

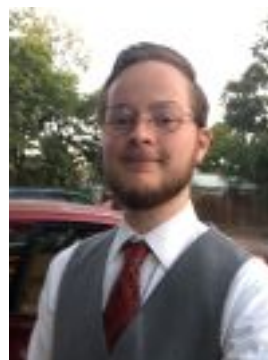
# Fall 2025 Colloquium

Thursday, December 4, 2025 - 4pm to 5pm - 127 McFarland Science Building  
(Refreshments available at 3:50pm)

## ETAMU Student Presentations

### **Josiah Baker** - *Constraining Neutron Star Equation of States using Machine Learning and Advanced Nuclear Models*

**Josiah Baker** spent 17 years in Mexico before coming to the United States to attend LeTourneau University. There, he earned a bachelor's degree in Engineering Physics and strengthened his dream of using the beauty of physics to enrich and improve the lives of others. Now, he is working toward a master's degree at ETAMU in pursuit of his dream. Aside from classes, he works on neutron star EoS research under Dr. Bertulani and does Geant4 based work for PANTEX. Following his masters, Josiah plans to pursue a PhD in Space Physics, aiming to study space plasmas and their interactions with Earth's magnetic field which result in geomagnetic storms and auroras.



### **Caitlin Bell** - *Characterizing an Iron Giant: High-Resolution Dayside Spectroscopy of UHJ WASP-178b with GHOST/Gemini South*

**Caitlin E. Bell** is a senior undergraduate astrophysics student at East Texas A&M University. She has previously conducted research over asteroid lightcurve analysis, which has resulted in a first-author submission and co-author publication in the *Minor Planet Bulletin*. She most recently completed an NSF REU at NOIRLab in Chile, where she analyzed GHOST/Gemini South observations of an ultra-hot Jupiter to determine its atmospheric composition. This work is ongoing, with results to be presented at AAS and several workshops, and expected to be published in *The Astronomical Journal* early next year. Caitlin plans to continue studying the properties of worlds beyond our own by pursuing a Ph.D. in Astronomy.



### **Antonio Cascio** - *Reducing Cognitive Load as a means of Enhancing Physics Learning and Comprehension*

**Antonio Cascio** is a graduate research assistant working on physics education research at ETAMU where he is currently working on his master's degree in physics. He earned his undergraduate degree in astronomy and astrophysics from Embry-Riddle Aeronautical University in Florida in 2023. Before enrolling at East Texas, he taught high school physics at Egg Harbor Township High School in New Jersey. His research focus is helping undergraduate physics students understand difficult concepts through the creation of video lectures.

