

DEPARTMENT OF PHYSICS & ASTRONOMY

Physics & Astronomy Colloquium

Prof. Jon Wilson

Baylor University

(Host: Prof. Yongbin Feng and Prof. Chris Madrid)

3:30 - 4:30 p.m. | Tuesday, March 24, 2026

Rm: ESB I 120



The future via the past: Effective Field Theory searches for new physics at JADE, LHC, and future colliders

As LHC Run 3 winds down in the next year or so, Effective Field Theory (EFT) is heating up as a technique to search for new physics. During the HL-LHC period and beyond, EFT will become even more powerful because of the enormous data sets that will become available. As a means to explore a possible future in which signs of BSM physics are discovered via EFT, we can turn to the past. A retrospective exploration of EFT techniques to data below the electroweak scale allows us to see how EFT could have performed in terms of discovering and understanding the electroweak physics. This case study offers tremendous hope for how much a future EFT discovery might tell us about BSM physics.

