

# ACMS Statistics Seminar

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Tuesday, October 15, 2019  
154 Hurley Hall  
3:30– 4:30 PM



## **Phylogenetically-Informed Distance Methods for Microbiome Data Analysis**

Phylogenetically-informed distances are widely used in ecology, often in conjunction with multi-dimensional scaling, to describe the relationships between communities of organisms and the taxa they comprise. A large number of such distances have been developed, each leading to a different representation of the communities. The ecology literature often tries to interpret the differences between representations given by different distances, but without a good understanding of the properties of the distances it is unclear how useful these interpretations are. I give an overview of some of these distances, describe the interpretational challenges they pose, develop some interesting properties, and comment on opportunities for improvement.

The Department of Applied and Computational  
Mathematics and Statistics

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