

*The Physics Department Colloquium Series Presents:*

**Seek and Describe: The Search for**

**The Elusive Higgs Boson.**

*Presenters:*

**Cal Poly Physics Professors**

**Dr. Thomas D. Gutierrez and Dr. Jennifer Klay**

***Thursday, November 8<sup>th</sup>, 2012***

***11:10 am - 12:00 pm***

***53 - 202***

**Abstract:**

This summer, scientists at the CERN Large Hadron Collider (LHC) in Switzerland announced the discovery of a new particle, one which may turn out to be the elusive Higgs boson. The Higgs boson is the last remaining undiscovered piece in the Standard Model of particle physics and is a manifestation of the underlying quantum field theory that gives rise to mass for the fundamental particles. Its discovery would inform ongoing investigations into physics beyond the Standard Model as physicists continue to develop a complete theory to unify the forces of nature. In this talk, we introduce the Standard Model and motivate the role of the Higgs in the theory. We will also review the story of the recent provocative experimental results and discuss the future of particle physics research at the LHC.