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Zoom : <https://umontpellier-fr.zoom.us/j/97410539197>

## Evaluating the impact of agricultural intensification on migratory birds

*presented by*

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### **ABSTRACT**

Migratory birds are moving through rapidly changing ecosystems and landscapes, and as a result they are declining fast. In particular, agricultural intensification in the tropics has been suggested to be a leading driver of the decline in migratory birds. The aim of this research is to evaluate how change in habitat quality and resource supply due to human activity on the wintering grounds affects the movement strategies, annual cycle timing and population dynamics of birds. I will present models based on energy efficiency that are able to explain well patterns of bird migration. These models also make predictions for how habitat degradation is expected to affect migratory birds and the resident communities that they visit. To test some of these predictions, bioacoustics and LiDAR data were collected in an experimental coffee agroecosystem in Chiapas, Mexico and used to quantify the relationship between habitat quality and wintering bird diversity across a gradient of agricultural intensification. The results of this research can inform Bird-Friendly certifications for agricultural productions such as coffee, tea and cacao, which are produced on the wintering grounds of many migratory bird species.

### **KEY WORDS**

Habitat degradation; bioacoustics; functional diversity; lidar; coffee; migratory birds

**Invited and animated by:**

Isabelle MARÉCHAUX

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