**Spatiotemporal Models for Ecologists**

**Epsilon Method**

Goal: Explore the properties of Epsilon bias-correction estimator in complex circumstances.

**Data generating process**

Envision a model with three random effects:

And define a derived variable . Also assume that the parameters are known, i.e., try , , , , and , . What is the expectation ?

Next, code this model in TMB, using chosen values for and **,** and calculate as ADREPORTed variable. How does the plug-in estimator perform relative to the known (true) expectation? And how does the epsilon estimator do?