

UNL Department of Physics and Astronomy presents:

Computational Models for Cluster-based Cosmology

PRESENTED BY
**CAMILLE
AVESTRUZ,**
University of
Michigan



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VIA ZOOM

Refreshments will be served in the JH 1st Floor Vending Area at 3:30

ABSTRACT

Observations of galaxy clusters have thus far supported the standard model of cosmology and provided constraints on non-standard models. The statistical power of galaxy clusters is at a golden age, where forthcoming observations will provide data for tens of thousands of galaxy clusters. However, our ability to further use clusters as probes is now limited by how well we measure cluster masses and quantify systematic effects in how we detect and measure galaxy clusters. To calibrate for and to understand underlying astrophysical processes, we need modeling approaches that can capture relevant astrophysical processes and the diversity within a large sample of galaxy clusters. I will discuss ongoing modeling efforts and software infrastructure development that allows us to best leverage the data in upcoming surveys.

