

DEPARTMENT OF PHYSICS & ASTRONOMY

Physics & Astronomy Colloquium

Prof. Tanmoy Laskar

University of Utah

(Host: Prof. Michael Fausnaugh)

3:30 - 4:30 p.m. | Tuesday, March 3, 2026

**Zoom Meeting: <https://texastech.zoom.us/my/yunsukeo>
(passcode: 621827)**



Extreme Astrophysics with Relativistic Transients

As the most energetic explosions in the Universe, relativistic astrophysical transients provide a unique opportunity to explore physics at extreme energy scales that are otherwise impossible to investigate in Earth-bound laboratories. I will demonstrate the power of multi-wavelength observations, combined with theoretical modeling, in teasing apart the physics of relativistic extragalactic transients. Shining a special spotlight on radio wavelengths, I will describe how pushing the boundaries of observational efforts is leading to new insights into these extreme events. Using a series of case studies involving gamma-ray bursts, I will describe the multi-messenger revolution currently underway in extragalactic time-domain astrophysics, concluding with highlights of future prospects in this rapidly evolving, data-driven field.

