



Contribution ID: 39

Type: not specified

Interpretability in Semi-Supervised Classifier Tests for Model-Independent Searches of New Physics

Thursday 12 September 2024 10:45 (30 minutes)

Many model-independent search methods can be understood as performing a high-dimensional two-sample test. The test is typically performed by training a neural network over the high-dimensional feature space. If the test indicates a significant deviation from the background, it would be desirable to be able to characterize the “signal” the network may have found. In this talk, I will describe our work on interpreting semi-supervised classifier tests using active subspaces to understand the properties of the detected signal. Additionally, I will show how to extract the signal strength parameter from the trained classifier.

Primary Field of Research

Presenter: KUUSELA, Mikael (Carnegie Mellon University (US))

Session Classification: Talks