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Short course on

Spatial analysis of beta diversity in multi-species communities

11–13 May 2016

Day 1

1. Review of the classical (PCA, CA, PCoA) and canonical ordination methods (RDA, CCA).

Day 2

2. Origin of spatial structures (15 or 20 min.)
3. Beta diversity partitioning and LCBD indices. Examples of space-time and time(weeks)-time(years) analyses.
4. Replacement and richness difference components of beta diversity.
5. Temporal beta diversity: computation and interpretation.

Day 3

6. Spatial modelling: Multi-scale modelling of the spatial structure of ecological communities. The dbMEM, generalized MEM, and AEM methods.
7. Community surveys through space and time: testing the space-time interaction in repeated surveys.

⇒ Lectures in the morning.

⇒ Afternoons: Practicals about these topics using the R language

The following files are distributed in the folder Practicals_in_R.zip –

- Day-by-day list of the practical exercises (file: Short_course_practicals.pdf)
- Introduction to the R statistical language (file: Introduction_to_R.pdf)
- Practicals in the R language: Basic matrix operations (file: Basic_matrix_operations.pdf)
- Practicals using the R statistical language (file: Practicals_in_R.pdf)
- Documentation file for PCNM function (file: PCNM documentation.pdf)
- Documentation file for pcoa.all function (file: pcoa.all documentation.pdf)

The following files are distributed in the folder Spatial_eigenfunction_practicals.zip –

- NEwR Script Chapter 7
- Gault_forest_reserve
- Legendre-Gauthier practicals