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Program News

Five Geology Majors Graduated in the Fall Semester



Lenora Perkins, Lauren Hall, Ivan Villareal, Alicia Molina, and Jesus Lemus Bohorquez graduated in the TAMUK Spring 2018 Commencement. We appreciate the level of dedication and effort given by these majors as both performed very well in our program and have bright futures as geoscientists. Great job!

Lenora Perkins graduated Cum Laude from the Honors College with a Baccalaureate of Sciences in Geology, and a double minor in Physics and Mathematics. She is the first student to graduate from Texas A&M University-Kingsville with a concentration in Geophysics. She has worked on six different research projects with three different mentors – Dr. Yelisetti, Dr. Sanchez, and Dr. Schneider – and has presented her research at not only a regional level, but in four different states, as well as at national and international conferences. Some of the conferences she has presented at include the Javelina Research Symposium (three times), the GSA South-Central Section meeting in Little Rock, Arkansas in 2018, Pathways Research Symposium at West Texas A&M in Canyon, Texas where she took first place with her poster, and the 2018 American Geophysical Union’s Annual Fall Meeting in Washington, D.C. Lenora was also the Departmental Tutor for Physics and Geosciences for a year, and a valued member of the program as she worked as a Teaching Assistant using her diverse knowledge and skillset to assist with Physical Geology, Astronomy, and College Physics 1 & 2 labs. She served on the executive board of both the American Association of Petroleum Geologists student organization, and the TAMUK Geophysical Society – a student chapter of the Society of Exploration Geophysicists. She is a current member of both the Corpus Christi Geological Society, and the Coastal Bend Geophysical Society, as well as a previous scholarship recipient of both societies. In 2018 she was awarded the Foss scholarship, and the Texas A&I Rising Scholar award. She is also an alumnus of Texas A&M University – Corpus Christi with a Bachelor’s degree in Biology, concentration in Marine Science, and Del Mar College with an Associates in Geology. Lenora has been accepted into the graduate program at Stephen F. Austin State University in Nacogdoches, Texas, where she will pursue her Masters and has been granted a Graduate Teaching Assistantship beginning with Summer Field Camp 2019.



Lauren Hall graduated from the Honors College with a Baccalaureate of Sciences in Geology, and a double minor in Biology and GIS. She began her tenure in our department as a high school student, studying paleontology under Dr. Buckley’s direction before enrolling as a college student four years ago. While at TAMU-K, Lauren was involved in several clubs, including the Women in Mathematics Engineering and Science (WiMenS), Geology club, and Golden Key International Honor Society. She was involved in several honors projects in geoscience courses, including Mineralogy, Structural Geology, and Remote Sensing, and presented research at the national GSA conference, under the supervision of Dr. Sanchez, as well as at the Society of Vertebrate Paleontology international conference, under the advisement of Dr. John Buckley. She states, “through the four years here at TAMUK, I have made good friends and had many doors open for me. I am thankful I had the chance to come to the school and have the experiences I did.”



Alicia Molina graduated with a Baccalaureate of Sciences in Geology, and is from the Corpus Christi, Texas area. While at TAMUK, Alicia worked as both a teaching assistant and research assistant. Some highlights of her experience here included being invited by the Honor Society of Phi Kappa Phi to present research on the “Microstructural analyses and lithologic interpretation of footwall and hanging rocks of the Lopukangri Rift, Tibet in 2018, as well as presenting her research at several other local and regional conferences.



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Ivan Villareal graduated with a Baccalaureate of Sciences in Geology. He is from Rio Grande City, Texas. While at TAMUK, Ivan participated in Greek Life. He also attended a field camp hosted by the Oklahoma State University during his undergraduate. He was an avid participant in all his classes, and often participated in extra projects during his Baccalaureate. He also worked as the storeroom manager for the department, helping organize and coordinate laboratory equipment.



Jesus Lemus Bohorquez graduated with a Baccalaureate of Sciences in Geology/Geophysics. He is from Maracaibo, Venezuela. During his time at TAMUK, he worked as a teaching and research assistant, helping Dr. Haibin Su with the course "Introduction to Geographic Information Systems". He taught GIS to high school

students. About his experience in our department, Jesus said the following: "My time in TAMUK and the Geoscience and Physics Department was in fact a turning point for me, it made me reflect onto the man that I am today. The experience was amazing, professors were nice and taught very well, the knowledge that I am applying as a Logging Geologist in Excellence Logging." Jesus is now a Logging Geologist for Excellence Logging, where he applies his GIS and Geology skills in the real world.

Welcome Dr. Veronica Sanchez!



The Department of Physics and Geosciences would like to welcome Dr. Veronica Sanchez to her new position as an Assistant Professor of Geology. She will be joining our department in August of 2019. Dr. Sanchez graduated from the University of Houston. Her research interests include structural geology, tectonics, geodynamics, geochronology, geomorphology, remote sensing, GIS, basin analysis, and microstructural geology. She is currently researching the evolution of rifts in the southern Tibetan Plateau as a response to strain partitioning during orogenesis. She has also performed landslide characterization in Oaxaca, Mexico, and studied the geometry and kinematics of structures in West Texas.

Geosciences Program Completes 5 Field Trips



On March 1, Dr. Robert Schneider led a group of 32 petroleum geology students on a field trip to the Nueces River valley and delta, as well as Mustang Island. Mr. Randy Bissell led the trip, which examined modern sequence stratigraphy in the river basin and delta. He also compared modern barrier island beach sands to Frio equivalents in well cores. Students also examined barrier island dune complexes and protected marsh environments. Finally, the effect of pollution on the beach from local and distant sources were reviewed.

On March 28-30th, Dr. Robert Schneider, Dr. Mark Ford, and Vernon Kramer with TAMUK led 15 students taking Field Methods and Cartography on a fieldtrip to study the structural geology in selected areas of central Texas. On Friday, the group looked at the deformation of Precambrian rocks around Inks Lake State Park. On Saturday, the students mapped the unconformity contact between Paleozoic and Cretaceous rocks on the Cypress Mill property.

On April 4-6th, Dr. Brian Smith, Ron Fieseler, Dr. Thomas McGehee and Dr. Mark Ford led 16 students in the Hydrogeology class to the Barton Springs Edwards Aquifer Conservation District (BSEACD) to study how hydrogeologists manage this portion of the Edwards Aquifer and Trinity Aquifer. Ron Fieseler and students logged a well, brought the data back to the lab and interpreted the log. He had two other logs they used to correlate the geology across a broad area

On April 26-28th, Dr. Mark Ford, Frank Roberts, and 6 geology club members traveled to Mason, Texas to prospect for gem quality topaz. The students found and identified many minerals in the heavily prospected area, but nobody found the elusive blue topaz gems that day.

On May 4, Dr. Thomas McGehee led 30 students taking Physical Geology and Historical Geology classes to the Houston Museum of Natural Sciences to study the professional exhibits and complete a scavenger hunt exercise. The Cullen Hall of Gems and Minerals and the Lester and Sue Smith Gem Vault keys into the Physical Geology class study of mineralogy. The Weiss Energy Hall keys into modern technologies in acquiring energy resources. The Morian Hall of Paleontology keys into both Physical and Historical Geology.





Geophysics Field Equipment News

Dr. Robert Schneider's work with the Corpus Christi Geological Society has yielded a ~\$4,800 donation to assist in the purchase of the first field equipment for the geophysics program. The donation, along with funds from the department and College of Arts and Sciences, will be utilized to purchase seismic acquisition hardware and software this summer. The Coastal Bend Geophysical Society has also committed to supporting the acquisition of new field equipment. The seismograph will be used for undergraduate – assisted research in the Rio Grande delta plain and in the Nueces River valley. Many thanks to both these organizations for their valued support and partnership!

Three Students in the Department win CCGS Scholarship

Three students in our Department received scholarships from the Corpus Christi Geological Society. The students were **Allison Mrotek**, **Andrew Edlin**, and **Rikki Ponce**. To get this scholarship, students had to go through a competitive application process which included a recommendation by faculty members in our department. Great job Allison, Andrew and Rikki!

Petrophysics Excellence Scholarship

Congratulations to Ajibola Samo for receiving the Petrophysics Excellence Scholarship in Spring 2019!

South Texas Geological Society Grant

Petrophysics graduate student, Erin Matthys was awarded South Texas Geological Society Jones- Amsbury Research Grant. Congratulations Erin!

Dr. Nathan Bangs Presents the 15th Annual Olan Kruse Lecture

On April 17th, Dr. Nathan Bangs presented the 15th annual Olan Kruse Lecture. This lecture, titled "What causes and controls subduction zone earthquakes?" covered different topics in seismology, particularly focusing on the increasing frequency of extreme events around the mayor tectonic rifts. The talk was attended by students from all majors, and presented an interesting perspective on subduction zones. By using real-world earthquake examples, Dr. Bangs showed how subduction zone earthquakes can be modeled using other tectonic data.



SEG EVOLVE Program

Texas A&M University-Kingsville geophysics student chapter representatives have been selected to participate in 2019's EVOLVE program by the Society of Exploration Geophysicists (SEG) and Halliburton. We are one of the twenty chapters selected this year. Congratulations Monica Estrada, Itohan Agbonkina, Benjamin Benedict, Howard August Palacios, and Ajibola Samo! The team is supervised locally by the student chapter faculty advisor, Dr. Subbarao Yelisetti and industry mentors through SEG. They are working with industry 3D seismic and well logging datasets, and will be presenting their research results at the SEG Annual Meeting in San Antonio in September 2019.

ECORD Workshop in Germany

Congratulations to Monica Estrada for participating in the European Consortium for Ocean Research Drilling! This highly selective training course took place in Germany, and was a great learning experience. Great job! Monica received funding from the US Science Support Program, the Coastal Bend Geophysical Society and the Corpus Christi Geological Society to cover her travel expenses. Thank you Dr. Yelisetti for providing Monica with this great opportunity and congratulations Monica!

Petrophysics Summer School in UK

Monica Estrada will be attending Petrophysics Summer School at University of Leicester, UK from June 29th to July 5th. Monica received funding from the US Science Support Program. Thank you Dr. Yelisetti for providing Monica with this great opportunity and congratulations Monica!

Petrophysics workshop at Lubbock, TX

All of our petrophysics graduate students attended a workshop on "Petrophysics" at Texas Tech University, Lubbock, TX in Spring 2019.



Graduate Teaching Assistantships

Congratulations to the two graduate students, Monica Estrada and Toluwalope Bamisile, who received the Graduate Teaching Assistantships in Spring 2019!

Nine TAMUK Students Earn GIS Certificates

Several of our majors received their GIS Certificate this semester in a ceremony following student presentations of their work for the Advanced GIS class on May 9, 2019. These students did a great job in their presentations illustrating high quality work.

Geosciences majors receiving the Certificate included **Allison S. Mrotek, Andrew M. Edlin, Diego M. Flores, Ivan Villarreal, Jesus G. Lemus Bohorquez, Rikki D. Ponce and Travis K. Burford**. The recipients from other departments over the campus included Cody M. Goll and Francisco Haces-Garcia.



Olan Kruse Science Faculty Award

Dr. Subbarao Yelisetti, Assistant Professor of Geophysics and Graduate Coordinator for Petrophysics received the 2019 Olan Kruse Science Faculty Award for Excellence in Teaching and Research. Congratulations Dr. Yelisetti!

Dr. Haibin Su Published an Article in a Peer-Reviewed Journal and Presented a Paper at AAG

Dr. Su recently published an article in *GIScience & Remote Sensing*, a peer-reviewed journal. The article is entitled, "Bathymetry retrieval from optical images with spatially distributed support vector machines." The article can be found at:

<https://doi.org/10.1080/15481603.2018.1538620>. He also presented research at the American Association of Geographers (AAG) annual meeting in DC the week of April 3- 7th. His paper title was, "Pathways to Geospatial Intelligence for Underrepresented South Texas Students – Vertical Integration Approach."

Attendance at the 2019 Christmas Mountains Symposium

At the end of the semester Dr. McGehee traveled to the Big Bend area to attend the annual Christmas Mountains Symposium and examine new areas for the next TAMUK field camp. This was the first time I attended all of the session talks at the symposium. Jim Chude started the symposium on Monday (May 21) with his guided geology fieldtrip to the Christmas Mountains overlook. This is the same fieldtrip given TAMUK field camp participants before they develop a map in the geology in a portion of the Christmas Mountains. Most of the presentations were from biologists from Sul Ross State University, Texas State University, and Miami University. Faculty and graduate students from the geology program at Sul Ross State University presented their research on this year's projects. Most of the participants hoped that TAMUK geologists would continue our work there this year and add to the geology papers in next year's symposium.

Gallery

15th Olan Kruse Lecture by Nathan Bangs





Gallery

Barton Springs Field Trip





Gallery

Inks Lake Field Trip

