

Geometry and Statistics in the Analysis of multimodal data for the Microbiome

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Abstract

Most modern biology data are heterogeneous and multimodal, connecting the different modalities can often be successful through the use of distances and networks. I will give a examples of incorporating prior information and updating these priors using a combination of local geometrical information based on distances using the available biological information. These methods enable the construction of uncertainty contours that incorporate variability at many different levels of a data hierarchy.