

Systematics Studies for MicroBooNE's Deep-Learning-Based Low-Energy Excess Analysis

Thursday, 8 June 2017 18:00 (2 hours)

Convolutional neural nets (CNNs) are increasingly being used for data analysis tasks in high energy physics. A common strategy for using CNNs relies on training the networks on simulated data and then applying them to real data from the detector. Consequently, any analysis using CNNs must quantify systematic uncertainties due to discrepancies between the simulations and detector data. In this poster, I will discuss our work in addressing these issues in the context of applying CNNs to data from MicroBooNE's liquid argon time projection chamber for a low-energy excess analysis. I will present the methods we are investigating to quantify systematic uncertainties, by using independent data samples.

Primary author: YATES, Lauren (Massachusetts Institute of Technology)

Presenter: YATES, Lauren (Massachusetts Institute of Technology)

Session Classification: Young Scientist Poster Session