

2023

Newsletter #41

2020 – 2023

A Message from the Department Chair

Alumni, Students, and Friends of UNO Earth and Environmental Sciences:

Well this EES newsletter and update has been a long time coming indeed and the faculty and students are excited to reach out to everyone after this little mishap in human history! Much has happened since our last newsletter and you will find that this one is particularly long as it provides updates from everyone in 2020 as well as 2023. We had started a newsletter in 2020 and of course we all know what happened then. In the front office of EES there still hangs a 2020 calendar on which Robin wrote for the day we were told to leave campus “time stood still”. Admittedly it was semi-chaotic at the beginning of the Pandemic as everyone was shifted to online courses, no one on campus, no fieldwork, few resources for online transition,...nothing! I don’t need to repeat the story as we all went through it but I reflect on the song by Elton John “I’m (we are) still standing”.



Department Chair
Dr. Mark A. Kulp

So here we are today. It has been slow to get back to normal but we and UNO continue to do so, step by step at this point. I just talked to a former student and he referred to it as the COVID “hangover”, wherein everything is slowly coming back into order and out of a fog. Campus life has mostly returned to normal in that we have shifted the majority of our classes back to being in person and it has been enlightening to see the parking lots at the University filled up again. We did find that keeping some of our introductory courses as online is actually beneficial to the Department because of the enrollment numbers that result from that, but except for those few introductory courses all other EES courses are back on campus.

As a Department we are doing very well. I just recently checked our number of majors and despite a post-pandemic down turn in total UNO enrollments EES remains at approximately the same number of majors as pre-pandemic. This certainly is a result of students continuing to be interested in the geological and environmental issues that continue to face our world, and I am encouraged by the continued levels of enrollment. Hopefully those numbers continue to grow.

After decades of commitment to the University Dr. Kraig Derstler retired in 2022. He is sorely missed but has been appointed as Professor Emeritus and keeps in touch. He currently is pursuing his love of museum and fossil collections. When I most recently talked to Kraig he was in Colorado working on these types of things. I can see the smile on his face as he tells a corny joke or looks at some unique specimen and I do miss him popping into my office to talk shop.

With the sad news of Kraig retiring comes the good news that we were able to make a new faculty hire. Dr. Madeline Foster-Martinez came on board in a tenure-track position in August of 2021. Maddie has an extremely solid background in hydrodynamic modeling and civil engineering, strong ties to coastal erosion mitigation efforts, and brings a wealth of other experience to the Department. We are very fortunate to have Maddie as part of our faculty. Her addition now brings the EES faculty to a total of five and we continue to bring outstanding education to our undergraduate and graduate students.

During the COVID situation our student organizations largely fell apart. Students were not able to interact, students did not get to know one another, they could not hold meetings and certainly could not do things like our annual Mineral Auction. I am happy to report that we just this past semester re-established the Society for Earth and Environmental Students (SEES) board with Dr. Mahon as the new mentor. This is great news and as a result we are planning on our mineral auction in November 2023, tentatively set for being held at the Cove on the UNO campus. Be sure to show up and support our Phoenix-like efforts.

I would like to once again extend a substantial thank you to our alumni from all of the people within EES. Your support of our students through mentoring, internships, and donations is significant. It is truly the community of past and present students and staff that ensures a bright future for EES. If you have not recently made a donation to the Department. I encourage you to do so in the near future and help support our students and our efforts to continue education in the Earth and Environmental Science disciplines. Such support goes a long way toward contributing to our efforts.

All the best and am looking forward to a great year,
Mark

Dr. Martin O’Connell, Professor Director of the Nekton Research Laboratory

This is what we (NRL personnel) were doing in 2020:



The scientists and graduate students who work in the Nekton Research Laboratory (NRL) have been pursuing various interesting research projects over the last year. **Senior Biologist and Database Manager Meg Uzee O’Connell** of the Pontchartrain Institute for Environmental Sciences (PIES) along with Dr. O’Connell and co-author Anthony A. Echelle have just published a book chapter titled “Rivulidae: New World Rivulines”. This chapter is part of the long-awaited book *Freshwater Fishes of North America: Volume 2*. Meg also finished contract work on the 2023 Coastal Master Plan, serving as an expert on estuarine aquatic organisms for a section involving model updates and improvements with ICM and HSI models.



Meg Uzee O’Connell



Dr. Will Stein

Assistant Professor-Research **Dr. William Stein** of PIES and Dr. O’Connell continue to work together on writing research grants and scientific manuscripts on various topics. For example, Dr. Stein is working on a manuscript based on his research conducted along the Orleans Landbridge. This region appears to provide essential nursery habitat for Gulf Menhaden (*Brevoortia patronus*), an ecologically and economically important local fish species.

Dr. O’Connell was awarded an internal College of Sciences grant titled “Testing for the occurrence of microplastics in the gastrointestinal tracts of local estuarine fishes.” For this research, fish specimens collected from Lake Pontchartrain in both 2001 and 2019 were examined. The goal of this research is to determine if there has been a change over time in the amount of microplastics that occur in the digestive tracks of these fishes. EES undergraduate researchers **Megan Burns** and **Micah Gisclair** have completed a large portion of the dissections, sample processing, and microscope work needed for this project. Preliminary results are pending.



Megan Burns

Micah Gisclair



Jeff Gearhart

Jeff Gearhart (Ph.D. student) continues to lead our TED research efforts. Part of his efforts involves coordinating the testing of different TEDs and TED methods in cooperation with local Vietnamese-American and Cambodian-American fishermen.

Graduate student **Damon Morse** (M.Sc. student) plans on defending his thesis research on the invasive Island Apple Snail (*Pomacea maculata*) in spring 2021. He is currently employed as a GIS Analyst for the Louisiana Department of Wildlife and Fisheries.



Damon Morse



Daniel Burke

Daniel Burke (M.Sc. student) is studying how Lake Pontchartrain fishes have responded to the many recent Bonnet Carré Spillway openings. His preliminary sampling has revealed that one freshwater species, the Longear Sunfish (*Lepomis megalotis*), has been consistently collected on the south shore of the Lake, yet this species was never observed here over the previous two decades. EES undergraduate researcher Jason Schiaffino has helped Daniel with this field research.

In December, Polly Burns (non-thesis M.Sc. student) will be defending her capstone project titled “The Case for Wildlife Corridors through Botswana”.



Dr. Martin O'Connell, Professor Director of the Nekton Research Laboratory

This is what we (NRL personnel) have been doing since 2020:

Senior Biologist and Database Manager **Meg Uzee O'Connell** of the Pontchartrain Institute for Environmental Sciences (PIES) along with EES Assistant Professor **Madeline Foster-Martinez** and former EES faculty members **Ioannis Georgiou** and **Denise Reed** were recognized by UNO for their contributions to the 2023 Louisiana Coastal Master Plan that was released by state officials on 6 January 2023. The \$50 billion coastal master plan is the state's proposed guiding document to address the challenges of land loss and coastal flood risk.

Dr. O'Connell and Co-P.I. Meg Uzee O'Connell received a research grant from the Barataria Terrebonne National Estuary Program for their research proposal titled, "Survey for tilapia (*Oreochromis* sp.) in the Port Sulphur 2009 rotenone impact zone." The purpose of this research is to revisit a 14-year-old project involving the NRL's multi-year survey for the presence of this invasive fish species in the Post Sulphur region of Plaquemines Parish.

In 2021, Dr. O'Connell was also a co-author on a publication titled, "Early evidence for long-term overfishing in the Gulf of Mexico." Lead author **Eric Guiry** along with co-authors **Ryan Kennedy** (UNO archaeologist), **Ryan Gray** (UNO archaeologist), **Christopher Grant**, and **Paul Szpak** described how they integrated 2500 years of stable isotope and zooarchaeological data to assess cultural, demographic, and technological changes affecting Sheepshead (*Archosargus probatocephalus*) populations and fishing practices in Louisiana. The findings provide the first evidence for large-scale depressions of historical Sheepshead populations and the processes driving them, including rapid human population growth and sustained harvesting pressure.

On 27 April 2023, graduate student **Damon Morse** (M.Sc. student) successfully defended his thesis titled, "Impacts of the Giant Apple Snail (*Pomacea maculata*) on fish and snail assemblages in urban waterways in New Orleans." Damon's research suggests that this invasive snail is negatively impacting both native egg-laying fish species and native egg-laying snail species. Damon was recently hired by the Army Corps of Engineers to be an environmental resource specialist.

Daniel Burke (M.Sc. student) has recently completed his research on how Lake Pontchartrain fishes responded to the many recent Bonnet Carré Spillway openings. He is currently analyzing his data and plans to defend his thesis in 2023.

Alia Jones (M.Sc. student) and **Mary Sitter** (M.Sc. student) joined the NRL in fall 2022. Alia will be studying how Bayou St. John fish assemblages react to multiple environmental impacts such as invasive species and regular openings of floodgates. Mary will be comparing microplastic content of fishes collected from different estuaries. Undergraduate researcher Jake Duhé assisted in numerous NRL research projects during the pandemic. Because of his hard work, his research experience here at UNO, and his academic achievements, he was accepted in to the graduate program at LSU's School of Renewable Natural Resources.



Daniel Burke



Alia Jones



Mary Sitter



Dr. Robert C. Mahon, Assistant Professor Dynamics of Sedimentation Laboratory (2020)

Greetings from the UNO Dynamics of Sedimentation (UNO DoS) Lab! This has been quite the year for everyone, with numerous ups and downs in the lab. Even under the current covid conditions, our crew was able to get some field work done over the course of the year, and the lab is coming together with new facilities and instrumentation.

UNO DoS' three current graduate students are working diligently to complete their degrees and have been doing a great job under such challenging circumstances. M.S. student **Sarah Noel** has been working away collecting and analyzing sediment samples and wave/current data from the Wax Lake Delta in Atchafalaya Bay to test her hypotheses about how sediment grain sizes evolve on river delta fronts (funded by an American Chemical Society PRF Doctoral New Investigator grant). M.S.

Student **Micheal Amos** is also wrapping up his work on controls on delta channel levee evolution and what sets stable subaqueous channel widths using flow and sediment transport data he has collected from the Wax Lake Delta. M.S. Student **Malcolm Cross** has been spending the past several months working on experiment data analysis in preparation for new experiments on the effects of biophysical cohesion on wave ripple dynamics, work he is doing with a co-advisor at the US Naval Research Laboratory at Stennis. Both Malcolm and Myk were awarded and completed projects through the Naval Research Enterprise Internship Program over the past summer as well (all remotely/online). All three graduate students are gearing up to defend their theses in the Spring/Summer of 2021 and we are looking forward to their next steps!

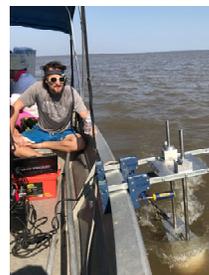
This year has also been an exciting year of undergraduate research in the UNO DoS lab. Recent graduate **Leah Tevis** (B.S., 2020; Tolmas Scholar) designed and ran flume experiments on flow and sediment transport in complex marsh vegetation. She presented her results at the InnovateUNO conference where she won a poster award, as well as at the AGU Fall Meeting in San Francisco. Leah was awarded a prestigious NSF Graduate Research Fellowship and is currently pursuing her M.S. at New Mexico Tech University. I am hoping to recruit new students into the lab to carry this project forward in 2021.

Along with several colleagues at 4 universities, I also received an **NSF RAPID award in the fall of 2019** to bring a cohort of undergraduate researchers from across the country to study the sedimentation patterns in the Bonnet Carre Spillway following the longest flood on record. The project's emphasis was on broadening participation in field studies by providing fully funded field research opportunities. We had a total of 24 undergraduate participants including two from UNO. Several of the projects undergraduates presented their findings at this year's GSA Annual Meeting and several PI-led presentations and one publication have also resulted. Undergraduates **Miles Beech** and **Madeline Cross** both participated. Madeline graduated with a B.S. in May of 2020 and Miles will be graduating in December to head to Trinity College Dublin for his M.S. degree.

I also recently received word that two new PURSUE scholars will be joining the lab group in the Spring of 2021 and I look forward to producing some great new science led by these undergraduates!



Undergraduate students from UNO, UNM-Gallup, Denison University, and Georgia Southern University trenching sediment deposits in the Bonnet Carre Spillway, Louisiana.



Myk Amos



Maddie Cross



Miles Beech



Leah & Malcolm



Dr. Mahon and an obligatory buoy selfie

Dr. Robert C. Mahon, Assistant Professor Dynamics of Sedimentation Laboratory (2022-23)

The UNO Dynamics of Sedimentation (UNODoS) group has had a number of milestones since the last newsletter. We have graduated two graduate students, Sarah Noel and Malcolm Cross as well as several undergraduate researchers.

Dr. Mahon recently completed fieldwork on the **Great Salt Lake in Utah** investigating wave dynamics and their control on ooid and microbialite mound growth. This work was led by colleagues at **CU Boulder and Caltech** and involved gathering real-time wave data with UNO buoys for a full year in the lake. A book chapter is accepted for publication in a Great Salt Lake guidebook of the Utah Geological Association describing those results and the datasets are published on ScholarworksUNO.

Our group also recently deployed two wave data buoys on the Wax Lake Delta in Atchafalaya Bay to investigate the role of waves on the ability of sand to be transported far out onto the delta front. The fieldwork was led by undergraduate student **Victoria Sanchez** (B.S. 2023, about to start M.S. at ULL). This is an extension of the modeling work done by Sarah Noel who defended her M.S. thesis in December 2021. Sarah is now a PhD candidate in geophysics at the University of Alaska, Fairbanks and is working to turn her thesis into a publication-ready manuscript pending this new wave data. Dr. Mahon has spent the past two summers working on an experimental project focusing on river dune 3-dimensionality using flume experimental data. He has revitalized the 72-foot river flume in the Civil Engineering Hydraulics Lab and has spent two summers on an NSF EPSCoR faculty fellowship at the University of California Santa Barbara coordinating lab experiments across multiple institutions. He will be welcoming a new postdoctoral researcher, **Maddy Kelley** (PhD Arizona State University) into the lab group on this project this summer.

The group also welcomed a **Fullbright-Lloyd's Visiting Scholar, Dr. Catherine Russell** from the U.K., into the lab over this past year. Dr. Russell is an Anthropocene Sedimentologist whose work focuses on the impacts of human activity on sedimentary processes and stratigraphy. She has been working on problems associated with reservoir sedimentation and plastics preservation as well as running experiments on the morphodynamics of rivers impacted by plastics pollution in the Hydraulics Laboratory flume throughout the year while interfacing with numerous community organizations throughout the New Orleans area.

In funding news, **Robert Mahon was the lead PI on a large state Board of Regents Departmental Comprehensive Enhancement grant for the Pontchartrain Institute for Environmental Sciences in collaboration with all PIES faculty co-PIs.** The award titled *"Reimagining the Pontchartrain Institute for Environmental Sciences to meet evolving environmental challenges facing Louisiana, the Gulf Coast region, and beyond"* totaled \$568k of direct funding to PIES. The award will fund novel environmental data collection instrumentation to build a real-time monitoring network across the Pontchartrain Basin and bolster and modernize field and laboratory equipment within the institute. It will include a full revamp of departmental computer resources for the Keck Lab; field tablets, microscopes, and laptops for CERF; coring and grain size analytical equipment; a wide range of water quality sondes; as well as other educational and research support equipment. The award was one of only 3 Comprehensive Enhancements awarded statewide this grant cycle.



Undergraduate student Victoria Sanchez and PIES Research Associate Mike Brown motoring along the Wax Lake Delta in the Mudlump on a perfect spring day.



Microbialite mounds in the south arm of the Great Salt Lake, Utah. Foreground shows rippled oolitic sands and microbialite rollers (similar to oncolites).



Undergraduate researcher Victoria Sanchez deploying a wave data buoy in the Wax Lake Delta, Atchafalaya Bay, Louisiana. These buoys broadcast live real-time data hourly and can be publicly viewed and downloaded here: <https://spotters.sofarocan.com/?spotter-filter=SPOT-30807C>



Dr. Mark Kulp, Professor

2020 to 2023....where does one start? It took a bit to get back into the groove and get going but since the 2020 shut down we have still managed to start and complete projects.

In the spring of 2019 **Jarret Levesh** finished his M.Sc. degree with a spectacular analysis of fault motion along the Delacroix fault of the Caernarvon basin. His examination of the fault provides a well-documented analysis of the fault history and indications that it has moved in recent history and contributed to wetland loss of the area. He has floated around with industry jobs the last few years but recently landed a full-time industry position in Houston and is quite happy.

Bobby Mohollen completed his analysis of faults in Lake Pontchartrain and Lake Borgne during the spring of 2020. He was, complimentary to previous studies, able to show that there is clear indication of Holocene fault motion in those areas and there are suggestions of fault offset affecting the New Orleans Land Bridge, a major conclusion inasmuch that there is currently a major marsh restoration effort in that area. My hope is that we will soon follow up on his work to run deeper high-resolution seismic in that area and more definitively identify whether faults penetrate the Holocene strata. At the moment Bobby is working for the Bureau of Ocean and Energy Management (BOEM).

Jared Bullock wrapped up his work on the Magnolia fault in Plaquemine Parish. He was able to trace the faults near to the surface and delineate their Cenozoic history of motion but because of the geotechnical conditions (soft, clay-rich sediments) was not able to completely identify Holocene stratigraphic offset. Our plan is to head back out to that area sometime soon and use a different seismic system to try and image through the sediments of that area. He too is currently working at BOEM and recently took on the role of treasurer at the New Orleans Geological Society, with higher aspirations of his role in that organization!!!

Joe Hankerson completed his M.Sc. degree on faults in the Terrebonne Basin. Similarly to Jared he was able to show the presence of the faults but because of shallow subsurface geotechnical conditions could not get good shallow seismic data to image whether the deep faults truly extend to the surface. He did however get some good, shallow radiocarbon dates that suggest offset may be present. As a result of his study and Jared's we are rethinking how we can try and get some good shallow seismic data in these type of environments. If things go according to plan we will be working with former EES student **Becky Totten** (now Dr. Totten at Univ. of Alabama) and **Dr. Davin Wallace** (Univ. Southern Mississippi) to get better seismic data in some of these locations.

Another interest of our group has been the unique shell berms of the Biloxi Marsh, St. Bernard Parish. Shell berms on the edges of the Biloxi Marshes are unlike anything I have seen elsewhere on the entire Louisiana coast, in some cases towering a meter or more above mean sea level. **Rachel Thomason** and **Frances Crawford** investigated some of these and **Rianna Grout** continued on with that work by showing the rates of movement of these berms and their impact to marsh as they migrate onshore and smother the marsh grass. She finished in August of 2021 and is currently working for the Grays County division of Environmental Health in Washington State. I talked to her recently and she is quite happy to be back in her home state with the cats and horse.

Current students are **Wilke Coleman** and **Marley Allen**. Both of them were significantly impacted in their progress, as were all students, during the last few years. However, Wilke is currently working with the Water Institute of the Gulf on a grant to develop a model for distributary development in the Barataria Basin. The focus of that work is to delineate former distributaries that may be sand rich and suitable as borrow sites for coastal sand re-nourishment efforts, as well as enhance our understanding of Holocene delta evolution. Marley is working on carbon storage in the south-central Louisiana inter-distributary basins. We are currently waiting on a proposal review with the National Science Foundation as subcontractors to the University of Louisiana Lafayette and pending those results may slightly modify her research direction. Hopefully we have some feedback by mid-summer 2023.

Approximately a year ago I was asked to help reinvigorate the UNO relationship to University of Innsbruck, Austria. UIBK is the sister institute to UNO and NOLA is the sister city of Innsbruck, so there is a long standing relationship between the two locations. During COVID this diminished and in the fall of 2022 I spent three weeks in Innsbruck meeting with faculty there to determine areas of potential UNO-UIBK collaborations. It was a great time being back in one of my favorite "cities" and has led to a symposium that we will hold in Innsbruck during the summer of 2023. Very exciting with the hope of getting scientific research relationships established between the two institutes.

One of the most exciting things for me in the fall of 2022 was to be able to run my structural geology camping field trip to Mt. Cheaha, Alabama. It truly provided a sense of recovery and return to normalcy. We had great weather, students were thrilled to be in the woods and I was very happy to discover that all of my BBQ stops survived and were fully functional. In fact for those of you who have been on that trip the BBQ joint at Rainbow City, Alabama actually expanded and now has a beautiful lakefront deck!

Jonah is now 12, to be 13 in October 2023. Doing great and most recently told me he wants to be a biologist...it changes about every 6 months but at least he no longer has visions of lowering me into a volcano to gather magma samples that he can study. Every day is a new adventure and bucket of fun with him.

Yeah, lots going on. Be sure to stop in if you are nearby, we all enjoy the random alum popping in to say hi. All the best.

Teaching Responsible Earth Education (T.R.E.E.)

Teaching Responsible Earth Education (T.R.E.E.) is a science education nonprofit based in New Orleans. T.R.E.E. is currently piloting an earth science program with the International School of Louisiana's 3rd grade students called Lost Treasures and focuses on the characteristics of rocks and minerals. In 2021 T.R.E.E. Program Coordinator, Lauralee LeBlanc organized a field trip to UNO's Earth and Environmental Sciences Department to enhance students learning.

Dr. Mark A Kulp, spoke on the environment and then answered questions from the interested 3rd graders.

Grad Assistant **Wilke Coleman** and **Dr. Maddie Foster-Martinez** explored the labs and allowed hands on activities.

Lastly, the 3rd graders explored the EES 'rock pile" and took home a rock of their choice.

EES looks forward to hosting them again next year!



The goal was to provide students an opportunity to see a geology lab up close. They had a chance to see (and even hold!) a collection of rocks and minerals and to speak with the department chair. The 3rd graders were extremely interested in asking questions and exploring the department.

EES was delighted to host T.R.E.E. and we hope this field trip sparked the imagination and interest of these young future geologists!!



2020–2021 EES GRADUATE ASSISTANTS

Riana Grout



Riana is in her last year of her masters program under Dr. Mark Kulp. Her research focuses on shells forming into shell ridges throughout Biloxi marsh. The ridges seem to be speeding up erosion to the marsh islands but you'll have to tune in to her thesis defense in the spring to hear the full details!

She also just got done celebrating her wedding !!



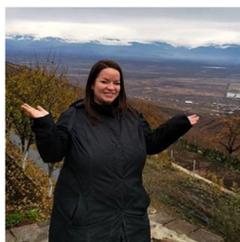
The beautiful bride, Riana Grout celebrates with Malcolm Cross



Joe Hankerson

Hey everybody! My name is Joe Hankerson and I'm a Graduate student studying under Dr. Mark Kulp. I'm currently researching growth faulting in south central Louisiana and trying to determine whether or not they have been active in the Holocene. If active, it could effect coastal subsidence and land loss rates.

I'm originally from North Carolina and am the proud papa to three guinea pigs- **Mike Raw**, **Lentil**, and **Miranda Cosgrove**. You may catch me trolling around the rock pile looking for some cool dudes for my collection.



Brittany George

Brittany George was born in St. Bernard Parish. She enrolled at UNO in the fall of 2015 and graduated from the geology program in 2018. She then moved to Denmark and enrolled at the University of Copenhagen, where she studied late

Cretaceous anoxic/dysoxic chalk facies in the Danish North Sea. She came back to UNO in the fall of 2020, where she is studying fault slip movement along the St. Rose Fault in Louisiana.



Mike Amos

I am a graduate student working with Dr. Mahon. I've been in New Orleans for a little under two years. For my research I'm looking at suspended sediment concentrations along underwater channel levees on Wax Lake Delta. Once, I grew up in Kansas, but left at 17 to get a BA in Classical Linguistics at Calvin College in Michigan. I then taught English in the Czech Republic, China, and South Korea over an eight year period. I moved back to the States in 2015 and started doing undergraduate work in geology as a new career. Now I find myself in the swamp swimming with sharks and gators for data in search of delta nirvana.



Meagan Russell

Meagan is an EES PhD student, studying under the guidance of Dr. Mark Kulp. She is in the process of completing her research proposal with high hopes of data collection in Spring 2021. Her research focuses on how the Christmas Tree

Project is changing coastal Louisiana's wetlands. She spends most of her free time with her son Radley. They enjoy hiking in Louisiana's State Parks, biking the trails, kayaking, and skateboarding.

2020-2021 EES GRADUATE ASSISTANTS



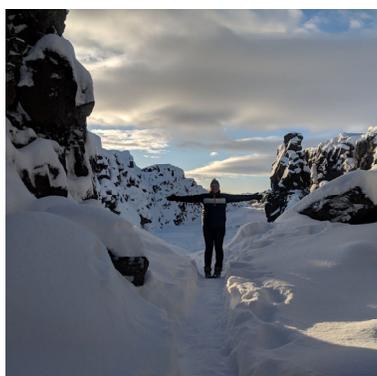
Jessica Villers

Jessica is a Master's candidate investigating sediment transport trends along marsh-bay boundaries and its implication for marsh shoreline restoration. Jessica was born and raised in the city of New Orleans and grew up spending her weekends along the gulf coast where she was exposed to the effects of the coastal crisis, aiding her interest in geology and coastal studies.

Favorite Mineral: Tourmaline
Favorite National Park: Big Bend National Park
Favorite Geologist: James Hutton



Jessica's graduation with Dr. Maddie Foster-Martinez



Thingvellir National Park Iceland
 Mid-Atlantic Ridge Rift Valley
 boundary between North

Sarah Noel

Sarah is a M.S. candidate working as a Graduate Research Assistant with Dr. Robert Mahon focusing on delta front sediment transport questions. She holds a B.S. in Petroleum Engineering with a minor in Geological Engineering from the Colorado School of Mines (CSM). After graduating from CSM, she worked a two-year field career for Schlumberger running measurement and logging while drilling tools in the Alaska North Slope Oilfields. Choosing to pursue graduate studies in geology was the next step in following her passion for the geosciences and understanding the rock record.

Sarah has received the **Jennifer Miller Memorial Environmental Geology Award**, the **New Orleans Geological Society Richard W. "Dick" Boebel Graduate Scholarship**, and the **Southern Geophysical Society University Scholarship**.

She would like to thank the EES Department, NOGS, and SEG for their generous support of her studies.



Daniel Burke

Daniel is a native of Marrero, Louisiana and graduated from LSU in 2010 with a B.S. in Natural Resource Ecology and Management. He spent several years working as a Fishery Observer for the National Marine Fisheries Service. In the Fall of 2019, he joined the Department of Earth and Environmental Science as a Master's Candidate under Dr. O'Connell. His thesis project focuses on the effects of the Bonnet Carre Spillway on fish populations in Lake Pontchartrain.

Daniel is a member of the **Sigma Gamma Epsilon** honor society and, in 2020, awarded the **Glenn Hebert Coastal and Environmental Scholarship Award**, the **New Orleans Geological Society Memorial Foundation Scholarship**, and the **Rockefeller State Wildlife Scholarship**.



Malcolm Cross

Malcolm Cross is a second-year M.S. candidate and works within the department as a Graduate Research Assistant. Currently, he works under the advisement of Dr. Robert Mahon at UNO in collaboration with the U.S. Naval Research Laboratory at Stennis Space Center, MS.

Malcolm continues to progress his research studying the effects of biological cohesion on bedform dynamics in oscillatory flow environments.

Structural Geology Cheaha State Park 2019-2020



Students of the 2019 structural geology trip in some nasty weather at the top of Mt. Cheaha Alabama. Notice that you can just barely see the Blue Ridge lithotectonic province in the distance.



Cheaha 2019: Faculty and students discussing the significance of the Wetumpka impact crater in Wetumpka Alabama during the fall



Dr. Catherine Russell, Fulbright Scholar

Catherine completed a PhD in fluvial sedimentology in 2017 at the University of Leeds, UK, following a Masters in Geology from the University of Leicester, UK. Since then, she has lectured in sedimentology at the University of Leicester, UK and is now a Fulbright-Lloyd's of London Scholar in the department of Earth and Environmental Sciences, at the University of New Orleans. Her research and interests span plastic research, sedimentology, geology, and social science in the context of how they interact in the novel Anthropocene environment in which we now live. The present goal of her research is to understand the distribution of

pollutants in reservoir systems, with the overarching aim to better connect the understanding of human-built environments to their natural systems. With this understanding we might better predict the distribution of pollutants, and map them for policy makers to align their priorities and finances for optimal prevention and removal of contaminants in the landscape.

College of Sciences 48th Annual Honors Day Celebration



Dr. Martin O'Connell presents EES Scholarships. Students Pictured: Lauren Fuller, Breanna Roberts and Giancarlo Portocarrero



Dr. Ioannis Y. Georgiou, Associate Professor

Greetings to all students, faculty, alums, and friends - I hope everyone reading this update is doing well.

As I write this update, trying to recollect the last year, or two, or three, one thing stands out. We did far less fieldwork this year compared to any other year. With the Pandemic somewhat behind us, although still lurking and getting people sick, I hope everyone reading this stays healthy. After two years of leave without pay, in August of 2021, I officially gave up my tenured position in the department, hoping that under Mark's leadership, the department would find a replacement. I continue working at the Water Institute (WI) as Coastal and Deltaic Systems Modeling Director. I am happy to report that all is well. I was particularly excited to see the developments with the UNO and WI administrations and the tireless work of PIES Director Mark Kulp to see through the signed MOU with the WI, which solidifies the relationship with UNO and opens the door for more collaborations.

Since we last reported, I have had several students graduate and had some lab departures. First, **Joshua Thomas**, our first non-thesis MS graduate, defended his project in December 2019, focusing on a water and sediment budget for Mardi Gras Pass, and so did **Pricilla Souza**, who defended her doctoral research on tidal point bars in mixed-energy tidal systems in the fall of 2019. **Joshua Hansen** defended his MS on the morphodynamical evolution of Mardi Gras Pass in the spring of 2020. Finally, **Kevin Hanegan** defended his doctoral research on the centennial morphologic evolution of mixed energy coastal systems due to sea level rise in the summer of 2020. Lastly, we mark the graduation and departure of **Leah Tevis** in the same year of 2020, our dependable and reliable undergraduate researcher who since has been a National Science Foundation (NSF) graduate student fellow studying Geology at New Mexico Tech (congratulations, Leah, we miss you around the lab). Finally, last year (2022) **Jessica Villers** and **Mohiuddin Sakib**, both defended their MS degrees, following various delays during the lockdown and a long struggle balancing graduate student life in a remote environment. I want to congratulate Drs. Souza and Hanegan, Joshua Hansen, Joshua Thomas, Jessica Villers, and M.D. Mohiuddin Sakib for completing their doctoral and MS degree requirements, and Leah for moving on. We wish you a prosperous post-UNO future; I could not be more proud of your accomplishments. Lastly, I would like to pay tribute to Tara Yocum, the tireless and dedicated researcher, who is officially the longest-serving member of my lab at UNO, starting as a volunteer undergraduate for two years before joining as a graduate student, completing an MS degree, and then staying on as a research associate for a few years. Much of the daily logistics of the research conducted in my lab and PIES would not be possible without dedication and perseverance of Tara. Her tenacity and kinder spirit made a lot of things happen. My most sincere thanks to you, Tara; it was a pleasure to work with you and to have you around all those years. I wish you all the best in this new chapter of your life.

In case you didn't know, I have a Gratis appointment at UNO. Unfortunately, I no longer teach or have active research through the University. Still, I maintain contact with faculty and staff and contribute to the UNO community and mission since I am just across the street at the research park. UNO is a special place, and our former and current students and the faculty who were and continue to be here make that happen. I hope the EES and the broader UNO family continue to be strong.

Stay safe, and most of all, stay in touch. And if you are ever in town, please reach out. I would love to hear from you and grab a bite or a coffee.

Cheers, and I hope to hear from you soon.



Jessica Villers, Md Mohiuddin Sakib, Kevin Hanegan, Joshua Hansen, Pricilla Souza. Tara Yocum (not pictured Joshua Thomas, Sean Kenny)



Pontchartrain Institute for Environmental Sciences (PIES) Activities at Shea Penland Coastal Education and Research Facility (CERF) CERF Back up and Running – Please come and visit!

With the impacts of COVID and extensive damages from Hurricanes Zeta and Ida, CERF has struggled over the past 3 years, but now with COVID behind us and all repairs complete, we just hosted our first overnight group of college students from Bucknell University since 2019 and we look forward to a summer of activities for students on and around the water.

During the 2022-2023 school year we ramped up our programs for schools, hosting environmental science field experiences for hundreds of middle and high school students. We continue our partnerships with many groups, including Birds of UNO, UNO TRiO Upward Bound, USFWS, Louisiana Sea Grant, and the Louisiana Master Naturalists of New Orleans. Our NOAA grants include partnerships with several schools in New Orleans East, strengthening community connections and providing opportunities for students to learn about their environment.

I am sure the fall semester will bring many more students back to CERF, including UNO students. I am hopeful that we can entice more EES students to CERF to enjoy the resource and perhaps support the educational programs and even pursue field-based research opportunities. Undergraduate Bret Bates has been helping with educational programs and sprucing up the building for visitors. He would love to see his fellow students join the fun!



As always, we encourage EES students to come out to CERF to visit and to get involved in the activities. The spring semester should be the ideal time to do so.

Please contact Dinah Maygarden at dmaygard@uno.edu for details.

Bret Bates (left) discusses the brackish marsh with Bucknell students and faculty.



Donald Davidson

Donald is an EES MS student. He was born in Seattle, Washington and on a whim, moved to New Orleans 15 years ago. After gaining valuable experience in the service industry, working every position, from dishwasher, bicycle delivery driver to general manager, he left the industry to pursue a life-long passion, coastal science. He graduated from UNO with a BS in environmental science, then spent a year studying ecology and hydrology at the Barataria Preserve, a unit of the Jean Laffite National Historic Park and Preserve. He is interested in estuarine ecology and utilizing collaborative experiences to help maximize Louisiana's coastal wetland conservation and restoration plans. In his free time he is an avid reader, participates in a multitude of sports and enjoys listening to and playing music.

*Letter from
greatly
appreciated
EES
donors...*

WE TREASURE YOU! Our relationship to UNO EES (néé Geology) began though Privateer Baseball and Privateer Cheerleading in the 1970's.

We met Faculty (Joe Snowden, Al Weidie, Ray Stephens) at baseball games. When Cheryl became Privateer Cheerleader Advisor in 1979 the squad included Sharon Usner Landeche, who majored in Sciences with Mathematics and Geology and has had a long career in oil exploration. Through Sharon we have known UNO Alumnus and past instructor Toby Roesler for decades.

We look forward to the Departmental Crawfish Boil, the Imperial Barrel Competition, the events of the three Departmental Student Organizations, the annual rock sale, the lectures and symposia, and more. Neither of us has a Departmental course on our transcripts, but our University instilled in us the depth and breadth to cherish all aspects of our diverse UNO community.

And, we do.
Pierre and Cheryl Champagne



Dr. Maddie Foster-Martinez, Assistant Professor

Hello! Hope this newsletter finds you well. For those of you whom I have not met, I'm Maddie. I started at UNO as Dr. Georgiou's postdoc in 2019 and switched to tenure-track assistant professor in fall 2021 (just in time for Hurricane Ida!). I am from New Orleans and wandered around the east and west coasts a bit before finding my way back home. I completed my undergraduate degree in Civil Engineering at Cooper Union in New York and my masters and PhD in Civil and Environmental Engineering at UC Berkeley, focusing on coastal fluid mechanics and wetland processes. I did a postdoc at LSU in the Center for Coastal Resiliency and am extraordinarily happy to now be a part of UNO. I named the new lab the Coastal Interactions Laboratory, as we study interactions on multiple spatial scales (vegetation stems to ecoregions) and between various entities (mangrove roots to dredge spoils) through fieldwork and modeling. The big picture goal is to promote nature based solutions to enhance both climate change mitigation and adaptation. Summary of current lab activities is below.

2023 Louisiana Coastal Master Plan is out now! Please check it out: <https://coastal.la.gov/our-plan/> There are a lot of new data viewing options that are extra neat via the "Data Viewer" (some available now and some coming soon). Dr. Foster-Martinez implemented the updates to vegetation model and the barrier island inlet model, was a part of the Soils and Vegetation team, and co-authored many of the technical appendices available online for those interested in the nitty gritty details. Talks are already underway for the 2029 iteration of the Master Plan. Work on the project **Marsh Sediment in Translation** is wrapping up now. Funded by the National Estuarine Research System (**NERRS**), we worked with wetland managers and stakeholders in San Francisco Bay to communicate the scientific results of a multi-year sediment transport study to a broader audience. The project was in collaboration with researchers at USGS, San Francisco Bay NERR, and University of San Francisco.

The lab received a grant from the National Science Foundation (NSF) entitled **Collaborative Research: Freshwater flocculation and its impact on sustaining floodplains and deltaic wetlands** with researchers at Caltech and the Water Institute. UNO undergraduate, **Kyd Williams**, will be at Caltech this summer to conduct experiments with a newly developed floc-camera, investigating the role of organic matter.

Work continues at the Bay Densse Living Lab. The Water Institute constructed platforms to be used for facilitating research, and graduate student **Charley Cameron** used them to deploy instruments measuring waves and velocity through spring/summer 2022. Graduate student, **Donald Davidson**, is studying vegetation-flow-sediment interactions with the goal of enhancing land building in Bay Densse and similar environments (i.e., sediment diversions). His work is funded by the **Sea Grant Coastal Science Assistantship Program**, and his project was recently selected by the National Center for Airborne Laser Mapping (**NCALM**) for data collection. Students in senior seminar have been working in the area as well. In the fall, students designed and constructed a structure to enhance sedimentation, and students in the spring worked on experimental willow staking and cypress planting, all with the goal of jumpstarting the ecological functions. We are investigating restoration techniques their impact on erosion by measuring the vertical distribution of belowground biomass in mangroves from restored and natural sites. This work is led by **Agathe Desthomas**, who joined the lab as an undergraduate in spring 2022 and as a graduate student in fall 2022. We took advantage of the December freezing event and collected more cores to add the variable of freeze impacts to the mix. Agathe will be visiting MIT for 2-weeks to learn methods for measuring erosion in laboratory flumes and will be presenting the work at the State of the Coast. Other research led by UNO undergrads and non-thesis masters students includes the environmental impact of weathered Mardi Gras beads, rain barrel efficiency, and subsidence rates at greater New Orleans wastewater treatment plants.

Outreach is also a big part of the lab. We hosted 2 days of 10th graders from New Harmony High School. **Dr. O'Connell** and **Dr. Mahon** gave tours of lab facilities, and **Dr. Foster-Martinez** led a hands-on exercise using the stream table. We gave talks around the city, including the Ben Franklin Climate Change retreat and a Fulbright workshop for graduate students, and remain involved in COESSING, an oceanography summer school in Ghana.

Thank you to alums, **Anna Strimas** and **Dr. Christopher Esposito**, and visiting scholar, **Dr. Catherine Russell**, for giving guest lectures in senior seminar this past year.

We are excited to be going back to the Netherlands this summer. UNO received a grant from (NSF) to take 14 PhD students to the Netherlands to learn about coastal water management and get hands-on training in Delft3D-FM (hydrodynamic modeling). The first trip took place in summer 2022, led by **Dr. Foster-Martinez** and **Dr. Tarr**. Students are selected from universities across the country, and this summer UNO's own **Marley Allen** is a part of the cohort, along with UNO alum **Carrie Miller**. Below: Summer 2022 Netherlands UNO trip.



2022-2023 EES GRADUATE ASSISTANTS



Marley Allen

I'm Marley Allen. I am a third year PhD student in the EES department. I'm from Kentucky and I did my undergraduate career at the University of Kentucky. I completed my master's degree at the University of West Florida in lovely Pensacola. My thesis research involved studying the influence of sand fence configuration on dune development. I enjoy anything and everything related to sports, and I have a handsome chocolate lab named Oakley.



Wilke Coleman

Wilke is a graduate student, teaching assistant, and research associate completing a Master of Science degree under the guidance of Dr. Mark Kulp. Outside of the soothing confines of the Framework and Core Processing lab rooms, Wilke enjoys seeking out live music, soulfully serenading those within ear's reach on his Selmer Mark VI tenor saxophone, cooking (and eating) fine foods, and watching his beloved St. Louis Blues, perhaps even with a Cardinals game or two peppered in here and there. His favorite outdoor excursions include paddling the Current River in the Missouri Ozarks, or contemplating the meaning of the universe whilst lounging on Siesta Beach in Sarasota, FL. Upon writing this, Wilke is suddenly craving a blackened Grouper sandwich.



Agathe Desthomas

Agathe is an M.S. student in environmental sciences and coastal engineering certificate. She was born and raised in Biarritz, France. She spent 3 years studying molecular biology and biochemistry in France before moving to Montreal, Canada where she earned her B.S. in Earth and Environmental sciences with a Geosciences concentration. She decided to stay in New Orleans for her M.S. after being an exchange student at the University of New Orleans during the last semester of her B.S. She is interested in the impact and the resilience of freezing events of the belowground biomass of *Avicennia germinans* on the coastal erosion rate in a barrier island restored with dredged sediment. Outside of the lab, she likes to learn about skincare/make up as well as practicing yoga and outdoor activities such as horse riding as she has been doing this for over 10 years.



Alia Jones

I'm a first year Graduate Assistant working with Dr. O'Connell to obtain my master's degree. I grew up in the Florida Keys and spent all my time on or in the water, and I'm very glad to be on a career path that allows me to continue that. I completed my B.S. in Marine Biology from the University of South Florida in December of 2021, and spent a few months doing estuarine chemistry work in coastal Massachusetts before moving to New Orleans. My thesis is focused on fish assemblages within Bayou St. John, specifically in reference to historical data collected by the NRL prior to the opening of the floodgates. When I'm not splashing around and disturbing the peaceful lives of fishes for science, I can usually be found in my office supergluing the many holes in my waders and lamenting the general lack of invasive eels in BSJ. After I graduate, I plan to find a job where I can continue to study estuarine fishes - hopefully back in sunny South FL!



Md Modiuddin Sakib

Sakib is a PhD student, graduate assistant and research associate under the supervision of Dr. Ioannis Georgiou. He has received numerous awards while in the UNO graduate program. **The William Craig Memorial Scholarship, Geology Geophysics Research Fund, Glen Herbert Coastal Environmental Scholarship and the Chevron Geology Scholarship.** He was a 2019 - 2020 winner of the 3MT competition and InnovateUNO. Sakib remained active in student organizations and leadership. He served as a president of the American Association of Petroleum Geologists (AAPG), president of Bangladesh Student Association (BSA) and Vice-president and Treasurer of the Muslim Student Association (MSA). Sakib is also a member of Sigma Gamma Epsilon (SGE).



Association of Petroleum Geology

The American Association of Petroleum Geologists (AAPG) UNO Chapter exposes students to current events, topics, and opportunities in the oil and gas industry. Our 2020 academic year has looked different, to say the least. We were fortunate to host Dr. John Dribus for a luncheon to discuss the future of petroleum exploration with the department before courses transitioned to online delivery. While this academic year has been quiet for our chapter, we look forward to the opportunities virtual conferencing offers and hope to reconnect with our alumni and network as we settle into virtual learning and work from home routines.

Our chapter is grateful for the continued support provided by the New Orleans Geological Society (NOGS) and look forward to the return of monthly luncheons and events, providing students with incredible learning and networking opportunities. We would also like to thank Dr. Brad Robison for his dedication to the department and its students. Dr. Robison voluntarily teaches the Introduction to Geophysics course at UNO in addition to serving on graduate student committees and mentoring petroleum exploration geology projects.

Finally, we would like to thank the department's generous alumni for their generous support and contributions at our annual Mineral Auction. This student chapter would not be possible without your support. We look forward to visiting with you and continuing the Mineral Auction tradition as world conditions allow. ~ Sarah Noel, AAPG UNO Chapter President (2020)



Bella

Brad A. Robison, Adjunct Professor

This year I celebrated the 50th anniversary of involvement in Earth Sciences. Yes, that makes me a dinosaur! However, I continue to enjoy learning new information and mentoring others of all ages.

As an adjunct professor at UNO, I have taught Introduction to Geophysics for several years. The first half of the course reviews methods in potential fields and reflection seismic, and the second half provides students with the opportunity to interpret 3d seismic data on a workstation. Many thanks are due to S & P Global for years of donating seismic interpretation software licenses to UNO's EES department, a cumulative value probably exceeding \$5 M.

Thanks also to the New Orleans Geological Society whose donations have helped EES purchase 6 new workstations for the interpretation lab. For quite some time, I have been interested in the science of climate change. With encouragement of Dr. Kulp, I taught the inaugural EES Climate Change course in the Fall of 2022. The course concentrates on the science behind Climate Change rather than on social impacts and policy. The ongoing research in climate change is amazingly diverse in scientific focus and new learnings are published nearly every day so course content is evolving. It is my hope that students that complete the course have a solid foundation on which to base opinions and choices in their futures because it is likely climate change will remain a key global issue.



My wife, Kathy, and I in Yosemite National Park

Lastly, that is not me in the top photo. That's our Malti-Poo, Bella. She takes a better photo than I do!

Brad

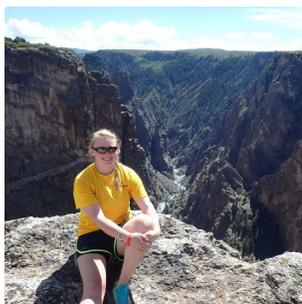
EES Graduating Class Spring 2023

Left to right:
Jake Duhe, Breanna Roberts,
Giancarlo Portocarrero,
Martin O'Connell, Allie Simmons,
James Rodgers, Victoria Sanchez



New Orleans Geological Society (NOGS) 2020 Scholarships

NOGS GRADUATE AWARD SARAH NOEL



Having grown up in Alaska, I moved to Colorado to pursue a B.S. in Petroleum Engineering with a Geological Engineering minor at the Colorado School of Mines. After graduation, I worked in the Alaska North Slope Oilfield for Schlumberger as a Measurements and Logging While Drilling Field Engineer. My nearly two year field career with

Schlumberger afforded me the opportunity to complete an intensive technical training program in the United Arab Emirates, drill a variety of development and exploration wells, and, most importantly, interact with professionals from a wide range of backgrounds. Working closely with these individuals inspired me to pursue my passion and apply for entry to higher education in the geosciences.

I quickly became immersed in sediment transport and having spent years at the proverbial sediment source (mountainous highlands), it seemed natural to continue education at the other end of the spectrum. Ultimately the decision to come to New Orleans was largely influenced by my husband, then fiancée, who was doing very well with his employer. New Orleans has proven to be a colorful, fun home over the past year for us and our crew of pets. The opportunities at the University of New Orleans have encouraged and challenged me to broaden my horizons. I hope the future will bring continued education in the geosciences and I look forward to a multifaceted career straddling industry and academia.



NOGS JUNIOR AWARD ZOE VITTUR

As a Louisiana native my interest and passion for our planet began early in my life. I declared that I wanted to become a marine biologist when I was only eight years old. Oceans and the life within them had always been a

source of wonderment for me by my college career started in 2015 with studying health services with the end goal of becoming a registered nurse. Shortly after finishing my medical assistant program, my wish to work in Earth Sciences resurfaced with an eye-opening documentary about plastic pollution. I immediately switched my focus and I am now a junior at UNO with a focus on coastal restoration. I hope in future I will be part of something far bigger than myself. I wish to become a part of an institute, like NASA, that researches and implements groundbreaking green innovations that enhance the livelihood of everyone who suffers from environmental issues such as land loss, pollution and natural disasters.



NOGS SENIOR AWARD

Charley Cameron is pursuing an undergraduate degree in the Department of Earth and Environmental Sciences at the University of New Orleans, with a concentration in Geosciences. She was born in the north east of England, and moved to the United States in her late teens. She studied Film Video and New Media at the School of the Art Institute of Chicago before moving to New Orleans to work as Media Coordinator for a local non-profit, **Common Ground Relief**. There, while participating in the organization's wetlands restoration projects, she first became interested in the coastal land loss issues facing Louisiana. She then went on to work variously as web designer, videographer, and writer, and also spent several years as an editor at a sustainable design and technology publication. In 2019 Charley enrolled at UNO to develop a greater understanding of some of the environmental issues she had covered as a writer. She promptly determined that her particular area of interest lies in coastal geology and plans to pursue graduate studies in that field once she has completed her undergraduate degree.

Charley currently works as an intern for the **Water Institute of the Gulf's Applied Geosciences** team.

New Orleans Geological Society (NOGS) 2022 Scholarships

Senior Undergraduate: Breanna Roberts

As a Louisiana native, Breanna Roberts has developed a passion for studying the coastal geology of the state. In the future, she intends to use that passion to serve Louisiana and other coastal states experiencing land loss resulting from subsidence, erosion, and saltwater intrusion. To accomplish these goals, she will first pursue a master's degree through the University of New Orleans to further develop and refine her skill set. In the meantime, she has established herself in the Earth and Environmental Science department, serving as President of the American Association of Petroleum Geologists chapter at UNO. Breanna is also an undergraduate student working under the department chair Dr. Mark Kulp. Notably, she has assisted in a project concentrating on the complete analysis of cores from Sabine Bank, Texas, which ultimately will aid in the beach nourishment of the Texas Point National Refuge.



Junior Undergraduate: Brittany Johnson

Earth and Environmental Sciences junior, Brittany Johnson, is from Tickfaw, La, and resides in New Orleans. She's fascinated by the Earth and its history and processes. Her study interests include paleoclimatology, climate change adaptation and mitigation, coastal restoration, and geomorphology. Britt enjoys research and lab and field work and pursues opportunities to ensure she can spend her life doing so. In the future, she intends to further her education at UNO through graduate school. When not working on academics, she trains on her aerial hoop, travels, or spends time with loved ones.



Extra Award:

Senior Undergraduate: Giancarlo Portocarrero

Senior undergraduate student Giancarlo Portocarrero was born and raised in Nicaragua. He moved to Louisiana in 2018 to pursue studies in environmental engineering. He attended Delgado Community College where he completed his Associate's Degree in Physical Science. There, he found his passion for geology and decided to pursue a bachelor's degree in geoscience from the University of New Orleans. Currently, he holds the position of Secretary in the AAPG Chapter at UNO. As of right now, he hopes to attend graduate school to develop his studies in groundwater hydrology, focusing on mapping, modeling, and management of water-based systems.

Graduate Student: Wilke Coleman

Wilke Coleman is currently working towards completion of a Master of Science degree at the University of New Orleans in Earth and Environmental Sciences. His graduate research focuses on refining the Mississippi River delta lobe chronology within Barataria Basin. This research utilizes a modern suite of seismic and vibracore data, and should bolster knowledge of the geomorphic evolution of the Mississippi River deltaic plain and sediment resources therein. Upon graduation, he aims to apply his knowledge of coastal geomorphology to aid in the development, implementation, and monitoring of coastal restoration strategies in southern Louisiana and beyond. Born and raised in St. Louis, Missouri, with additional familial ties to Sarasota, Florida, Wilke has an inherent love for the river systems of the Ozarks and Gulf coast Florida beaches alike. In his spare time, Wilke is a connoisseur of music, an authentic barbecue enthusiast, and an avid fan of St. Louis Blues hockey.



Mark your calendars! SEES is Bringing Back The Society for Earth and Environmental Sciences Mineral Auction 2023.

Tentatively slated to hold the auction at the Cove on **Friday November 17th** starting at 7pm.
Further information will follow in early Fall.

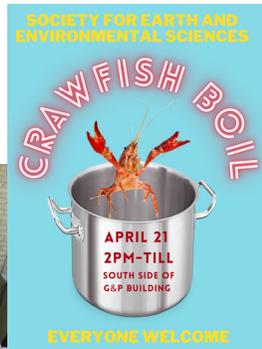
SEES has also been busy this year - we elected new leadership with **Barrie Sullivan**, President, **Kris Timmons**, Vice President, **Donnie Davidson**, Secretary/Treasurer, and **Dr. Mahon** as Faculty Advisor.

SEES also hosted an oyster shucking and throw decorating event in February, paraded in the Krewe of UNO Mardi Gras parade with our float (boat!) the **R/V Greenhead**, joined an Earth Day volunteer cleanup on Bayou St. John, and hosted our annual crawfish boil in April.

SEES is looking forward to building on the momentum with more activities in the fall. Join SEES and share in the EES community & fun!



Krewe of UNO Mardi Gras Parade



EES Student Scholarships 2020-2023

Glenn Hebert Coastal and Environmental Sciences Scholarship Fund

2020: Daniel Burke, Donald Davidson
 2021: Brice Crull, Jake Duhe, Paige Johnson
 2022: Lauren Fuller, Emily Mailhos, Barrie Sullivan
 2023: Bret Bates, Mary Sitter

Glenn Hebert Petroleum and Geology Scholarship Fund

2020: Malcolm Cross, Joseph Hankerson, Jared Garcia, Liu Qilang
 2021: Emily Mailhos, Brigid Richwine, Alexandra Simmons
 2022: Benjamin Bardwell, Kristen Ledford, Griffin Rome, Alexandra Simmons
 2023: Lauren Fuller, Emily Miller, Kristina Timmons

Jennifer R. Miller Memorial Environmental Geology Award

2020: Sara Noel, Missy Joffirion
 2021: Emily Colombo, Paulett Naumova
 2022: Caroline Randall, Ashlyn Schneida, Kristina Timmons
 2023: Yasmine Haddad

Olga Braunstein Scholarship

2020: Michael Amos, Meagan Russell, Jessica Villers, Sarah Cameron, Megan Burns, Mariana Miranda Iraheta, Micah Joseph Gisclair, Tessie Elizabeth Landry, Stacey Hunter, Miles Beech, Hailey Vanzant
 2021: Cecilia Allen, Marley Allen, Samantha Becnel, Sarah Cameron, Donald Davison, Mariana Miranda Iraheta, Paige Johnson, Amelia Russell
 2022: Joshua Bares, Samantha Becnel, Philip Burke, Cameron Cummings, Jake Duhe, Bailey Johns, Brittany Johnson, Breanna Roberts, Amelia Russell
 2023: Marley Allen, Emma Bourgeois, Ashlie Burke, Wilke Coleman, Brittany Johnson, Alia Jones, Breanna Roberts, Md Mohiuddin Sakib

Geoscience Minority Fund and Women in Science Scholarship

2020: Kelsey Pembroke, Zoe Vittur, Gayle Durr, Paige Johnson
 2021: Jasmine Bush, Jared Garcia, Qilang Liu
 2022: Calvin P. Balbeua, Chloe Blair, Jared Garcia, Giancarlo Portocarrero, Samer Lane

Chevron Geology Scholarship

2020: William Bell, Jake Russell Duhe, Jared Garcia, Md Mohiuddin Sakib, Zane Charles Zimmer,

Geology and Geophysics Research Fund

2022: Marley Allen, Wilke Coleman, Brittany George, Md Mohiuddin Sakib

William Craig Memorial Scholarship Fund

2020: Riana Grout
 2021: Giancarlo Portocarrero, Zoe Vittur
 2022: Marley Allen, Wilke Coleman, Brittany George, Md Mohiuddin Sakib
 2023: Claire Fusiek

The New Orleans Geological Society
 Memorial Foundation: NOGS

Congratulations 2023 NOGS Awardees

Graduate Scholarship \$3,000 Awardee: **Donald Davidson**

Senior Scholarship \$2,500 Awardee: **Barrie Sullivan**

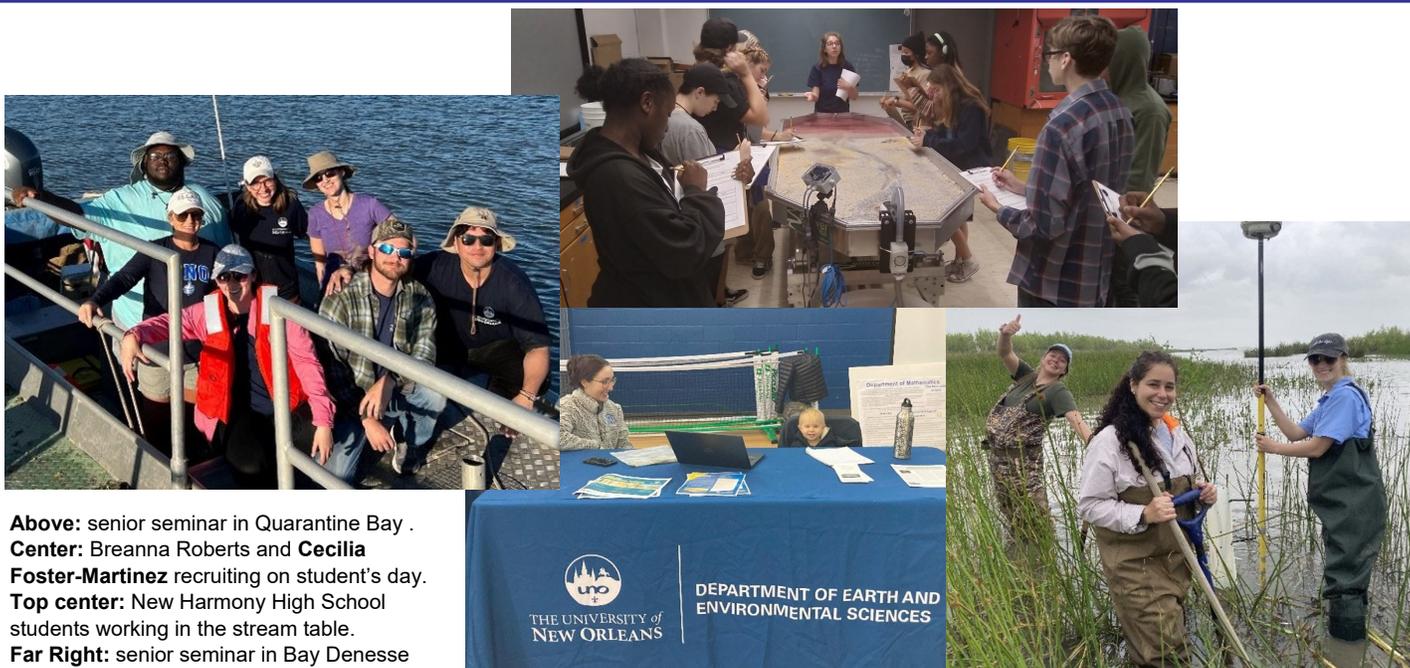
Junior Scholarship \$2,000 Awardee: **Katelyn Merrill**

Jr./Sr/Grad Scholarship \$2,500 Awardee: **Emily Mailhos**

(Awardees to be featured in upcoming NOGS and EES newsletters)



Congratulations! Victoria Sanchez
 2023 recipient of the **LaSPACE**
 Guided Pathways in STEM (GPS) Scholarship



Above: senior seminar in Quarantine Bay .
Center: Breanna Roberts and **Cecilia Foster-Martinez** recruiting on student's day.
Top center: New Harmony High School students working in the stream table.
Far Right: senior seminar in Bay Denesse


 THE UNIVERSITY of
 NEW ORLEANS

DEPARTMENT OF EARTH AND
 ENVIRONMENTAL SCIENCES



THE UNIVERSITY *of* NEW ORLEANS

Earth and Environmental Sciences

2000 Lakeshore Drive
Geology/Psychology Building 1065
New Orleans, LA 70148
Phone: 504-280-6325
Email: rejackso@uno.edu
Editor: Robin E. Jackson

SHARE YOUR UPDATES AND PHOTOS IN FUTURE NEWSLETTERS:

Name: Degree: Graduation Year: Current Address:
Telephone: Email: Current Employment: Please provide 2-5 sentences about life, career, or whatever you wish to share. (phone & address not published)

Discover your **BIRTHQUAKE...**
the most powerful earthquake on the day of YOUR birth.
www.earthscope.org/birthquake

EMAIL TO : rejackso@uno.edu

DONATIONS AND GIFTS TO EES

The Department of Earth and Environmental Sciences has thrived in large part because of the support of our alumni and friends. Monetary contributions have allowed teaching, research, and scholarship programs within the Department to flourish. **The Earth & Environmental Sciences Fund (No. 90243)** supports special projects, departmental seminars, student events and travel to out-of-state conferences.

The **UNO Foundation** manages the Department fund. The preferred form of donation is via check, payable to **The University of New Orleans Foundation** and mailed to the **EES Department Office**, with reference to the department or the fund.

EES is greatly appreciative of contributions. Thank you in advance for your donation.

SPECIAL THANK YOU FOR YOUR GIFTS (2019-2022)

Contributors to the Department of Earth and Environmental Sciences

EES Student Scholarships: Mr. and Mrs. Glenn P. Hebert, Olga and Jules Braunstein, Jennifer R. Miller Memorial Environmental Fund, Geology and Geophysics Research Fund, Geoscience Minority Fund, Chevron Geology, William Craig Memorial Fund

Honored Contributors and Donors:

Mr. Walter Deister Jr., Dr. William Stein III, Robert Rooney, Chair, New Orleans Geological Society Memorial Foundation (NOGS)

Mr. Donald E. Burch Jr., Ms. Susan A. Bathke, Mr. Harvey S. Edwards, Jr., Pierre and Cheryl Champagne, William and Allison Ranson, Stacy A. Smith, Mr. David E. Wahl, Jr.