

# BumpNet

## Automatizing the mass resonance search

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June 17, 2025

EuCAIFCon 2025

### Motivation

**Bump-hunting** is an effective method for finding new particles



#### What Is BumpNet? JHEP 02 (2025) 122



#### Only a **fraction (11%) of final states** have been probed for mass bumps



350

400

*m* [GeV]

350

*m* [GeV]

#### Advantages?

- SR and background estimation **not needed** beforehand
- Look at wide variety of final states
- **Quickly** determine regions of the data that are of interest

Ethan James Meszaros

#### Performance

• Can find the Higgs!



Can find BSM! 

500

750

250

 $\times 10^{1}$ 

Events Þ

3

2

1

0

10

5

Events

Unbiased agreement across many histograms



See poster 23 to learn more!

1000

1250

1500

1750

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