



Contribution ID: 34

Type: **A collaboration/project summary talk**

DL In MicroBooNE

Friday, 10 July 2020 10:45 (40 minutes)

The MicroBooNE experiment consists of liquid argon time projection chamber(LArTPC) situated in the path of the Booster Neutrino Beam (BNB) at Fermilab. The goals of the experiment are to (1) investigate the observation of an excess of a possible electron-neutrino and anti-neutrino events by the MiniBooNE experiment, (2) measure argon-nucleus cross sections, and (3) perform R&D for LArTPCs. The data from MicroBooNE, and other LArTPCs, can be naturally arranged as high-resolution images of particle tracks traversing the detector. This has spurred effort on MicroBooNE towards applying convolutional neural networks (CNNs), a type of deep learning algorithm shown to be effective in numerous computer vision problems, to our data. I'll talk about the ways in which MicroBooNE uses CNNs with a focus on recent results demonstrating their performance on real data. I'll also discuss future directions MicroBooNE is exploring to further apply CNNs.

Primary author: WONGJIRAD, Taritree (Tufts University)

Presenter: WONGJIRAD, Taritree (Tufts University)

Session Classification: Day 1 Morning