

PHYSICS
ARTS AND SCIENCES

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

APPLICATION DEADLINE: 02/25/2022

PROJECT TITLE: Searching for Physics Beyond the Standard Model with the Large Hadron Collider

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Project Description

With the Large Hadron Collider (LHC) at CERN, we are seeking to probe beyond the Standard Model of particle physics, using proton collisions at the highest energies achieved in the laboratory. Prof. Conor Henderson collaborates on the LHCb experiment at the LHC, where his group will make measurements of electroweak physics processes and perform direct searches for potential new physics beyond our current Standard Model.

Students will have an opportunity to gain experience with advanced programming in C++/python, to learn software and simulation tools used in high-energy physics research, and to perform analysis on data collected by the LHCb experiment, as part of this research group.

Training in programming and the appropriate software tools will be provided, so prior experience with programming is helpful but not essential, provided the student is enthusiastic to learn.

Students should be interested in physics, but specific physics courses are not required for this project.