Undergraduate Colloquium in Mathematics
Wednesday, October 31st 10:00 AM-10:50 AM
STV 310

Using Neural Networks to See Proton-Proton Collisions

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Abstract: In this talk, I will be discussing neural networks, and how they can be applied to research areas. Research facilities such as CERN generate data on a scale that is impossible for humans to accurately analyze. Through the use of machine learning algorithms and neural networks, there is more hope in successfully finding the ¨interesting" collisions by training these algorithms to recognize these events. We will explore the fundamental aspects of neural networks, some of the challenges one faces in the successful implementation of a network, and the application of a neural network to research at CERN. We will focus on how networks can be used to see what is happening during a proton proton collision, and classify the types of particles produced during a collision.