Dynamic Forest Carbon from High Resolution Satellite Data.

Young scientist position

The Laboratoire des Sciences du Climat et de l'Environnement (LSCE) and Kayrros (a Paris based EO startup), are looking for two motivated early carreer scientists to develop new methods to quantify forest biomass and biomass changes using very high resolution satellite, with artificial intelligence.

Carbon in forests is both very important to mitigate climate change and to supply wood resources. Forest carbon stocks are spatially highly heterogeneous across forest types, and strongly impacted by trees demography, forest management, and natural disturbances such as fires, insect outbreaks and droughts.

Join our team to develop new deep learning and machine learning models and apply them to high spatial and temporal resolution satellite data to map forest cover, tree density and carbon stocks. Satellite images e.g. from the Planet satellites will be combined with inventories and forest height measurements using spaceborne Lidars. A science breakthrough is expected from artificial intelligence methods pioneered by Kayrros for 3D image analysis and the know-how of LSCE on forest carbon dynamics to provide the first very high-resolution maps of forest carbon in several European countries, including tree density, species types and carbon change rates.

Requirements

- Programming skills, preferably in Python.
- Machine learning and deep learning.

Selection Criteria

- PhD in a field such as remote sensing, signal processing, machine learning or statistics.
- Autonomy, ability to work in a team and time management skills.
- Experienced in multidisciplinary team-based activities with the ability to effectively communicate with colleagues and with staff from the partners of a project.

What Kayrros and the LSCE can offer you:

LSCE is a world-class research laboratory established and a collaboration between CEA, CNRS and the University of Versailles Saint-Quentin (UVSQ). It is part of the Institute Pierre Simon Laplace (IPSL). 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. The purpose of this joint position between LSCE and Kayrros is to develop R&D that becomes sustainable and could lead to a permanent position opening at Kayrros during or after the position duration.

Location: Laboratoire des Science du Climat et de l'Environnement (https://www.lsce.ipsl.fr) located about 20 km from the heart of Paris in the Orme des Merisiers green area.

Kayrros is an earth observation startup founded in 2016. It now employs about 150 people between Paris, New York, Houston, Singapore, Bangalore and London. Kayrros' mission is to track carbon using satellite imaging and alternative data sets, following oil & gas production, storage, demand and finally emissions and sequestration. The postdoc will involve constant interactions with the Paris team. Much of the R&D is located in offices on rue Lafayette, in the center of Paris.

Contract duration: Up to 24 months**.**

Starting date: The position is available from Oct 2021 and will remain open until filled.

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

How to apply: Applicants should submit a complete application package by email. The application package should include (1) a curriculum vitae including most important recent publications, (2) statement of motivation (3) answers to the selection criteria above (4) names, addresses, phone numbers, and email addresses of at least two references.

Contact

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https://www.lsce.ipsl.fr
https://www.kayrros.com