

EVOLUTIONARY ECOLOGY

QUANTITATIVE AND EVOLUTIONARY ECOLOGY OF COMMUNITIES GROUP

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DOCTORANTE

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I am a Phd student (she/her) at the LBBE since October 2020, and I am supervised by Stéphane Dray (LBBE) and Hervé Fritz (IRL REHABS). My PhD subject is: "Analysis of the composition patterns of African fauna communities from camera trap data: identify co-occurrence networks and explore their robustness in the face of contrasting management modes and climate constraints".

Research

My research focuses on the interaction networks between species within a community. A first axis of my PhD consists in investigating methods to infer interactions between species from camera trap data. To do this, I use statistical models to infer attraction-repulsion networks between species. I use data from the
Snapshot Safari South Africa program
, which manages camera trap grids in protected areas in South Africa. Some of the results of this axis have been published in the article "
Using the multivariate Hawkes process to study interactions between multiple species from camera trap data"
.

A second axis of my PhD consists in analyzing interaction networks, especially the link between species traits and their interactions. Therefore, I use multivariate methods applied to a bipartite interaction matrix.

Finally, a third axis of my PhD consists in developing a R package as well as a Shiny app to analyze camera trap data. The code is on
GitHub
.

URL of the page: https://lbbe.univ-lyon1.fr/en/annuaire-des-membres/nicvert-lisa

Teaching (*"activité complémentaire d'enseignement"*)

As a PhD student, I have had the opportunity to take part in some teaching activities in the frame of the complementary teaching activity (*"activité complémentaire d'enseignement"*) since October 2020. This consists in teaching practicals and tutorials for undergraduate students for 64 hours a year. I mainly taught statistics and R programming. In particular, I taught in the following courses (links in French):

- Practicals and tutorials for the Biostatistics and bioinformatics course (L2)
- Practicals for the Bio-mathematics and Modelling BISM course (L3)
- Practicals for the Biology and Modelling course (L1)

Science popularization

I am very enthusiastic about science popularization. Besides, I am deeply convinced of its usefulness both for the general public and for my own research. I regularly take part in scientific outreach actions, such as the *"conférences embarquées"* (mini-conferences on a boat), the *"Fête de la Science"* (national science festival) or the *Déclics* meetings with high school students.

I have also been a member of the *Projet Pangolin* society, which raises awareness about ecology and gives means to preserve the environment and biodiversity. I contribute mainly through drawings, but I also write articles for the blog. Here are some blog articles for which I contributed (in French):

- the Naturalist guide on insects and the Naturalist guide on trees (drawings)
- the article about citizen science (co-writing)