



Nicolas Barbier est chercheur à l'IRD, UMR AMAP en écologie tropicale. BioIngénieur tropicaliste de formation (ULB, Bruxelles), il a fait sa thèse de doctorat sur l'auto-organisation des végétations semi-arides, avant de s'intéresser aux forêts tropicales au cours de ses post-docs à Oxford et Montpellier.

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**9 JUILLET 2024**  
14h00 – 17h00

Amphi IRD, Avenue Agropolis, Montpellier  
**Visioconférence** : [lien teams](#)

## SOUTENANCE DE HDR

# From leaf to satellite, dynamics and functioning of tropical vegetation

HDR soutenue par

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### ABSTRACT

The main objective of my research is to understand tropical vegetation dynamics at spatial (landscape, region...) and temporal (season-decade) scales relevant to the management, conservation and mechanistic modeling of these systems under the effect of climatic and anthropogenic forcings. The link between the architecture and functioning of plants and the structure and dynamics of vegetation is central to my research. Understanding how plant structure, function and interactions generate large-scale emergent dynamics may require the use of biophysical models to capture the often non-linear mechanisms at play. I'm also working on improving remote sensing approaches (mainly active and passive optical sensors), for the potential they offer for upscaling, although sensitivity and error propagation, instrumental effects and relevant indicators need to be carefully considered, which may also involve employing spatially explicit statistical approaches or radiative transfer modeling.

### **Composition du Jury :**

Jérôme Chave (EDB/CNRS)  
Nicolas Picard (GIP Ecofor)  
Cédric Véga (ENSG/IGN)  
Hélène Muller Landau (STRI)  
Sylvie Durrieu (Tetis/INRAE)  
Imma Oliveras Menor (AMAP/IRD)

### MOTS CLES

Ecologie tropicale; Télédétection; Structure; Fonction; Changement d'échelle; Interactions

**Type de séminaire :** Soutenance de HDR

**Langue :** Anglais

**Langue du PPT:** Anglais

UMR « botAnique et bioinforMatique de l'Architecture des Plantes » (AMAP)  
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