We finally feel like things are getting back to normal where we are back on campus and teaching face-to-face regularly. Although COVID-19 is still with us, it does not seem to be the life-threatening, all-encompassing factor it had been. Some are still at high-risk, however, so please be respectful of others if they mask up, social distance, and work online.

We are always indebted to our generous donors from the past and today and this year we had an amazing gift provided by Larry Wollschlager. $2 million was donated to initiate an Institute for Sustainable and Strategic Resources. President Wilson and Dean Kirken held a reception in the Reading Room to announce this gift. Funds will support research & education efforts related to critical minerals, specifically rare earth elements that are so important in modern technology and our economy. We thank you, Larry, for all you do!!

Many of you know Willie Quinn who has been leading the APOs for many years. This Homecoming (October 27-29), he will be honored with UTEP’s Distinguished Alumnus Award. Well-deserved and long overdue, I hope alumni, faculty and student will turn out to honor this great man who has given so much to our community.

We undergoing significant changes in faculty recently. Many of you attended the retirement celebration for Professors Libby Anthony, Diane Doser, Terry Pavlis and Laura Serpa in May. Luckily, an in-person event was possible, and it was obvious how much people enjoyed getting together again. Heartwarming testimonials were given for all of these faculty who have dedicated so much of their lives to UTEP and our students. We salute you and hope retirement is a wonderful experience to reward you for all your hard work over the years.

Also leaving us was Dr. Jie Xu who is taking a new position at Arizona State University after 6 years at UTEP. We will miss you Jie and wish you luck in your new location.
Joining us in August 2022 are James “Jay” Chapman from the University of Wyoming and David Young from Ohio University. Jay is a UTEP alum, so we welcome him back. His research focuses on the tectonics of convergent margins and the evolution of the continental lithosphere. David was formerly at UT San Antonio, so he knows our mission and will do great here. He works on the tectonics and geodynamics of the continental lithosphere with particular focus on the evolution and termination of continental collisions.

Faculty News

Kate Giles is 2022 recipient of the National AAPG Grover E. Murray Memorial Distinguished Educator Award. Congratulations!!!
Kate Giles with research team in the Flinders Ranges, South Australia in Summer 2022

Aaron Velasco lead three successful grant proposals: Center for Collective Impact in Earthquake Science (C-CIES): Building Inclusive Excellence, Diversity, Equity and Community into Earthquake Science (with Weidner & Karplus); Insights into Complexities of a Seismogenic Subduction Zone (with Gonzalez-Huizar & Karplus): Analysis of a High-quality Aftershock Data Set from the 2017 Tehuantepec (M8.2) Offshore Mexico; and an Implementation grant: Community-driven Inclusive Excellence and Leadership Opportunities in the Geosciences (CIELO-G – with Brunner, Gutierrez, Karplus & Ma).
Hernan Moreno received a grant from NASA ROSES Global Precipitation Mission (GPM) group in Collaboration with the the NOAA Cooperative Institute for Research in the Atmosphere (CIRA) at CSU entitled GPROF and Regime-dependent Uncertainties. This project investigates the structure of radar and satellite error precipitation estimations and potential application of these findings to improve the national precipitation forecasting chain relevant to the NAS Global Precipitation Mission.

Jose Hurtado was awarded a NASA grant for Participation in 2022 D-RATS Analog Test. This grant is for participation in the 2022 NASA Joint Exploration Test Team 3 (JETT-3) analog test. This project is testing hardware (next-generation space suits and geology field equipment) and concepts of operations for the Artemis lunar exploration program.

Hurtado received an additional $30K from Jacobs Engineering to support continued cataloging of astronaut photography of Earth taken from the International Space Station. Since 2020, I have funded nearly 20 students who have together cataloged approximately 10,000 photographs, adding metadata that NASA uses to populate the Gateway to Astronaut Photography web archive as well as to teach machine-learning algorithms.

Another $30K from Jacobs Engineering supports Hurtado’s Artemis-related efforts, including his role as a lead classroom and field instructor for NASA astronaut training in geology and planetary science, lead field instructor for "Geology 101" courses offered to NASA management and engineering personnel, and participation in NASA research activities such as the JETT-1 analog test in May 2022. Shown here is a photograph of Hurtado in the prototype ATLAS spacesuit when I was a test subject for JETT-1.

Hurtado is also a co-Investigator on a NASA-funded Planetary Science and Technology through Analog Research (PSTAR) grant titled ARDVARC: Augmented Reality Data Visualization Analog Research Campaign. This project will develop and implement augmented reality (AR) technologies to enable astronauts to interact with a variety of data types in the field. The start date for this (~$2M) project is October 1, 2022.
Tom Gill was funded to work on Sampling and Dust Support to the Black and Brown Carbon Monitoring Study in El Paso by the Texas Commission on Environmental Quality with the University of Houston.

Hugo Gutierrez-Jurado, in partnership with Southern Illinois University Edwardsville and Colorado State University, was successful in obtaining funding for A Course Scaffold for Integrating Science and Culture: Exploring Faculty Adaptations Across Disciplines and Institutions. This project designs, iteratively tests, and refines three new undergraduate courses that integrate humanistic perspectives in environmental sciences, geosciences, and agricultural biology.

Marianne Karplus became a PI on the high-profile project International Thwaites Glacier Collaboration: Science Coordination Office sponsored by the NSF, and co-PI with Julien Chaput, Aaron Velasco, Danniel Rodriguez and Soheil Nazarian (lead PI) on Distributed Acoustic Sensing for Interdisciplinary Geophysical and Civil Engineering Research and Education sponsored by the Department of Defense.

James Kubicki was selected as a Fellow of the American Chemical Society in 2021 and co-led with Rachel Phillips (UTEP), Craig Nichols (UBC) and Matt Pendleton a workshop at the Earth Educators’ Rendezvous on Preparing Students for Careers, Licensure and Industry in July 2022.

The dryland critical zone team had an all-hands meeting on May 23-25, 2022 at UTEP, and researchers, collaborators, and students from UTEP, New Mexico State University, University of Wyoming, Boise State University, Insights and USDA Agricultural Research Office had the opportunity to share progress, discuss research ideas, and identify potential future collaboration. We also visited field sites (the pecan orchard at Tornillo, TX and Jornada Experimental Range at Las Cruces, NM).
Field Camp II a Success – To broaden the experiences our students receive in Field Camp II, a number of faculty (Doser, Engle, Gutierrez, Hurtado, Karplus, Ma, Ricketts, Velasco) revised the course content to include hydrology and geophysics hands-on work. This is part of our department-wide effort to provide career-related skills development opportunities to our students. They conducted a week of fieldwork locally in El Paso focused on hydrology and geophysics, followed by a week in northern Arizona doing field geologic mapping and geophysical surveys in the San Francisco Volcanic Field and field trips to the Grand Canyon, Meteor Crater, and the Lava River Cave lava tube. The third week was focused on data processing and creating of map products and reports in El Paso.
Student & Alumni Success

This year, the Department of Geological sciences witnessed 28 B.S., 7 M.S. and 2 Ph.D. students graduate and are on their way to careers and graduate school. This year’s students received approximately $25,000 in UTEP and departmental scholarships. The 2022-23 academic year began with the welcoming of 13 new graduate students.

Student/Alumni success highlights were:

Mya Valenzuela won best presentation award in Physical Sciences at the COURI Spring Symposium 2022. Mya Valenzuela working on her research project.

Undergraduate researchers Rebecca Navarrette and Mya Valenzuela were selected to participate in the COURI SURPASS (summer 2022) and the COURI MERITUS (fall 2022/spring 2023) programs.

Rebecca Navarrette, Mya Valenzuela, Tricia Tellez and Madison Woelfel received scholarships from the AAPG SWS section.

Rebecca Navarrette, Tricia Tellez and Madison Woelfel received scholarships from the West Texas Geological Society.

Rebecca Navarrette received a 2022 Memorial Funds Research Grant from the Colorado Scientific Society and a scholarship from the West Texas Geological Society.

Tricia Tellez received a scholarship from the Roswell Geological Society.

Madison Woelfel was selected as a grant recipient for the 2022 American Association of Petroleum Geologists Foundation Grants-in-Aid Program, a GSA research grant and the Wendell J Steward Scholarship by PBS-SEPM.

Jordan Caylor (MS Geophysics 2020) was hired by Los Alamos National Lab.

Jenna Faith (PhD expected 2022-23) was hired by Los Alamos National Lab.

Alex Eddy (MS Geophysics expected 2022) had a summer internship at the Nevada National Security Site.

Yeshy Seldon (MS Geophysics expected 2023) had a summer internship as a NASA Develop Fellow in Colorado.

Lucia Gonzalez (MS Geophysics 2020; PhD expected 2023) continued her internship at Lawrence Livermore National Lab. She also received funding to present her research on Thwaites Glacier at the Cryosphere Symposium in Reykjavik, Iceland during August 2022.
External grant and scholarship recipients Tricia Tellez (left), Rebecca Navarrette (middle), and Madison Woelfel (right) with their advisors Ben Brunner and Kate Giles in the field in Utah.

Aimee Garcia (MS Geophysics 2021) was hired by TCEQ in San Antonio several months ago

Julia Astromovich (MS Geophysics 2020) is employed by Overton Park Oil & Gas in Ft. Worth

Juan Ochoa Chavez (PhD Geological Sciences 2019) now works for TerraSond in Houston

Syprose Nyachoti, PhD (UTEP, 2016) was hired as Research scientist position at the Department of Toxic Substances Control in California in August 2022.

The Geology Field Experience Funds were awarded to graduate student Yeshey Seldon and undergraduate students Oskar Alvarez, Gabrielle N. Contreras, Aracely Garcia, Christian L. Leach, Leslie V. Moreno, Carmel G. Murillo, Rebecca D. Navarrette, Tricia A. Tellez, and David W. West.

Stephanie Marquez awarded as best poster in NOAA-CoRP national annual meeting at Fort Collins (Picture below).
- UTEP NOAA summer bridge interns at Jornada Experimental Range field trip with GeoSenSE (picture below- trips sponsored by departmental summer field experience fund)
- Rivers and Basins exhibit by Alvarez and Moreno as part of the Smithsonian Waterways Exhibit at the UTEP Centennial Museum
- https://scholarworks.utep.edu/cgi/viewcontent.cgi?article=1000&context=nsf
Fall 2021 & Spring 2022 Graduating Student Award Winners

Fall 2021
   Outstanding Graduating Senior in Environment Science – Yeshey Seldon
   Outstanding MS Student in Geology - Aaron Conley
   Outstanding Graduate Student in Geophysics – Aimee Garcia
   Outstanding PhD student in Geology – David Lankford-Bravo
   COS Best dissertation award: David Guenaga

Spring 2022
   Outstanding Graduating Senior in Environment Science – Gerald Strenke
   Outstanding Graduate Student in Environmental Science – Martha Gardea
   Outstanding Graduate Student in Geology – Joshua Lewis
   Outstanding Graduate Student in Geophysics - Derek Scott
Colloquium - “GEOFORCE – Gaining Energy & Outlook for Optimizing Research, Collaboration & Education

This year’s Colloquium featured the keynote talk “The Co-Evolution of Earth and Life: Harnessing the Power of Mineral Information” by Dr. Robert Hazen from the Geophysical Laboratory and George Mason University and was sponsored by James Cearley and Larry Franceware. Our sponsors’ generous gifts made planning the Colloquium much easier.

We thank the organizing committee America Alvarez, Iliana Galvan, Lucia Gonzalez, Jessica Hartman, Judith Hoyt, and Rachel Phillips who deserve special accolades for leading the effort.
Colloquium Judges: ?????.
White Award Judges: Jose Hurtado, Deana Pennington, Hernan Moreno, Laura Alvarez, Hugo Gutierrez

Outreach
Aaron Velasco with Katalina Salas, Judith Hoyt, and Marianne Karplus led two successful one-week, high school summer camps funded by Shell to encourage students to consider a career in the Geosciences. These activities are one of the few opportunities local students have to learn about the Earth, so it is invaluable to the students and as a recruiting mechanism for the department that deserves our praise and support.

The Rivers, Rocks & Resources Workshop sponsored by the Halliburton Foundation encompassed a wide range of activities, from painting with minerals to cutting of Geodes and Thunder Eggs. The effort was led by Ben Brunner, Gail Arnold and Maryam Zarei, with help from faculty Hernan Moreno & Laura Alvarez (Rivers), Phil Goodell & Vicky Harder (Painting with minerals), Antonio Arribas (Resources & Energy), Kate Giles (A day at the beach in El Paso), and Rip Langford (El Paso Rocks) and was supported by graduate students Alfredo Dagda Torres, Andres Monsalve, Claudio Araya Torres, David Muller, Eduardo L. Zuniga, Hannah Adowa A. Buamono, Jayanga Hambange Don, Jorge A. Mayo, Juan Pablo De Anda De Alva, Marisol Dominguez, Mohan Pant, Nuria Andreu, Rosa E. Espana, Santiago Hoyos Echeverri, Stephanie Marquez, Yeshey Seldon, Nohemi Valenzuela and Judith Hoyt.
We are happy to announce that the Halliburton Foundation Inc. will continue to support El Paso Area High School Geological Education also in the coming year in the framework of the “Rocks & Resources” outreach activity proposed by Ben Brunner.

Students, faculty, and staff in the department organized and participated in a hugely successful Earth Science Day on October 23, 2021, which brought the public in to see a large variety of earth science themed booths and events throughout the Geological Sciences Building and lawn. A synchronous virtual series of presentations by DEERS faculty allowed for participation beyond campus. This year’s theme was, “Water Today and for the Future”. The event included fun activities for kids of all ages including a bean bag toss, rocket launches, drone demonstrations, gold panning, a stream table, and a weather balloon launch. Students affiliated with local earth science organizations, such as UTEP chapters of the Association for Women Geoscientists (AWG) and Society for Advancement of Chicanos and Native Americans in Science (SACNAS) and the UTEP Geology Club, organized booths which were well attended and demonstrated an excellence in leadership by DEERS students. Earth Science Day celebrations were bolstered by outstanding presentations and contributions from the Texas Commission on Environmental Quality, the International Boundary and Water Commission, El Paso Water’s TechH2O, and Insights El Paso. Turnout for the event was very strong and included a visit from UTEP’s own President Wilson and Provost Wiebe. The 2021 event was organized by Dr. Lixin Jin, Dr. Diane Doser, Dr. Mark Engle, Dr. Annette Veilleux, Katalina Salas, Julio Ceniceros, Nuria Andreu-Garcia, and Nohemi Valenzuela.
We are fortunate to hire Maryam Zar to replace Ignacio Ronquillo as our new Undergraduate Program Coordinator. Maryam comes to us with a lot of experience helping students at UTEP. She is connected throughout the El Paso area school districts and will be working with faculty, staff and students to engage and recruit new majors.

In Memoriam

Professor Robert Schmidt – Yours truly neglected to include Dr. Schmidt’s passing when it occurred, but I am correcting my error now. Robert Howard Schmidt, Jr., Ph.D., passed away on Wednesday, July 26, 2017. He was 77 years old. He was a longtime resident and supporter of El Paso, Texas. Robert moved to El Paso in 1969, where he taught Physical Geography at UT-El Paso for 31 years. Upon his retirement, he earned the honor of Professor Emeritus. He had a passion for the desert, research, adventure, and traveling the world with his loving wife Merced Aida. Robert’s survivors are his wife for 32 years, his two sons, Howard (Jennifer), and Justin (Debbie) and his daughter, Andrea Kelly (Rodney) Brewer. He had 5 grandchildren, Bergen, Lauren, Gianna, Channing and Reid. His other survivors in crime are Lourdes Medina and Pilar Medina.

Of course being a geographer Rob loved to travel. Some of his adventures can be viewed on his obituary where he is seen with camels and elephants and more.

Emile Couroux passed away August 8, 2022. He was an MS student with Diane Doser and Rip Langford. Emile graduated with a B.S. from UTEP as well. He started an environmental business in El Paso, and was successfully providing employment to 10, several of them our ex-students. He gave back as a judge for our Colloquium on a number of occasions. As an undergraduate engineering student at UTEP, he took an Engineering Geology course, quickly switched majors to Geological Sciences, and never looked back. He went on to also complete his MS degree at UTEP, working with his advisors Dr. Rip Langford and Dr. Diane Doser. Emile went on to have a successful career in environmental geology, eventually serving as President and Principal of ESSCO Environmental, Inc. who provides employment to ~10 employees, many of which are DEERS alumni. Emile frequently gave back to the department, serving as a judge at the departmental colloquium on many occasions, volunteering his time to discuss career options with students, and bringing on interns to ESSCO from the Environmental Science Program. His passion for the Earth Sciences and for service for the community, including serving as a part-time instructor at El Paso Community College, will be missed.
Professor Jasper Konter died on 3 July, while his wife Professor Bridget Smith-Konter suffered serious injuries and is undergoing physical therapy. Both were currently at the University of Hawaii, Manoa but had served as faculty at UTEP from 2008 to 2014. Jasper was instrumental in building and maintaining facilities for faculty and students working in volcanic geology and isotope chemistry, including his involvement with the Center for Earth and Environmental Isotope Research. Bridget gave the keynote talk at the 2021 Colloquium entitled “The 2018 Kilauea Volcano Eruption - Sequences, New Science, and Plenty of Surprises!” They have two young children and there is a GoFundMe set up, https://gofund.me/6cacdb03 to help with expenses stemming from this tragic accident.

Professor Ken Clark entered into eternal rest on Saturday, March 06, 2022 in El Paso, Texas. He was a wonderful husband, father, son, grandfather, and will be greatly missed.

Dr. Ken Clark’s memoirs... “Jambo Bwana” cover his birth through his 4 years in Africa with Anglo American Mining. It was really amazing the scope and breadth of his work first in East Africa in the Rift System and South Africa in the diamond province in Orange Free State and Namibia.

Please join us as UTEP Earth, Environmental & Resource Sciences moves forward to learn more about how we are using education and research to help society deal with today’s complex geological, environmental, and energy issues. We are happy to include you in our efforts.

James Kubicki
Chair, Earth, Environmental & Resource Sciences