Séminaire / Seminar AMAP

Rémi is currently a researcher at UMR AMAP – CIRAD, Montpellier, France. Working on plant modelling, he is interested in understanding and predicting complex perennial cropping systems like oil palm🌴, cacao🍫, and coffee☕ to improve sustainable farming practices using innovative observational and modelling approaches.
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Salle 201, Bâtiment PS2, CIRAD-UMR AMAP, Boulevard de la Lironde
Visioconférence : Lien Teams

DigitalPlant: Multi-scale Modelling and Digital Twins for Durable Perennial Cropping Systems

presented by

Dr. Rémi Vezy

UMRAMAP – CIRAD, Montpellier, France

ABSTRACT

I will present DigitalPlant, a proposal I am preparing for the ERC Starting Grant 2025 call. The project aims to improve the long-term durability of perennial cropping systems like sugar cane, banana, and cacao in the face of climate change. We will investigate the key processes that influence system resilience, productivity, and resource use over time. By employing a novel method—multiscale digital twins—we will create virtual replicas of these cropping systems to simulate their structure, growth, and functioning across different scales, from individual organs to entire fields. The project will analyse the interactions between plants, their environment, and management practices to identify strategies to optimize resource use and improve the resilience and sustainability of these crucial agricultural systems.

KEY WORDS: fspm; architecture; lidar; agroforestry; durability; climate change

Invited and animated by:	Dr. Rémi Vezy (UMR AMAP)
Type:	Research results
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Language of PPT:	english