DEPARTMENT OF PHYSICS AND GEOSCIENCES

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Geosciences

Newsletter

VOLUME 12, ISSUE 3

Program News

New Multidisciplinary Petrophysics Graduate Program has Launched

The Petrophysics Graduate Program was approved by the Texas Higher Education Coordinating Board (THECB) in Spring 2018. Since then it was advertised on the earthworks-job site, Seismological Society of America job page, UCAR job site, graduate studies Facebook page, and Society of Exploration Geophysics (SEG) Facebook page. Additionally, Dr. Yelisetti sent the flyer to all the SEG student chapters around the world (over 225) and the Society of Petrophysicists and Well Log Analysts (SPWLA) student chapters (over 35). He also contacted earth science departments in over 102 international universities in Asia, Africa, Europe, Australia, North America, and South America, and asked them to advertise the flyer in their respective departments. The Petrophysics advertisement flyer is posted on the graduate studies website: https://www.tamuk.edu/grad/flyers/petrophysics.pdf

A total of 115 students from all over the world showed interest in the program. Nine students applied for Fall 2018 admission. Five students are currently enrolled in Fall 2018 classes. There are seven applications either accepted or pending for Spring 2019. Exploration Geophysics, Advanced Petrophysics and Advanced Topics in Geology are currently offered in Fall 2018. Seismology, Applied Geology and Advanced Reservoir Engineering courses will be offered in Spring 2019.

A graduate scholarship fundraising campaign is underway. Using funds from the Physics, Geosciences and Natural Gas Engineering Programs, we have set up two scholarships – the Geosciences Board Petrophysics Graduate Scholarship and the Petrophysics Excellence Scholarship for incoming and existing petrophysics students, respectively. We have also contacted the local petroleum industry to get scholarship support for students. A Petrophysics Scholarship Committee will be set up in October. This committee will include representatives from Geophysics, Geology, and Natural Gas Engineering.

Petrophysics Graduate Students - Fall 2018



Toluwalope Bamisile is an aspiring petrophysicist with a background in geology. She obtained a Bachelor's degree in Geology at University of Ilorin, Ilorin, Nigeria. She was part of a team that won the bronze medal in Basin Evaluation Competition organized by the Nigerian Association of Petroleum Explorationists and the African Region of the American Association of Petroleum Geologists. After her BS degree, she joined University of Nevada, Las Vegas for an MS degree in Geoscience with a concentration in planetary science. She is a co-author on several abstracts that were published at national

and international conferences. She received grants and scholarships from the Geological Society of America and National Astrobiology Institute, Spain. She is a student member of the Geological Society of America (GSA), National Society of Black Engineers (NSBE) and Society of Exploration Geophysicists (SEG).



Howard August Palacios is a Geologist Engineer with 15 years of experience at Halliburton as wireline log data analyst, and technical consultant of wireline OH and CH data acquisition, well log data quality control, post-processing, integration, and interpretation. He provided a comprehensive insight of the reservoir properties and making recommendations about horizons prospectivity on several countries of south and central America, and Eastern Africa. Additionally, he performed structural and sedimentological evaluation of OBM and WBM borehole micro-resistivity images, NMR data post-processing for

pore size classification, permeability index and fluid characterization, and interpretation of cement bond logs from acoustic and ultrasonic sources. He received Geologist Engineer degree from the Universidad de Oriente, in Venezuela as the first student of class promotion. He is a co-author on several papers of relevant cases of studies highlighting the value provided by the NMR technology into the improved estimation of net pay zones.



SEP 2018



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Monica Estrada recently graduated from Texas A&M University-Kingsville Honors College with highest honors, and the Arts and Sciences College with a bachelor's degree in Geology, minor in GIS. She was inducted into Golden Key International Honors College. After graduating she did an internship with the USGS in Menlo Park, CA for a month. After the internship, she started working as a mudlogger in West Texas with Stratagraph for a year.



Erin Matthys worked as a Supplemental Instruction Leader at TAMUCC for both Physical Geology and Historical Geology. She currently works at Headington Energy Partners as a Contract Geologist after starting out as an intern two years ago. She graduated from TAMUCC with a BS in Geology in May of 2018. She is currently teaching two sections of undergraduate physical geology laboratory at TAMUK.



Ajibola Samo is a Petrophysicist with over 10 years of industry experience in Wireline/LWD Acoustic/NMR processing, analysis and data quality assurance/control, advanced Acoustic Anisotropy analysis, Petrophysical analysis with core log integration, production logging, rig support, and integrated field studies. He provided support for all Baker Hughes Formation Evaluation LWD/WL tools. Always eager to train and mentor junior geoscientist. He graduated with a BS degree in Geology from University of Ado-Ekiti, Nigeria. He is a member of the the Society of Petrophysicists and Well Log Analysts (SPWLA).

Geosciences has Eleven New Majors

Kaylie Arnwine is a Junior Transfer student from Tyler Junior College. Alyssa Brown is a Senior internal Transfer student from the Art Department. Christopher Cantu is a Freshman student from Laredo Texas. Coby Gass is a Sophomore student from Uvalde, Texas. Cristiano Irving is a Junior Transfer student from Del Mar College. **Rachel Lovett** is a Junior Transfer student from Del Mar College. **Benjamin Romo** is back in the program after a 2-year absence. Sarah Savell is a Junior Transfer student from Del Mar College. Keidre Taylor is a Freshman student from Houston Texas. Trace Venske is a Sophomore internal Transfer student from the Kinesiology Program. Myra Wilson is a Freshman student from Mercedes Texas.



Benjamin

Sarah

Keidre



Trace





Geosciences Newsletter



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International Conference Presentation



Lenora Perkins will be presenting at the American Geophysical Union Fall meeting in Washington, DC. Lenora Perkins, Subbarao Yelisetti, Dibakar Ghosal, and RR1718 Science Party, Fluid Flow and BSR Distribution off Oregon, American Geophysical Union Fall meeting, Abstract # OS51F-1370, 10th-14th December, Washington, DC.

Local High School Teacher Receives GIS Certificate



With the support of their ongoing NGA grant, Drs. Su and Hedquist offered a GIS workshop for Mr. Robert Ross from San Diego High School. During a 2-week period, from June 4th to June 15th, Mr. Ross took intensive GIS and GPS training as a preparation for teaching the introductory GIS courses at San Diego High School this fall. As part of the training, he was provided with textbooks, software, lecture notes, lab handouts and data. This approach will make an impact on the number of high school students exposed to and engaged in geospatial technology. It will also boost the institutional collaborations between TAMUK Geosciences and local high schools.

We Have Four Fieldtrips Scheduled for the Fall Semester

We have Mineralogy, Sedimentology, and Physical Geology undergraduate courses this fall semester with trips scheduled. If you plan to attend mark your calendar and put your name on our sign-up sheet in the main office.

On September 29th we will be looking at modern fluvial, deltaic, lagoonal, and barrier island depositional environments in the Nueces County Area. We will be making multiple stops starting in Hazel Bazemore Park and ending in the Padre Island National Seashore Park. The objective of this fieldtrip is to observe modern sedimentation processes, which produce the rock products. We will then travel to Freer, Texas to observe Cenozoic rock formations.

On October $11^{th} - 13^{th}$ (Thursday-Saturday) we will be leading a fieldtrip to central Texas to study Paleozoic and Cretaceous rocks. This includes a lithostratigraphic and biostratigraphic study of the lower Cretaceous rocks along Fitzhugh Road near Flat Creek and lithostratigraphic and biostratigraphic study of Cambrian rocks near Hye, Texas. The collected data in both areas will be used to prepare two stratigraphic sections.

On November 10th (Saturday morning) we will travel to Houston to the World Class Houston Museum of Natural Sciences. The Mineralogy class will join us to spend time in the Cullen Hall of Gems and Minerals. Also, we will be traveling to the 65th Annual HGMS Houston Gem and Mineral Societies Gem, Jewelry, Mineral, and Fossil show in Humble, Texas that afternoon for student to observe the current key mineral localities where specimens are mined and see some great specimens for sale.

On November $15^{\text{th}} - 17^{\text{th}}$ (Thursday-Saturday) we will be looking at a commercial Precambrian mineral deposit in Central Texas. This includes a mineralogical examination of the pegmatite at Badu Hill and the surrounding metamorphic host rocks. Students will also examine crosscutting relationships, examine mineralization and metamorphic events, and evaluate the economic potential of this rare earth element resource.

Summer Faculty Recruitment at TAMUK

Over the summer, Dr. Mark Ford gave two presentations to the UBMS (Upward Bound Math and Science) students attending TAMUK for summer classes. UBMS is a program for selected high school students that come to TAMUK, live on campus and partake in learning modules and classes. Dr. Ford gave one presentation on Geoscience careers and another presentation on the recent eruptions of Vulcan de Fuego and Hawaii over two days to about 15 students. Dr. Ford also presented to 25 RGV (Rio Grande Valley) Engineering Initiative summer camp students. He also visited the Kleberg County Library where he participated in a geology outreach program.

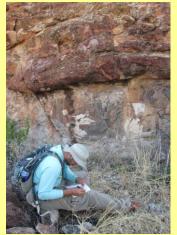
Dr. Hedquist and Margarita Wilhelm (Recent Geosciences Graduate) Presented Research at an International Climate Conference

Dr. Hedquist and Margarita Wilhelm (2018) were co-authors on a research presentation titled, "The Effect of Tree Canopies and Building Orientation on the Urban Climate of a Residential Neighborhood in Corpus Christi, Texas." The research was presented at the Tenth International Conference for Urban Climate (ICUC-10) in New York City, NY, August 7, 2018.



Department of Physics and Geosciences Texas A&M University - Kingsville

Recent Graduates Are Excited by Their New Positions



Adolfo Enciso doing field work in Big Bend National Park (TAMUK field camp.)



Brian Wilkinson seeing the sights in Paris during a weekend off from training at Schlumberger's European Learning Center.



Audrey Lucio doing field work in Big Bend National Park (TAMUK field camp.)

Adolfo Enciso from Fredericksburg, Texas: I am a recent graduate (Spring 2018) from Texas A&M University-Kingsville. I was raised in the small town of Fredericksburg TX where I attended Fredericksburg High school. During this time, I established my interest for physical science and the outdoors. This became the precursor to my interest in geology and eventually my career. Entering college, I declared Geology as my major and Geographic Information Systems (GIS) as a minor. Through my time at TAMUK, I had many memorable experiences including some of my courses I had taken. I particularly enjoyed Mineralogy and Petrology, and even had the opportunity to help teach them as a teaching assistant. I also attended Summer Field Camp at TAMUK where we actively investigated the orogenesis of the Big Bend Region and researched the hydrogeology of Central Texas.

I currently work for ExxonMobil as a Geoscience Technician. I am a part of the Exploration group for South America southern margin. In this role, I get data from off-shore salt basin exploration. We collect new data from different vendors from South America where it is then processed and verified to make sure the data is properly referenced to the area of interest. This data is then compiled and used to create maps, correlations, iterations, and interpretations to create a final project for the block that will be bided on.

As a recent alumnus, I can't help but to cherish the many memories that I established with so many people throughout my time at TAMUK. The students and faculty create a welcoming and helpful environment that allow you to carve a path to your future. The interactions between these groups change you from a student to a professional by the end of your time at TAMUK. I was able to find a home at Texas A&M University-Kingsville, and ultimately lead to a successful career. GO HOGS!!!

Brian Wilkinson from Tomball, Texas: I graduated December 2017 with a Bachelor's of Science in Geology, and a Minor in Geographic Information Systems from Texas A&M University – Kingsville. I currently work for Schlumberger as a Field Technical Analyst offshore in the Gulf of Mexico. In my role I work to deliver data analysis and well monitoring for all types of different wells.

I am thankful to have been able to study at Texas A&M University – Kingsville, because it guided me to become the professional I am today. The Physics and Geosciences Department at Kingsville is unique in regards to the way they prioritize taking what you learn from lecture and applying that knowledge to the field. Due to this I think students are able to get a better grasp on the curriculum they are learning and therefore have a better understanding than those students who aren't afforded the same opportunity. Furthermore, I attended both winter and summer field camps that the department offers. Attending these field courses gives practical experience with different facets of industry as well as letting the students take the knowledge they have gained over the past 4 years and apply it in a real geological study.

Audrey Lucio from Corpus Christi, Texas: Hello, my name is Audrey Lucio, and I was born, raised, and reside in Corpus Christi, Texas. I transferred to Texas A&M University - Kingsville in the Spring of 2016 and graduated in the Spring of 2018 with a Bachelor's of Science in Geology and a minor in Geographical Information System. I attended both winter and field camp with Texas A&M University - Kingsville.

I currently work for Nye Exploration and Production, an Independent Oil and Gas Company, as a Geotech/Geologist. I am learning the many aspects it takes to find oil and gas, such as geology and geophysical, land and legal, engineering, and production work.

Attending Texas A&M University - Kingsville, helped show me how geology is not only applied out in the field but also in the industry. Both winter and summer field camps provided a hands-on insight into the field and industrial aspect of geology. Attending school here helped to lay a strong foundation that I will be able to build upon.



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Upcoming Events – Earth Sciences Week Events

The Geosciences Program is offering daily events at our 6th Annual Earth Sciences Week to our campus and local community. At our open house, faculty will demonstrate interesting Earth science activity from their classrooms and show how we study the Earth. We will be providing materials for our community Boy Scout troops to earn their merit badges in Geology. Monday, Oct 15th – Invited Guest Speaker – Patrick Nye (Nye Exploration & Production) "Building on Successes & Failures – The Life as an Independent" Come see how Mr. Nye has navigated the path of an independent oilman in south Texas. Mr. Nye has 35 years of experience in oil and gas exploration and development and more than fifteen years in the renewable energy business. He is also an alumnus of TAMUK. Open to all Geoscience majors, minors and friends of the Department. 7:00 PM. Location: Hill Hall117 Tuesday, Oct 16th - Departmental Open House Department Open House: GIS, Paleontology, Mineralogy & Petrology, Field Geology, and Geophysics demonstrations, fossils) on display. Open to the public. faculty personal collections (meteorites, minerals, Location: Manning Hall rooms 126, 127, 129, 140, and Hill Hall. 6:00 PM Wednesday, Oct 17th – Boy Scout Geology Merit Badges If your scout troop is interested in a merit badge please contact Mark.Ford@tamuk.edu Location: Manning Hall 126 6:30 - 8:30 PM **RSVP** required. Thursday, Oct 18th – Public Lecture "An Update and Review of the Exciting 2018 Hawaiian Volcanic Eruptions" Dr. Mark Ford (Assistant Professor of Geology at Texas A&M University - Kingsville) Location: Hill Hall 119 Open to the public. 7:00 PM Friday, Oct 19th - Campus Clean-up Activity Join us to pick up trash and help beautify the campus. There will be cold water available and a group picture afterward.

Photo Gallery: Field Trips

Location: Manning Hall 144 All TAMUK students and faculty welcome. 3:00 PM







Department of Physics and Geosciences Texas A&M University - Kingsville

Geosciences Calendar – Fall 2018

Date	Event	Contact	Notes
Sept 11	Visiting speaker – Randy Bissell	Dr. Ford	Hosted by
-			Geosciences
			Club and AAPG
Sept 11	Earth and Space Science Evening	Dr. Ford or	Open to the
	Joint with the Physics Program and	Prof. Nelson	public
	Department clubs		
Sept 29	Stratigraphy and Sedimentology Field Trip:	Dr.	
	Quaternary sedimentary geology of south Texas	McGehee	
Sept 25	College Night Out	Dr. Ford or	Hosted by
	Geosciences Club and AAPG event	Schneider	College of Arts and Sciences
Sept 30 –	GCAGS meeting in Shreveport, LA		Some faculty
Oct 2			may attend
Oct 11 – 13	Stratigraphy and Sedimentology Field Trip	Dr.	
	Central Texas – overnight	McGehee	
Oct 15 – 19	Earth Sciences Week events and	Dr. Ford	Open to the
	Departmental Open House – Events all	and Dr.	public. See Earth
	week long!	Hedquist	Science Week
Oct 22 - 27	Homosoming West Alumni wales mal		flyer for events
Oct 22 - 27	Homecoming Week – Alumni welcome!		
Nov 4 - 7	GSA meeting in Indianapolis, IN		Some faculty
			may attend
Nov 10	Houston Museum and Gem and Mineral show	Dr. Ford	
	trip (all classes welcome)		
Nov 13	Earth and Space Science Evening	Dr. Ford or	Open to the
	Joint with the Physics Program and	Prof. Nelson	public
	Department clubs		
Nov 15 - 17	Mineralogy Field Trip (Badu Hill)	Dr. Ford	All majors
	Central Texas – overnight		welcome
Dec 6	"Dead Day" – study day. Finals start Dec 7 th		