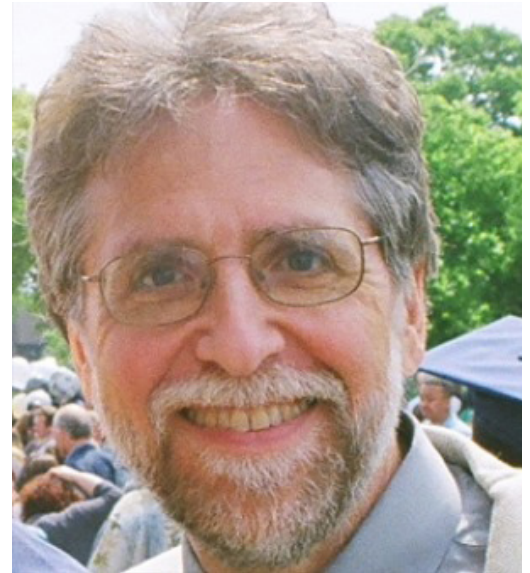


# PHYSICS AND ASTRONOMY COLLOQUIUM

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Why You Should Pay Attention in Class:  
Charged Lepton Flavor Violation and Undergraduate Physics

The three types of fundamental fermions are arranged into three generations and we don't know why. Their behavior is further puzzling. One of the three types, the charged leptons, seems different from the neutrinos and quarks: they don't change back and forth among the generations. The Mu2e experiment will study this difference by searching for a rare process at the level of a few times  $10^{-17}$ . I will explain what the experiment is looking for and how it works. Although the new physics under study may be esoteric, I will show that the design of a cutting-edge experiment can be understood by anyone with an undergraduate education in physics.



**THURSDAY, JANUARY 24, 2013 | 4:00 PM | HAWKING AUDITORIUM**



**PHYSICS & ASTRONOMY**  
TEXAS A&M UNIVERSITY