Geosciences

DEPARTMENT OF PHYSICS AND GEOSCIENCES

Newsletter

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Program News

May 2020 Graduates – Congratulations!



Allison Mrotek, BS Geology

Allison was born in Arizona and moved to Texas at age 12. Her family introduced her to geology at a young age with desert hikes, rock hunting, exploring natural areas, and attending gem & mineral shows. Her love for science and the natural world inspired her to pursue a career as a geologist. As a sophomore, she began working in the geosciences department as a laboratory teaching assistant. She continued this work for the rest of her time at TAMUK. She grew to love helping others, and hopes her work inspired those students to never let their curiosity fade. Allison is a self-titled nerd and loves learning. Her free time as an undergraduate student was spent helping with AAPG and the Geosciences club. Throughout her time at TAMUK, she was an active participant in both clubs and helped with advertising and fundraising. She

attended the AAPG Convention in Salt Lake City, Utah in Spring 2018. Other club sponsored trips she attended include spelunking at Kickapoo Caverns and rock hunting in Mason County. She completed field camp with East Carolina University in Summer 2019 and spent six weeks studying in New Mexico and Colorado. Her efforts granted her a nomination for the USGS/NAGT Cooperative Field Training Program. She was awarded the Javelina Field Scholar award in Spring 2020. She plans to continue her education and hopes to make innovative contributions to the field of geosciences. Allison was accepted into the Master's program at New Mexico State University and will begin her graduate research in Fall 2020, with the help of a teaching assistantship.



Eric Villalba, BS Geology - concentration in Geosciences

Eric graduated with a Baccalaureate of Science in Geology with a Concentration in Geosciences and a minor in Geography in Spring 2020. Eric also obtained a Certificate in Geographic Information Systems (GIS). He was a student member of the Corpus Christi Geological Society devoting time to volunteering for various networking and social activities throughout his undergraduate career. Eric also worked as a Teaching Assistant for Applied Geology. During the Spring 2020 semester, he conducted research on what alters sand dune movement in the South Texas Sand Sheet with Dr. Hedquist, and Diego Flores.



Diego Flores, BS Geology - concentration in Geosciences

Diego graduated in May 2020 with a Baccalaureate of Science in Geology with a Geosciences concentration and a minor in Geographic Information Systems (GIS). Diego is originally from Glen Flora, Texas. While at TAMUK, Diego helped teach GIS to high school students and was the president of the Geosciences Club. About his experience in our department, Diego said the following: "My time at TAMUK and the Geosciences and Physics department was amazing. The professors are amazing and have really made an impact on my life. I would say my greatest accomplishments while at TAMUK were of course graduating, but also adopting my now son while in school and working. I would like to thank my family, friends, and professors for their support and love throughout my time at TAMUK."

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Geology Major will soon be joining the Graduate Program at New Mexico State



Allison Mrotek was accepted in the geology graduate program at New Mexico State University in Las Cruces. She will be working with Dr. Jeff Amato and his research group at NMSU. We sincerely wish Allison a very productive and successful time at NMSU!

Geoscience Program Welcomes New Majors

Two students joined the program in Spring 2020. **Tommy Peña** and **Tony Cortez** joined us as internal transfer students. Tommy is now a Geology major, previously a Physics major at TAMU-K. He will continue to obtain a Physics minor. Tony is now a Geosciences major and was previously a major in Natural Gas Engineering. Welcome!

Corpus Christi Geological Society Scholarships 2020





excellence from the Corpus Christi Geological Society (CCGS) in mid-March. These funds will support expenses associated with summer Field Camp. Christiano and Taylor are both Geology seniors and on their way to graduation. Congratulations to both on their accomplishment! On behalf of the Department, thanks to the Corpus Christi Geological Society for their phenomenal support to our students!

Christiano Irving and Taylor Palmer received a \$1000 scholarship each for academic

Christiano

Taylor

Earth Day Webinar speaker- Ramón Treviño, Bureau of Economic Geology, University of Texas-Austin



The Department hosted Ramón Treviño at the Earth Day Webinar on April 22, 2020. Ramón is currently project manager at the Bureau of Economic Geology - Gulf Coast Carbon Center (GCCC) at the University of Texas at Austin. Ramón received his B.S. in Geology from our Department, formerly Texas A&I University, in 1983; MS from University of Texas at Arlington in 1988 and M.B.A. from the University of Oklahoma in 1994. Ramón presented ongoing carbon sequestration research. He is part of a multi-disciplinary group and has led successful multi-million-dollar projects in Texas, as well as in the greater Gulf Coast Region. His areas of expertise include integrated reservoir characterization, sequence stratigraphy, subsurface correlation and mapping and subsurface structural interpretation. He is the 2012 recipient of the Gulf Coast Section-Society of

Sedimentary Geology GCS-SEPM Distinguished Service Award for his contributions. The highlights of his talk included the mechanism of CO₂ injection and the impacts on the reduction at a global scale, but also in oil recovery. He presented some of the results of his current research projects along with promising and ongoing activities. We were honored to have him!

Field Geology successfully completed field trip to west Texas to conduct mapping projects – Spring Break



The field geology class conducted their field studies in west Texas from March 5-12 in the vicinity of Big Bend National Park and Christmas Mountains. The group led by Dr. Veronica Sanchez conducted various mapping assignments during a 7-day stay in the desert where they explored the complex volcanic and tectonic history of the region. The students had a fun and productive time perfecting their skills in geologic mapping and outcrop description while supervised and mentored by Dr. Sanchez, Jim Chude and alumnus Joshua Kranavek. The group also had a chance to visit a local mine and see outstanding geology at Big Bend National Park. The goals of this "field methods" course go beyond the course itself. We want to successfully train students in geologic field mapping in preparation

for upper division courses including summer field camp, facilitate comradery and enhance the learning experience in a remote settings, and test the skills they have gained thus far in their career as undergraduates. Dr. Sanchez and the Department greatly appreciate the assistance of Jim Chude, Joshua Kranavek and local mine owners.

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Recruiting Trips to Regional Geoscience Programs

Geoscience faculty visited various campuses in February-March to meet prospective students in the Greater Houston Area. They were able to highlight recent department activities and hosted students in department tours of the labs and teaching classrooms. In late February, Drs. Hedquist and McGhee visited Alvin Community College and multiple campuses of Lone Star Community College. Dr. Sanchez visited College of the Mainland. In early March, Drs. Hedquist and Schneider, as well as Richard Parker visited multiple campuses of Houston Community College. Students transferring from these colleges will have the opportunity to seamlessly transfer to our program due to a 2+2 transfer articulation agreement.

Monica Estrada accepted to the 8th Annual Seismology Student Workshop, Lamont-Doherty Earth Observatory



Petrophysics graduate student **Monica Estrada**'s abstract entitled "Correlating Porosity Characteristics of Miocene Formation Reservoirs from Well Log Data in the Main Pass Protraction Area in the Gulf of Mexico" was accepted for poster presentation at the 8th Annual Seismology Student Workshop at the Lamont-Doherty Earth Observatory in New York from March 19th-20th. Unfortunately, the workshop was postponed due to the COVID-19 pandemic. Monica was also awarded a small travel scholarship from the workshop committee and a travel scholarship from the Coastal Bend Geophysical Society (CBGS). We thank the CBGS and the Seismology Workshop organizers for their support.

Online Tutor – Study Buddy Program from Schlumberger

A new program created by Schlumberger, the Study Buddy program, aims to help young students accomplish their educational goals while following the stay-at-home orders and enduring the school closures during the COVID-19 pandemic. **Monica Estrada** proudly serves as a volunteer for the Program and we wish her success in helping younger students.

Distinguished Student Award – Howard Palacios, MS candidate

Petrophysics graduate student **Howard Palacios** has been selected as the Spring 2020 Distinguished Student Award recipient for the College of Graduate Studies.

Field Trip Galleries









