



**14**  
**SEP.**  
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🕒 de 13h à 14h

## SÉMINAIRE

# Robust diversity measures for metabarcoding - Parameter inference for stochastic models

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Metabarcoding is increasingly used to study environmental DNA, especially for biodiversity monitoring purposes. However, this technique induces many biases in the resulting data. I will present two projects of my PhD on the acquisition of quantitative metabarcoding data and on the taxonomic attribution of the observed DNA sequences to species. Secondly, I will present the Fixed Landscape Inference MethOd (flimo), a new inference algorithm for stochastic models used in ecology. It is a simulation-based likelihood-free algorithm with a specific management of the random variables generation. Flimo works in a framework similar to Approximate Bayesian Computation (ABC) algorithms. In the studied applications, flimo allows a strong reduction of the inference time for similar performances compared to existing methods.