

1. Course title : **Generalized Linear Models for Evolutionary Ecologists**
20-24 November 2017, CEREEP Saint-Pierre-Lès-Nemours.
2. ECTS : 3
3. Language : English
4. Target audience: The course is intended for PhD students, but we allow the participation of Msc students and post-docs.
5. Learning outcomes : At completion of the course,

Knowledge of: producing high quality scientific graphs. Coding hygiene. Generalized linear models, mixed models and generalized linear mixed models.

Skills : Implementation of a data analysis and the production of graphics in the statistical software package R in a reproducible and accessible manner.

General competences: Be able to design and execute a statistical analysis using generalized linear models or mixed models that fits the scientific purpose of the study.

6. Content : Lectures, practical exercises based on example scripts, development of a solid and adequate analysis of data the participants bring themselves. Discussions of practical and theoretical matters in data analysis.
7. Organization and teaching : The total course duration is approximately 32 hours from Monday afternoon to Friday at noon. Every morning and afternoon session starts with a lecture discussing concepts in programming and graphics, GLM(M) model fitting and model selection. Each lecture is followed by hands-on training based on example scripts we provide and the analysis of the datasets participants bring. For this reason, the ratio instructors/participants is high. Evenings can be used for further discussion in small groups and on-demand extra training in small working groups. Monday afternoon and evening are reserved for bringing all arriving participants to the required starting level in terms of proficiency in R.
8. Prerequisites : Basic notions of statistics (ANOVA, regression). A personal lap-top for the exercises.
9. Mandatory requirement : Full presence.
10. Assessment: There will be no specific assessment.
11. Faculty: Institute of Ecology and Environmental Sciences iEES Paris, team VPA Phenotypic Variability and Adaptation; responsible for the course content: Tom JM Van Dooren.