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Physics Department

College of Science & Mathematics

Particle Physics at the LHC

Dr. Jason Veatch

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Thursday, November 7, 2024
11:10 am - 12:00 Noon
Building 53, Room 215
Pizza will be served!

Abstract: The Standard Model (SM) of particle physics is one of the most successful scientific theories in the history of humankind. It describes the fundamental constituents of the universe and their interactions that define the world around us. The final missing piece of the SM, the Higgs boson, was discovered in 2012 at Large Hadron Collider (LHC) at CERN just outside of Geneva, Switzerland. Large teams of physicists continue analyzing the data collected from the LHC in search of additional insights into the nature of the universe and to answer questions such as the identity of dark matter and how to unify gravity with the other fundamental forces. This talk gives an overview of particle physics theory and experiment, an inside look at career paths in particle physics, and some of the cutting-edge physics analyses being done at the LHC that can provide insights into the future of the universe.

Bio: Dr. Veatch completed his PhD in particle physics at University of Arizona working on the ATLAS Collaboration at CERN. He worked as a postdoc on the ATLAS Collaboration at University of Göttingen in Germany and then at California State University East Bay. He is currently an assistant professor of physics at California State University Stanislaus. His research interests include searches for Beyond-the-Standard-Model Higgs physics, hadronic jet reconstruction and identification, software development, and physics outreach.