Contents

Motivation

Start writing what might be a good introduction for any paper or chapter.

Include citations!

definitions

- ASV
- OTU
- Zero-Inflation
- Phylogenetic tree
- Compositional
- Covariates/variables

Notation

- Number of samples: n
- Sample index: $i : i = 1, \ldots, n$
- Number of ASVs: k
- ASV index: $j : j = 1, \ldots, k$
- Number of covariates: q. Note that q does not include the intercept.
- Covariate index: $k : k = 1, \ldots, q$
- Responses: Transformed counts into relative abundances.
  Note that an alternative transformation to relative abundance might be good.

$$y_{ijk}$$

- Design matrix X:
- Parameter vector β

Dirichlet ideas

Dirichlet variance

Dirichlet covariance

Dirichlet correlation

GEE ideas

(include definitions of all)