Postdoctoral Position in Ecology – Phenology

http://www.fapesp.br/oportunidades/nordeste_uma_nova_ciencia_para_um_importante_porem_negli genciado_bioma_fapespnercbiome/1327/

Subject: Post Doctoral position in Ecology - remote phenology

Process Number: FAPESP: 2015/50488-5

Project Title: Nordeste: new science for a neglected biome
(http://www.bv.fapesp.br/en/auxilios/93282/nordeste-new-science-for-a-neglected-biome/)

Principal Investigator/supervisor: Patrícia Morellato

Unity/Institution: Departamento de Botânica, Instituto de Biociências / UNESP Universidade Estadual Paulista

Dead line for subscription: 04/12/2016

Published: 17/11/2016

Location: Departamento de Botânica, IB - Av. 24A, 1515 Rio Claro, São Paulo, Brazil

Summary

Near remote phenology and leaf traits of tropical seasonal vegetation

The Laboratory of Phenology, Department of Botany from São Paulo State University (UNESP) at Rio Claro, São Paulo, is seeking applicants for a post-doctoral position to participate in the FAPESP (Fundação de Amparo a Pesquisa do o Estado de São Paulo) – NERC – BIOME project: "Nordeste: new science for a neglected biome". Applications close on 4th December 2016 and the position is available for two years (Feb 2017- Jan 2019).

The successful applicant's activities will be concentrated on: (1) the establishment and monitoring of a phenology system using digital cameras (phenocams) at Nordeste study sites encompassing different areas of seasonal tropical dry forest (STDF) and 'caatinga' vegetation types in northeast Brazil ; (2) The analyses of digital images in order to establish the dynamics of leaf exchange patterns and, with the aid of concurrently collected meteorological data, to key identify environmental drivers of semi-arid vegetation seasonality patterns. The goal is to understand the trade-offs associated with different phenological strategies and leaf exchange patterns, along with their environmental drivers, triggers and constraints. The information will be integrated with biome-wide information on floristic composition, plant traits and ecophysiological characteristics with climatic data from local stations and flux towers also employed to help understand 3D structure (LIDAR) and associated hyperspectral images of a range of semi-arid vegetation types in Brazil. Data collected is also expected to aid the development of future models of ecosystem carbon, heat and water vapour exchange for this understudied biome.

The temporal analyses will be carried out using developing software and R language or other resources such as MatLab and Python.

The candidate must have a Ph. D. degree on Ecology, Biological Sciences, Plant Biology, Remote Sensing or related fields, with experience on programming, primarily in R language and statistical analysis of ecological data. Knowledge of machine learning for image processing and analysis, time-series data analyses, digital remote phenology using cameras, GIS, remote monitoring with drones, hyperspectral and Lidar sensors is considered advantageous, with proficiency in a language other than English, such as Portuguese and/or Spanish are also considered as a desirable characteristic.

The position is open to both Brazilians and foreign candidates. The selected candidate will receive a monthly post-doctoral (PD) fellowship from FAPESP of R$ 6.819,30 per month free of taxes, plus an additional research contingency fund equivalent to 15 % of the annual value of the scholarship to be expended on his/her research. Candidates from abroad will receive one month additional fellowship for moving expenses and airplane tickets. For more information go to: http://fapesp.br/en/postdoc

Applicants should send by December 4th, 2016 a letter explaining the candidate´s motivation/interest, a curriculum vitae and two letters of recommendations, all documents in PDF format, to the PI, Dr **Patrícia Morellato** (patricia.morellato@gmail.com, pmorella@rc.unesp.br). A decision is expected to be made by December 20, 2016.