

## Student Poster List (Cont.)

Empirical Determination of the Effective Solid Modulus in Organic-Rich Shales by [Larkin Spires](#)

A cautious tale: what drove topographic growth of the Chocolate Mountains Anticlinorium, San Gabriel Mountains... by [Karissa Vermillion](#)

Novel data-integration workflow to reconstruct paleoenvironmental conditions: Lessons from organic Re and Os...Basin by [Ana Vielma](#)

Processing and interpretation of elastic waves from a 3D fiber-optic VSP in the Permian Basin, West Texas by [Yin-Kai Wang](#)

Unveiling the Hidden Threat: Drought-Induced Inelastic Subsidence in Expansive Soils by [Jennifer Welch](#)

Convolutional Neural Network Assisted Least Squares Migration by [Boming Wu](#)

Comparing the low-frequency content of seismic source-receiver combinations using surface-wave analysis: A field case...by [Yu-Tai Wu](#)



Department of Earth  
and Atmospheric Sciences  
College of Natural Sciences  
and Mathematics

# 25th Annual Robert E. Sheriff Lecture



## First Presentation



Two Decades of Exploration and Discoveries Enabled by the National Center for Airborne Laser Mapping: Contributions to the Archaeology of North and Central America.

[Dr. Juan Carlos Fernandez-Diaz](#), Dep. Of Civil and Environmental Engineering, University of Houston

## Second Presentation



The Habitat of Giant Fields in the Gulf of Mexico: Geology, Geophysics, Digital Technology: Are There More Giants to be Found?

[Charles A. Sternbach](#), Star Creek Energy, Adjunct Professor, University of Houston

Co-author: Richard S. Bishop

Scan QR Code to go to our  
UH EAS website!



## Program Highlights

- ◆ [5:30-6:30PM](#) Social hour & UH student posters
- ◆ [6:30-7:30PM](#) Welcome & Dinner
- ◆ [7:30-9:00PM](#) Presentations
- ◆ Sheriff Lecture Committee: Dr. Rob Stewart, Linda Sternbach, Dr. Paul Mann, Dr. Jiajia Sun

## Student Poster List

Quantification and Comparison of Per- and Polyfluoroalkyl Substances (PFAS) in Edwards Aquifer & Neches River- Southern Texas by [Amna Afzal](#)

Proposed Cretaceous hydrocarbon play based on syn-rift Cretaceous source rocks, deepwater...by [Olajumoke Akinpelu](#)

Temporary Sediment Storage in Proglacial Lakes Near Kangerlussuaq, Greenland by [Samantha Baker](#)

Breaking the Ice: Thermal-Mechanical Erosion of Permafrost in Greenlandic Deltas by [Lucille Baker-Stahl](#)

Understanding pre-salt, rift and sag hydrocarbon plays of the deepwater Campos Basin, Offshore Brazil by [Ruth Beltran](#)

Locating unmarked burials at historic cemeteries in Texas using geophysical methods by [Charles Clapsaddle](#)

Seismic Stratigraphy of Valdivia Bank, Walvis Ridge, South Atlantic Ocean from Multichannel Seismic Data...by [Edgar Contreras](#)

AGATNet: Adaptive Graph Attention Network-based Bias-Correction for CMAQ-Simulated PM2.5 concentrations over Korea by [Rijul Dimri](#)

Geochemical Investigations into a Miocene/Pliocene Tephra Which May Constrain the Timing of Cervidae in North America by [Shawn Fields](#)

Quantifying the Uncertainty of 3D Electrical Conductivity Structure of the Yellowstone Plateau Using Magnetotelluric Data...by [Julio Garcia](#)

Interpreting marine magnetic anomalies with deep learning by [Jay Ghosh](#)

Subsurface Characterization of the Mare Orientale Impact Basin Region of Earth's Moon by [Kyla Gray](#)

Proglacial Delta-Front Sediment Transport in West Greenland by [Nilay Gungor](#)

The detached architecture and deep laccolithic inflation of the Neogene-Quaternary Luzon Arc near Taiwan by [Yu-Huan Hsieh](#)

Tonga-Kermadec-Hikurangi subduction initiation timing from seismic tomographic slab reconstructions by [Sui Jia](#)

Uncertainty Quantification of Electromagnetic Inversion Using Invertible Neural Network by [Divine Kalu](#)

Influences of California Wildfires on CO<sub>2</sub>, CO, and CH<sub>4</sub> by [Thishan D. Karandana Gamalathge](#)

Identifying anthropogenic methane and carbon dioxide emissions sources in Houston, Texas by [Irfan Karim](#)

Cloud Formation and Precipitation over Texas during TRACER Campaign: Improving WRF-Chem-SBM Simulations using...by [Nima Khorshidian](#)

Modern benthic foraminiferal assemblages offshore Thwaites Glacier, Amundsen Sea, Antarctica; implications for... by [Asmara Lehrmann](#)

Influence of Clay-Bound Water on Wave Dispersion and Attenuation Signatures of Shale by [Teng Long](#)

Calibration of Stalagmite  $\delta^{18}O$  for Paleoclimatic Interpretations in Cueva Enseno, Hatillo, Puerto Rico by [Gabriel Lopez](#)

Measuring Seismic Anisotropy in Granite for Enhanced Geothermal Systems by [Mayra D. Lopez Carraquilla](#)

Could the deepwater, rifted-passive margin of Argentina be as prolific in hydrocarbons as its Namibian conjugate margin?...by [Daniel Maya](#)

Modeling Pore Pressure Amplification in Heterogeneous Poroelastic Media using Biot Theory by [Joseph McNease](#)

Vehicle Electrification and New Tailpipe Emission Standard: Health and Air Quality Benefits in the Four Major US Cities by [Ali Mousavinezhad](#)

A comprehensive approach combining positive matrix factorization modeling, meteorology, and machine learning...by [Delaney Nelson](#)

A 1D CNN-based Digital Twin of CMAQ: Predicting NO<sub>2</sub> concentration over the most populated urban regions in Texas by [Mahsa Payami](#)

How Oceanic and Oceanic Plateau Crustal Structure Controls Deepwater Plays, Colombian Basin by [Juan P. Ramos Vargas](#)

Combining Hyperspectral Imaging, X-ray diffraction, and Petrography to interpret stalagmites for paleoclimate reconstruction by [Ali Raza](#)

Planform Shoreline Metrics for Galveston and Follet's Island, TX by [Sara Rojas](#)

Deep Learning based Digital Twin for Simulating CMAQ Surface NO<sub>2</sub> Levels over the CONUS by [Ahmed Salman](#)

Evaluating the Efficacy of Deep Learning and Hybrid Models in Forecasting PM<sub>2.5</sub> Concentrations in Texas: A 7-Day...by [Shihab Shahriar](#)

Along-strike crustal transition from the rifted volcanic margin of the Guinea Plateau in Senegal to the non-volcanic...by [Md Upal Shahriar](#)

Assessing the effectiveness of artificial neural networks (ANN) and multiple linear regressions (MLR) in forecasting AQI...by [Seyedeh R. Shams](#)

Predicted hydrocarbon trends of the Guyana-Suriname margin based on a 3D full-thickness lithospheric and basin model by [Kenneth Shipper](#)

Deep-BCSI: A Deep Learning-Based Framework for Bias Correction and Spatial Imputation of PM<sub>2.5</sub> Concentrations...by [Deveshwar Singh](#)

Estimation of Diffuse Solar Radiation Models for a Tropical Site in Nigeria by [Olanrewaju Soneye-Arougundade](#)