Postdoctoral Researcher / Research Engineer

Postfire Forest Carbon Dynamics from Remote Sensing

Context

This position is part of the **QWERTY project**, one of the ten laureates of the **PEPR FORESTT** (*Programme et Équipements Prioritaires de Recherche – Forêts et leurs Transitions*), a national French initiative supporting interdisciplinary research on forest transitions under climate change.

QWERTY aims to **quantify the vulnerability of forest ecological values to wildfires**, combining ecological theory, remote sensing, and spatial modeling. The project will identify which forest functions (carbon storage, biodiversity, structure, etc.) are most affected by fire, how vulnerability varies across bioclimatic gradients, and how forests may recover or shift under future scenarios.

The successful candidate will join a collaborative team of ecologists, data scientists, and remote sensing experts from LSCE and project partners (IRD, CNRS, UVSQ, URCA, EPHE, ENPC). The position will focus on developing spatially explicit analyses of forest structure and biomass recovery using remote sensing data.

Missions:

- Develop and run processing pipelines for multi-source remote sensing datasets (e.g., height/biomass maps,).
- Integrate large spatial datasets (raster and vector, including NetCDF) with ecological and forest inventory data.
- Conduct ecological and biophysical analyses of forest structure, growth, and carbon dynamics.
- Contribute to methodological advances in remote sensing–based monitoring of forest transitions.

- Prepare scientific outputs, including peer-reviewed publications, reports, and presentations within PEPR FORESTT.

Profile:

- You have a masters degree in Ecology, Geography, Environmental Sciences, Data Science, or related fields.
- PhD is a plus but not a requirement.
- Strong proficiency in **Python**, with experience in scientific/data analysis libraries (NumPy, pandas, xarray, scikit-learn).
- You have experience in remote sensing or are motivated to develop technical skills in that field.
- You have knowledge of geospatial data handling (rasterio, GDAL, geopandas) and large-scale data workflows.
- Background in forest ecology, ecosystem functioning, or carbon cycle science is a strong asset.
- Strong analytical skills, independence, and ability to collaborate in an interdisciplinary and international research environment.
- You like problem solving, you are autonomous, but want to work in a collaborative environment.
- You are able to lead and structure implementation projects.
- You are curious, enjoy learning and a research environment.
- You are able to communicate efficiently with the team on their needs and the projects you're involved in.
- You want to work on problems that can benefit the environment.

Location:

Laboratoire des Sciences du Climat et de l'Environnement (in the Orme des Merisiers green area, Saclay).

LSCE is a world-class research laboratory and a collaboration between CEA, CNRS and the University of Versailles Saint-Quentin (UVSQ). The LSCE hosts approximately 300 researchers, engineers and administrative staff including many PhD and master's students. This project will provide the employee with the opportunity to work directly on advanced methods with researchers from the LSCE and other institutions.

Contract duration:

24 months, with an extension possible.

Starting date:

The position is available now and will remain open until filled.

Salary:

Competitive salary, full social and health benefits, commensurate with work experience.

Supervision:

Main supervisor: Philippe Ciais, Research director at LSCE

Co-supervisors: Agnès Pellissier-Tanon (LSCE)

How to apply:

Applicants should submit a complete application package by email to the contacts below. The application package should include (1) a curriculum vitae including e.g. important recent publications / projects, (2) statement of motivation / cover letter (3) names, addresses, phone numbers, and email addresses of at least two references.

Contacts:

Philippe Ciais • philippe.ciais@lsce.ipsl.fr

Agnès Pellissier-Tanon • agnes.pellissier-tanon@lsce.ipsl.fr