

## Thematic school

# Remote sensing for tropical biodiversity mapping and management across scales



### Faculty:

- **David Coomes**, University of Cambridge, UK
- **Mathias Disney**, University College London, UK
- **Maria Joao Ferreira dos Santos**, Universiteit Utrecht, Netherlands
- **Jean-Baptiste Féret**, IRSTEA, Montpellier France
- **Sassan Saatchi**, NASA JPL Pasadena, USA

Convenors: *Jérôme Chave (CNRS, Toulouse France)*  
and *Grégoire Vincent (IRD Montpellier France)*



**Dates:** 25-29 September 2017

**Venue:** Hotel des Roches Kourou, French Guiana

**Context:** Earth surface is now being sensed continuously at high temporal and spatial resolution by multiple space-borne instruments. When combined with appropriate methodologies, these sources of information will allow monitoring biodiversity at the global scale. In addition, technologically advanced sensors such as Lidar and imaging spectrometers are becoming increasingly available on airborne platforms. They are part of the equipment dedicated to ground observation, and allow an exploration of the structural heterogeneity of the vegetation, spanning orders of spatial scale. Such technologies already proved their potential and allow multiple applications for the monitoring of complex ecosystems.

**Objectives:** The Thematic School is open in priority, but not exclusively, to early-career scientists (PhD students, post-doctoral associates) interested in exploring the potential of remote sensing in tropical biodiversity mapping and management. For instance, canopy heterogeneity is correlated with insect diversity in tropical forests, and canopy moisture is a proxy for amphibian diversity. Environmental variables can also be coupled with biodiversity occurrence data using species distribution modelling. Mapping of species richness derived from imaging spectroscopy is another attractive opportunity. These techniques have a direct implication for the management of tropical ecosystems, as they help prioritize areas for conservation. The week will be organized around working sessions, evening lectures and will include a visit to a field station (Paracou). The participants are expected to apply with a clearly stated research problem including already acquired datasets. During the meeting sessions, they will collaborate with other members of the group. Teachers will give evening lectures and provide guidance. Individual projects should result in publishable papers.

**How to apply:** Applicants should submit their application preferably before July 12th, 2017 to Jessica Delhaye ([jessica.delhaye@univ-tlse3.fr](mailto:jessica.delhaye@univ-tlse3.fr)). The application package should include two pdf files: (1) a curriculum vitae, (2) a motivation letter detailing your proposed research project and the nature of available datasets. This could include remote sensing data analysis, biodiversity modelling or other questions relevant to tropical forest biodiversity.

**Costs:** The program will cover accommodation, meals, and transport within French Guiana, but **not** travel costs to French Guiana.