We are seeking a postdoctoral researcher who will focus on modeling interactions between plants, mycorrhizae, and soil organic matter cycling.

This position is part of a DOE-funded project investigating the role of mycorrhizae and microbial community traits in soil carbon and nitrogen cycling using a combination of field measurements, experiments, and modeling. As part of the research team, you will develop and test numerical models of soil organic matter cycling incorporating mycorrhizae and other microbial processes and conduct model simulations of carbon and nitrogen cycling under different scenarios of nitrogen availability, plant traits, and mycorrhizal associations. You will collaborate with colleagues conducting laboratory and field measurements to evaluate model simulations.

This position is through Dartmouth College where you will be part of the vibrant intellectual community of the Ecology, Evolution, Environment & Society program. You will also work closely with collaborators at Oak Ridge National Laboratory and have the opportunity to travel to Oak Ridge National Laboratory for the collaboration. The position is funded for 19 months. Potential exists to extend the position via competitive postdoctoral fellowships at Dartmouth.

For additional information, please contact Caitlin Hicks Pries (caitlin.hicks.pries@dartmouth.edu) or Benjamin Sulman (sulmanbn@ornl.gov).

To apply, please submit your CV and a cover letter indicating how your background might fit with our research via e-mail to Caitlin Hicks Pries (caitlin.hicks.pries@dartmouth.edu). Please include the contact information for three people who can write a letter of reference at the end of your CV. Letters will be requested for finalists. Please apply by June 25th for full consideration.

Major Duties/Responsibilities:
Design and conduct model simulations of mycorrhizal roles in soil organic matter cycling and plant nitrogen acquisition Parameterize microbial traits in a microbial-explicit soil organic matter model Synthesize and analyze existing observations of biogeochemistry and ongoing experiments and measurements with colleagues on the project to evaluate model simulations Communicate model developments and research results through group meetings and conference presentations Publish results in peer-reviewed journal articles Work closely with an integrated team of collaborators who use numerical, experimental and observational methods

Basic Qualifications:
Ph.D degree in biogeochemistry, environmental science, Earth science, environmental modeling, or a related field. Understanding of ecosystem biogeochemical processes including soil carbon and nitrogen cycling Experience running, analyzing, or evaluating ecosystem or biogeochemical models Programming experience in python, R, or similar language Evidence of strong written and oral communication skills

Preferred Qualifications:
Experience with modeling microbial roles in soil organic matter cycling Experience with model parameter estimation, inverse modeling, or Bayesian statistical methods Experience developing scientific or technical software using collaborative development tools such as Github Interest in
working collaboratively in a team science environment Record of publication in the peer-reviewed literature

Dartmouth College is an Ivy League university with graduate programs in the sciences, engineering, medicine, and business. It is located in Hanover, NH, about 2.5 hours northwest of Boston. Dartmouth College is an equal opportunity employer.