

DEPARTMENT OF PHYSICS & ASTRONOMY

Physics & Astronomy Colloquium

Dr. Aram Apyan

Brandeis University

3:30 - 4:30 p.m. | Tuesday, April 29

Science Building 234

**A window to New Physics with Collisions of W
bosons**

The Standard Model of particle physics has been extremely successful in describing the building blocks of matter and their interactions. The observation of a Higgs boson at the Large Hadron Collider in 2012 presented a new paradigm of precision physics aiming at the investigation of the Higgs mechanism. Since that time, many decay modes of the Higgs boson have been observed, indicating Higgs boson properties in good agreement with the theoretical expectations. In this colloquium I will discuss a powerful way of stress testing the standard model and searching for new physics using collisions of heavy vector bosons. My presentation will be illustrated with the newest results obtained from proton-proton collision data recorded by the ATLAS detector at the Large Hadron Collider.

Refreshments at 3 p.m. | SC 103

