

CURTAINS for your Sliding Window: Constructing Unobserved Regions by Transporting Adjacent Intervals

Thursday 3 November 2022 14:00 (20 minutes)

We introduce a new model independent technique for constructing background data templates for use in searches for new physics processes at the LHC.

This method, called CURTAINS, uses invertible neural networks to parametrise the distribution of side band data as a function of the resonant observable. The network learns a transformation to map any data point from its value of the resonant observable to another chosen value.

We demonstrate the performance on CURTAINS at anomaly detection on the LHC Olympics R&D dataset, hunting for a dijet resonance, by transforming data in sidebands into the signal region.

We will also present the latest developments and improvements to the method.

Preprint: <https://arxiv.org/abs/2203.09470>

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Session Classification: Anomaly Detection