

## Mining the LHC Data for Anomalies

*Wednesday, May 30, 2018 5:50 PM (20 minutes)*

We describe a novel, model-independent technique of “rectangular aggregations” for mining the LHC data for hints of new physics. A typical (CMS) search now has hundreds of signal regions, which can hide the presence of potentially interesting anomalies. Applying our technique to the two CMS jets+MET SUSY searches, we identify a set of previously overlooked  $\sim 3\sigma$  excesses, characterized by low jet multiplicity, zero  $b$ -jets, and low MET and HT. We discuss the presence of a bump in the similar ATLAS monojet search, and discuss a simplified model that provides an excellent combined fit to these excesses and discuss all additional constraints.

### **E-mail**

monteuxa@uci.edu

**Primary author:** MONTEUX, Angelo (UC Irvine)

**Presenter:** MONTEUX, Angelo (UC Irvine)

**Session Classification:** Physics at High Energies

**Track Classification:** PHE