biology was in the Halley Building at the time. The Halley Building has since been torn down and replaced by a parking lot (the opposite of what usually happens on campus). I remember dreading rainy days when I had to walk across campus to MFL to teach, especially if I had to transport exams.

The Texas Higher Education Coordinating Board authorized the B.S. in Geoscience November 5, 1982. Authorization to change Geoscience to Geology was authorized August 29, 1983.

Betsy Dransfield (later to be **Dr. Betsy Torrez**) was hired to teach structural geology Spring 1984. She had her MS in Geology from TAMU. She did a great job, enjoyed the experience, and subsequently did her doctoral work at the University of Alabama. Betsy and I took our students to Arkansas for Spring Break. Mike Howard of the Arkansas Geological Survey (AGS) led a tour of Magnet Cove, and Charles Stone (AGS) showed us a variety of structural features. Dianna Cannan and Stacy Horn were the first to graduate with a B.S. in Geology in August 1984. Dianna established the Cannan Geological Scholarship which was first earned by Kathy Phillips in 1984.

Speaking of scholarships, the Sam Houston Association of Geology Students (SHAGS) figured out a way to raise money by making "rock boxes" and selling them to physical geology students. SHAGS had started doing this before the Old Main fire and the first SHAGS scholarship was awarded to Rachal Spar in 1981. The "rock boxes" became very important to teaching physical geology labs after the Old Main fire since everything had been lost.

Dr. Conrad left Sam in Summer 1985 to establish an environmental services company in California. **Dr. Arun Majumdar** was hired Summer 1985 to take his place. This worked out well because Dr. Conrad is a vertebrate paleontologist and Dr. Majumdar is a structural geologist which we needed. Dr. Brown stepped down as Geology Program Coordinator and passed the position to me near the end of Summer 1985. The General Purpose Classroom (GPC) building opened in November 1985. Geology students and faculty had to transport mineral and rock specimens from the third floor of MFL (AB1) to the third floor of the GPC. MFL (AB1) did not have elevators at the time. The AB1 elevators were installed when COBA moved some offices into AB1. The GPC was renamed the Lee Drain Building and dedicated August 18, 1990. Lee Drain was a Distinguished Alumnus of Sam, an Air Force Captain, successful in the banking industry, and served on the TSUS Board of Regents for 18 years.

So, like a phoenix, the Geology Program rose from the ashes of the Old Main fire. The Geology Program had five offices, four lab rooms, and two research areas on the third floor of a new building. Went from two faculty members to three. Changed from Geoscience to Geology. Added a B.S. in Geology along with the existing B.A.T. in Geology. And managed to weather the downturn in the petroleum industry in the mid-1980's.

Stay tuned for Episode III, *Lake Powell and More*, as **Dr. Dennis Netoff** is hired as our physical geographer and helps take both geography and geology to new heights.



Spring Break Arkansas trip, 1984

The author takes full responsibility for any misrepresentations or errors in this article. Any corrections or additions to this abbreviated version of the full history will be much appreciated.

Department Updates & Upcoming Events

Welcome **Kerry Billington**, our new GIS Administrator. Kerry will help maintain the GIS labs and assist with our GIS classes.

Dr. Jim Tiller, recently retired geography faculty, received **Professor Emeritus** status after serving 50 years at Sam Houston State University. Well done!

NSF-funded GEOAllies Opportunity

From September 29 - October 1, 2023, faculty members **Dr. Renjie Zhou** (PI) and **Dr. Ross Guida** (co-PI) will be taking students to the **Texas Hydro-Geo Workshop** (<https://hydrogeoworkshop.org/>) hosted at the *Cave Without a Name* in Boerne, Texas. The trip will largely be funded by a \$2,000 grant received in August 2023 through Texas Tech's NSF-funded GEOAllies program that aims to increase student participation in field experiences. Participating students will have a chance to network with graduate schools and employers and will experience a wide variety of hands-on modules on groundwater, surface water, karst, geomorphology, drilling, water quality, ecology, and more.

Upcoming Field Course to Costa Rica Opportunity

In early June 2024, Geographers **Dr. John Strait** and **Ava Fujimoto-Strait**, along with Biologist, **Dr. Amber Ulseth**, will be taking students, teachers, and any interested alumni to the Nicoya region of Costa Rica. This field experience will involve community engagement with the **Crema Foundation** (<https://www.cremacr.org>) to assist with a turtle conservation project and the **Macaw Recovery Network** (<https://macawrecoverynetwork.org>) to assist with the reintroduction of parrot species into the wild. If you are interested in participating, please email: ava@shsu.edu for more information.

3rd Annual Faculty, Student, and Alumni Social – date and time will be announced soon.



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