

Post-doc position in soil science and remote sensing

Project framework : MELICERTES flagship project of the PEPR « Agroécologie et numérique », France 2030 program of the French National Research Agency (ANR)

Hosting lab : UMR ECOSYS, Campus AgroParisTech Palaiseau, 22, Place de l'Agronomie, 91120 Palaiseau

Contact : Emmanuelle Vaudour (emmanuelle.vaudour@inrae.fr)

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Date : temporary employment of 18 months (eventually renewable). Beginning : 1st November 2023

Overall context

There is a growing need to spatially estimate and monitor many soil properties, at different spatial and temporal scales, to support and guide soil and land management as well as decision- and policymakers. Among these soil properties, the soil organic carbon (SOC) content is of particular importance. This post-doc proposal will contribute to the flagship MELICERTES project, which aims to integrate data from multiple heterogeneous sources to develop satellite and data-driven spectral and spatial models of soil organic carbon content and stocks and develop satellite-based diagnoses of agricultural practices that maximize soil carbon storage.

Tasks

- collecting, structuring satellite time series (such as Sentinel-2) and soil data for several areas ;
- work on temporal mosaicking of satellite time series ;
- development, calibration and validation of models for soil properties prediction from spectral data ;
- eventually field work if desired ;
- interactions planned with partners from other countries.

Qualifications

- PhD degree and academic background in the fields of Soil science, agriculture, environment and geomatics ;
- good knowledge in remote sensing, and Copernicus land monitoring service ;
- practice of geomatics, stats and programming experience in Python and/or R ;
- ability to work independently as a scientist (proven by publication track record) ;
- good writing/talking skills in English ; proficiency in French is desirable.

Working environment

The postdoc will be hired by AgroParisTech, EcoSys in the framework of WP1 of MELICERTES (PEPR

« Agroécologie et numérique », France 2030 program).

The place of work will be the INRAE/AgroParisTech campus in the Paris-Saclay university (22, Place de l'Agronomie 91120 Palaiseau, France).

Remuneration : gross salary of 2500-2800 €/month (upon experience).

Procedure for candidating

Candidates must send a motivation letter and a detailed *curriculum vitae* and contacts of potential referees to emmanuelle.vaudour@inrae.fr