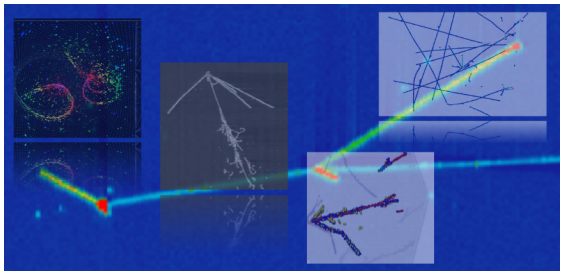

Contribution ID: **29** Type: **Long talk (25min. + 10min. Q/A)**

Machine Learning Assisted Reweighting and Unfolding for Neutrino Analyses

Friday 31 October 2025 13:00 (25 minutes)

It is well-known that classifiers can be trained to approximate the likelihood ratio between two distributions, and that machine learning based classifiers in particular can learn this likelihood ratio in high-dimensional spaces. This provides a method to reweight events from different distributions as functions of many features. OmniFold is an unfolding technique that uses this concept to perform unbinned, high-dimensional unfolding. This talk will present the application of OmniFold to a neutrino cross-section study using T2K public data and discuss potential future applications to other neutrino experiments.

Presenter: HUANG, Roger

Session Classification: Neural Inference Techniques