

Analyzing community data with Hierarchical Modelling of Species Communities (HMSC) with R or Matlab.

Otso Ovaskainen

Attendee background: The attendees should have some prior knowledge of R or Matlab, and basic knowledge about species distribution modelling.

Course Abstract: The course provides a tutorial to hierarchical modelling of species communities with generalized linear mixed models, and it is based on applying models to both simulated and real datasets. We use models to address questions about species niches (the relationship between species occurrence and environmental characteristics) and co-occurrence patterns among the species. Further, we examine how species traits and phylogenetic relationships influence species niches and co-occurrence. The basic data involve a matrix on species presence-absences (or abundances) on a set of sites, and some environmental characteristics of those sites. Optional data involve species traits and phylogenetic relationships.

The attendees should bring their own laptop with Matlab or R installed. The necessary files will be made available during the course.

Attendees who wish to bring their own data are encouraged to do so, but they should contact otso.ovaskainen@helsinki.fi beforehand for instructions on how to format the data.