UCLA Nuclear Physics Seminar

"Precision Jet Substructure with the ATLAS Detector at 13 TeV"

Presented by Benjamin Nachman
Lawrence Berkeley National Laboratory

We are in the midst of a QCD renaissance, with significant advances in both experimental and theoretical studies of jet substructure. I will discuss recent developments from the ATLAS experiment, including the first measurement of a jet substructure quantity at a hadron collider to be compared with next-to-next-to-leading-logarithm calculations as well as a recent measurement of gluon splitting inside large-radius jets. These measurements are part of an exciting program to measure fundamental parameters of the Standard Model, search for new particles, study quantum properties of inherently interesting emergent phenomena, and tune Monte Carlo event generators. I will conclude by briefly discussing future directions at the interface of jet physics and machine learning and quantum information.

Location: Knudsen 4-134
Date: Friday, May 3, 2019
Time: 12:00 PM

UCLA