

Job description: Postdoctoral fellowship in modeling of the phosphorus cycle in the Amazon forest

We seek a motivated postdoctoral fellow to join a collaborative research effort to understand the role of nutrient limitation in explaining the observed decline of Amazonian carbon uptake and inter-site variability. In the absence of nutrient limitation, we predict an increase in the carbon uptake by ecosystems via biomass accumulation due to the CO₂ fertilization, as well as a drought-induced mortality risk, but this is not well captured in models. The postdoctoral fellow will investigate how productivity and biomass turnover are affected by the low soil P concentrations in Amazonia and if increasing nutrient limitation can explain the observed trend in Amazon carbon sink and their impact on its future evolution. He/she will make extensive use of the process-based grid-based ecosystem model ORCHIDEE (Krinner et al., 2005), which was recently extended by representations of the cycles of phosphorus and nitrogen, and their interactions with environmental conditions. Model predictions will be tested against the unique long-term observational data acquired in French Guiana over more than 100 ha of permanent forest plots (<http://paracou.cirad.fr/experimental-design/guyafor-network>). This project is jointly funded by the Imbalance-P ERC-Synergy project (<http://imbalancep-erc.creaf.cat/>), and by the laboratory of excellence CEBA (Center for the study of Biodiversity in Amazonia; <http://www.labex-ceba.fr/en/>).

Candidates should hold a PhD in Ecology, Earth System Modelling or environmental Science, have strong skills in computer science, experience in tropical forest ecology, strong writing skills, and demonstrated ability to work in a team environment.

The fellowship will be hosted in Philippe Ciais' group at the Laboratoire des Sciences du Climat et de l'Environnement, Gif-sur-Yvette, with regular visits to Jerome Chave's group at laboratoire Evolution et Diversite Biologique, Toulouse. It will be awarded the standard CNRS postdoctoral stipend. The appointment is for two years.

How to apply: Applicants should submit a complete application package by email until March 15th, 2017, to Amaia Iribar (e-mail: amaya.pelozuelo@univ-tlse3.fr). Application package: CV, including contact information for three references, statement of research interests and accomplishments, and two relevant publications.



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