

FUNCTIONAL DIVERSITY OF INTACT AND REGENERATING AMAZON, ATLANTIC, AND CERRADO SYSTEMS USING HYPERSPECTRAL IMAGERY

More specifically, the Young Investigator project will tackle the following questions across the three biomes: Can airborne spectroscopy from an unmanned aerial vehicle (UAV) adequately characterize canopy chemistry? Are ecosystem biogeochemical flows in plant matter identifiable in the hyperspectral images? To what extent can hyperspectral data of canopies be used to estimate biomass production and storage in intact versus regenerating vegetation? Do higher levels of diversity confer resilience to environmental disturbances? And, in combination with Landsat and MODIS images, to what extent are Amazon and Cerrado systems shifting? Our in-depth exploration of the potential of hyperspectral techniques is expected to provide new methods to describe and explore ecosystem services at larger scale, and their relationships with functional biodiversity. Given current lack of knowledge on the role of functional diversity in maintaining ecosystem services in the face of global change the project will substantially advance the state-of-the-art research for the Brazilian biomes.

PRINCIPAL INVESTIGATORS

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ABOUT THE PROJECT

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