Apt. 408 215 N. Stanton **David F. Lankford-Bravo** 914 483-7715

El Paso, TX, 79901 Dfbrav@gmail.com

**EDUCATION**

**University of Texas El Paso**

Ph D. Student Geology, Salt Tectonics and Sedimentation Expected 2021

Research Advisor: Katherine Giles, Rip Langford GPA: 3.8

**PhD Thesis:** Characterization of Multiple Stages of Syndepositional Deformation at the Onion Creek Diapir,

Paradox Basin, UT

**University of Houston**

Bachelors of Science in Geology, University Honors with Honors in Major May, 2017

University of Houston, Earth and Atmospheric Science Department, Honors College GPA: 3.3

Research Advisor: Paul Mann

**Senior Honors Thesis**: Effect of the changing strike of the step-up fault marking the continent-ocean boundary on the structure of overlying fold belts in the northwestern Gulf of Mexico

**Additional Projects:** Characterization of isolated lenses of high velocity Eocene to Miocene Limestone in the deepwater

Gulf of Mexico, The Pacific origin of Salt in the Gulf of Mexico, The Eagleford extent into Mexico

**Languages:** Fluent in English and Spanish. Basic Russian,.Python, Matlab, Javascript, Unix, Awk

**RELEVANT COURSEWORK**

**University of Texas El Paso**

- Nonseismic Exploration Methods - Fundamentals of Oil and Gas Investing - Sed. Depositional Environments

- Sequence Stratigraphy - Sandstone Petrography - Petroleum Geology

- UTEP 2018 IBA Team Member - Well Logging - Hydrogeology

- Carbonate Petrography & Depositional Environments - Mineral Resources, Economy, & Environment

- Quantitative Techniques, Geological Sciences – Digital Image Processing - Indep. Study Point Cloud Analytics

- Seismic Processing - Tectonics - Geochemistry

**University of Houston**

* Petroleum Geology - Modern Sediments Field Course - Sequence Stratigraphy
* Structural Geology - Stratigraphy - Field camp
* Basin Analysis - Potential Fields Short Course

**Professional Courses**

* AAPG Machine Learning 101, 2019 - The Data Science Course 2019: Complete Data Science Bootcamp
* AAPG Well Tie Short course - AAPG GTW Deepwater and Shelf Reservoirs, 2015
* GCAGS 2015 Gulf of Mexico Primer - GCSSEPM Seismic Interpretation Course
* ExxonMobil Reservoir Modelling Short Course

**SOFTWARE SKILLS**

ArcGIS, Neuralog, Google Earth, Petrel, Midland Valley Move, Adobe Photoshop, Microsoft Office, Photoscan, Cloud Compare,QGIS, Agisoft Metashape, Python, Landmark Decision Space, Matlab, SMT Kingdom, Oasis Montaj Talwani, Google Earth Engine, Blender, Javascript, Unix, Awk, Structure Solver, Seismic Unix, Shearwater Reveal

**RESEARCH INTERESTS**

* Salt Tectonics & Sedimentology
* Fluvial Sedimentation
* Integrated Basin Analysis – Geochemistry, Sedimentology, Structure, Tectonics
* Passive Margin Fold Belt Development & Kinematics
* Accommodation Space on Rifted Margins
* Integrating 3D Modelling, Field Geology, and Datascience
* Datascience for the Geosciences

**Collaborations**

* Integrated Geochemical, Sedimentological, Structural & Analytic Studies of Altered Sediments at the Onion Creek Salt Diapir Contact
  + Co-led with Sarah Giles, PhD Student, Columbia University
  + 2 Undergraduate Projects integrating field data and 3D models
* Structural & Sedimentologic Studies of the Neoproterozoic Wonoka Canyons, South Australia
  + Collaborated with structural interpretations of deformation in the Wonoka Canyons near Fortress Hill, South Australia
  + 3D photogrammetric modelling & field map integration
* Structural and Geochronological Studies of the Florida Mountains, Deming, NM
  + Collaborating with UH Professors leading undergraduate research
  + Mentoring two students in integrating field data with 3D Photogrammetric Models
* Onset of the Cambrian – Ordovician Delamerian Orogeny, South Australia
  + Collaborative project with Sarah Giles, PhD Student, Columbia University

**Students Supervised/Mentored:**

**Co-Supervised with Sarah Giles, Columbia University**

Hao Pham, Undergraduate, UTEP – 3D Structural Mapping, the Blob, Onion Creek Salt Diapir, Fisher Valley, UT

Rachael Hill, Undergraduate, UTEP – Sedimentology & Geochemistry, the Blob, Onion Creek Salt Diapir, Fisher Valley, UT

Mia Ramirez, Undergraduate, UTEP – Pyrite Sulfur Isotope Measurements, Neoproterozoic Paleocanyons, South Australia

**Mentoring**

Kenneth Shipper, Undergraduate, University of Houston – Integrating fracture measurements into a 3D Map, Florida Mts, Deming, NM

Hunter Martin, Undergraduate, University of Houston - Integrating fracture measurements into a 3D Map, Florida Mts, Deming, NM

**EXPERIENCE**

**Salt Sediment Interactions Research Consortium (SSIRC)** August 2017 – Present

**-** PhD student working on an integrated sedimentology and structure project that incorporates field mapping, drone based 3D modelling, quantitative computational methods and machine learning to understand the evolution of multiple stages of halokinetic? deformation at the Onion Creek Salt Wall, Fisher Valley, Utah

**-** Developed and taught other students & professors a workflow that integrates field mapping, 3D modelling, and remote structure and sedimentary isopach mapping using matlab and python

**Field Assistant**, **Structural Geology & 3D Digital Field Modelling, South Australian Fieldwork**  Summer, 2019

* Structural mapping & in field 3D model & basemap creation from drones as a field assistant

for a Columbia University PhD Student project focusing on ~ 600 m.a. deformed incised canyons

* 3D Structural Interpretation

**Teaching Assistant. University of Texas El Paso** August 2017 – Present

**-** Teaching assistant for Spring Geophysics & Hydrology Field Camp, 2019

- Teaching assistant for Winter Geologic Field Camp, 2018

- Teaching assistant for an undergraduate level Sedimentology and Stratigraphy Course with a field and lab component, 2017, 2019

- Lab teacher for an Principles of Earth Science Course, 2018

**Caribbean Basins, Tectonics and Hydrocarbons Project (CBTH)** May 2014 – June 2017

**Research Assistant** UH Department of Earth and Atmospheric Sciences

**-** Seismic interpretation, well correlation, and mapping of deepwater and onshore Gulf of Mexico units and structures

**-** Experience working with two teams of 4 on local and regional scale research projects focusing on the Gulf of Mexico

**CAP Res. Geotechnical Intern** July 2016 – October 2016

**-** GIS specialist focusing on relating datasets to investigate induced seismicity across the US

**University of Houston Department of Student Housing and Residential Life** Jan 2014 – May 2015

**Resident Assistant** Cougar Place Residential Hall

**-** Planned and executed educational, community building, and relaxing events and programming for 48 residents as a member of a 16- person team

**Hess Deep Research Undergraduate Assistance** May 2014 – August 2014

- Petrographic microscope analysis on 32 thin sections of igneous rocks from Hess Deep looking for pyroxenes

- Analyzed pyroxene content using a microprobe to gain insight into the chemical evolution of the samples

- Worked as part of a team on the microprobe with a PhD student to keep it running and help other students analyze samples

**ACTIVITIES AND HONORS**

**Energy Adventure Workshop, 2020**

**UTEP Summer Research Grant, 2019**

**GSA Graduate Student Research Grant, 2019**

**National Science Foundation Graduate Student Research Fellowship Program (GRFP) Honorable mention, 2018**

-Salt Shoulders: new insights into salt-sediment interactions involving dissolution, partial burial, and salt flow

**James Cearely Field Studies Scholarship, 2018**

**AAPG Wanek Grant, 2018**

Honorable Mention 2015,2016 GeoScience Day Undergraduate Poster Presentation at the University of Houston

UH Field Camp Scholarship, 2015

Chevron Academic Excellence Scholarship, 2014

Volunteer Member, Houston Geological Society International Explorationists Group, 2014

UH Academic Excellence Scholarship

**SPEAKING ROLES & PANEL MODERATIONS**

**Panelist,** Mentoring Programme Round Table: Value of Mentoring: WPC 6th Future Leaders Forum, St. Petersburg, Russia, 2019

**Moderator,** Climate Change: Tackling a Global Dialogue: WPC 6th Future Leaders Forum, St. Petersburg, Russia, 2019

**PROFESSIONAL AND STUDENT ORGANIZATIONS**

**Chair, Young Professionals Program, 23rd World Petroleum Congress, Dec. 2020**

**Chair, Young Professionals Program, US National Committee to the World Petroleum Council, Present**

**USA Young Professional Representative, World Petroleum Council Young Professionals Committee, Present**

**Sustainability Planning Committee Member, World Petroleum Council’s 6th Future Leaders Forum, St. Petersburg, Russia 2019**

**Society of Petroleum Resource Economists, New Student Chapter Development Coordinator, 2018**

**Vice President, AAPG at the University of Texas at El Paso, 2018-2019**

**Student Chapter Development Coordinator, Society of Petroleum Resource Economists, Feb 2018**

**-** Will serve as a mentor to developing SPRE student chapters internationally

- Will mentor young students in leadership, petroleum economics, global communication, and event planning

- Responsible for chapters in the US, Russia, UK, China and India

**Vice Chair of Business Competition, the Energy Coalition at the University of Houston, 2016-2017**

* Managed an interdisciplinary team of student leaders to run an energy efficiency housing development project in a traditionally impoverished neighborhood focusing on 1. Community development and education 2. Energy efficiency education and technology implementation, 3. Collaboration between community, University, and Industry partners
* Mentor student organizations seeking to develop their own business competitions and short courses on organizational, leadership, and pedagogical skills

**President, GeoSociety at the University of Houston 2015-2016**

* Led a team of 11 to create social, career development, and academic opportunities
* Returned as alumni to mentor students out on the annual 2018 GeoSociety Winter Field Trip in West Texas and New Mexico

**Event Coordinator, GeoSociety at the University of Houston 2014-2015**

* Coordinated a variety of short courses and as part of a team created 5 research projects for undergraduate students at the University of Houston

**Vice Chair of Protocols, Founding Member, Energy Coalition at the University of Houston 2015-2016**

* Defined and clarified protocols for the continued development of a new organization

**Organizing Committee Member, Direct Energy/UH Energy Efficient Housing competition 2015-2016**

* As a member of a team of 5, ran a $20,000 business competition sponsored by Direct Energy focusing on student teams designing energy efficient housing

AAPG Student Member HGS Student Member Gold Key Honors Society

NSCS Honors Society UH Club Lacrosse, 2014

UH Policy Debate, 2012-2014 - 5th place speaker at the annual UH Debate Tournament, 2013

**ABSTRACTS AND PRESENTATIONS**

* **Lankford-Bravo, D.**, K.A. Giles, R. Langford, *Dynamic Depositional Systems near Salt: Coupled Deformation and Deposition of the Permian Cutler Formation, Onion Creek Diapir, Fisher Valley, Utah,* SEPM ISGC
* Giles, S.M, N., Christie-Blick, **Lankford-Bravo, D**., *Discerning the submarine from the subaerial: New insights from the mid-Ediacaran Wonoka canyons, South Australia,* SEPM ISGC
* Christie-Blick, N., Giles, S.M., and **Lankford-Bravo**, **D**., 2020, *New insights on the origin of the Wonoka canyons (mid-Ediacaran), South Australia*: 36th International Geological Congress, Delhi, India
* **Lankford-Bravo, David.** K.A. Giles, R.Langford, *Characterization of Syndepositional Deformation in the Permian Cutler Formation, Northern Margin Onion Creek Diapir, Paradox Basin, UT,* Poster, GSA Annual Meeting 2019
* **Lankford-Bravo, David.** K.A. Giles, R.Langford, *Multiple Stages of Syndepositional Halokinetic (?) Deformation in the Permian Cutler Formation, Northern Margin of the Onion Creek Diapir, Paradox Basin, UT,* Poster, AAPG ACE 2019
* Langford, R.P., K.A. Giles, **D. Lankford-Bravo,** D. Ronson, R. Soltero, A. McFarland, J. Heness, *Syndepositional Synclines Developed in Salt Wall Roof Strata, Paradox Basin, Utah and Colorado*, Poster, AAPG ACE 2019
* **Lankford-Bravo, David.** Paul Mann. *Detailed mapping of the junction of the late Jurassic “step-up” continent-ocean boundary of the northern US GOM with the continent-ocean transform along the east coast of Mexico,* Presented at GSA South Central Meeting 2017
* **Lankford-Bravo, David.** Paul Mann*. Delineation of the Mesozoic “step-up fault” at the continent-ocean boundary in the US Gulf of Mexico and its Cenozoic role as a thrust-ramp for passive margin fold-belts,* Presented at AGU Fall Meeting, 2016
* **Lankford-Bravo, David.** Paul Mann*. Location of the continent-ocean boundary “step-up fault” and its influence on the passive margin fold belts of the western Gulf of Mexico,* Presented at the UH-HGS Sheriff Lecture, 2016
* **Lankford-Bravo, David.** *The Effect of mentors in my time at UH,* Invited talk given to the UH NSM College Dean’s Advisory Board on October 14th, 2016
* **Lankford-Bravo, David.** Paul Mann*. Delineation of the Mesozoic “step-up” at the continent-ocean boundary in the US Gulf of Mexico and its Cenozoic role as a thrust-ramp for passive margin fold-belts,* Presented as a talk at the UH Undergraduate Research Day, October 13th, 2016
* Loureiro, Patrick, **David Lankford-Bravo.** *Oil and Gas 101 and How to Get into Grad School,* Presented as a talk to undergraduate student members of the GeoSociety student organization, October 12th, 2016
* **Lankford-Bravo, David.** Paul Mann*. Location and structural role of the GOM step-up fault in the eastern, northern and western GOM,* Talk presented at the CBTH Year’s End Sponsor Meeting, 2016
* **Lankford-Bravo, David.** Paul Mann*. Improved mapping of the sub-salt, continent-ocean boundary in the US Gulf of Mexico and implications for the structural relief for overlying folds of the passive margin fold-thrust belt,* Poster presented at GCAGS, 2016
* **Lankford-Bravo, David**, Bugti, Muhammad Nawaz, Cornelius, Sharon, and Mann, P. *Documentation of isolated lenses of high velocity, Eocene to Miocene limestone within clastic rocks above and below allochthonous salt bodies, northcentral Gulf of Mexico*, Poster presented at GCAGS, 2016
* **Lankford-Bravo, David**. *UH Students in Energy: The Energy Coalition Housing Project*, Oral Presentation to EXPLORE Energy & Sustainability Summer Institute, July 27th, 2016
* Mann, P., Padilla, R., Nguyen, L, and **Lankford-Bravo, D.** *Geologic and Geophysical Evidence for a Pacific Origin for Seawater Filling the Callovian Gulf of Mexico Basin*, Presented by Drs. Paul Mann and Ricardo Padilla at AAPG ACE, 2016
* **Lankford-Bravo, David.** Paul Mann. *Basement controls on morphological and structural characteristics of the western Gulf of Mexico passive margin fold belts: Perdido-Port Isabel and the Northern and Southern Mexican Ridges*, Presented at the UH-HGS Sheriff Lecture student poster competition (2014), UH EAS Annual Student Research Day (2014, 2015), and GCAGS 65th Annual Convention (2015). Won Honorable Mention for UH EAS Annual Student Research Day.
* **Lankford-Bravo, David.** Paul Mann.*Restoration of the passive margin fold belt of the Mexican Ridges using 3D MOVE*, Presented at the Caribbean Basins, Tectonics and Hydrocarbons project Year End Meeting to various sponsors from the industry, 2015

**PUBLICATIONS**

**-** Brunner **et al.**, 2019 *Synthesizing old questions with new developments in caprock research: is it time to abandon well-trodden paths?* GCSSEPM Perkins-Rosen Research Conference Publication, Houston, Texas, December 2019