

Title: Postdoctoral Researcher in Ecological Modeling

Position Summary:

There is an opening for a postdoctoral researcher in the group of Dr. Vargas in the Department of Plant and Soil Sciences at the University of Delaware. The researcher will work closely with a multidisciplinary team (University of Arizona and Donald Danforth Plant Science Center) to support prediction and analysis of crop growth models, ecological forecasts, and scenarios. The work will be focused on predicting the impacts of genetically modified traits on physiological and ecosystem dynamics.

The ideal candidate will be proficient with crop, ecological or land surface models, will have a strong foundation in ecophysiology, biogeochemistry, or related discipline within biology or earth sciences, and a commitment to collaborative and open science. The position is available immediately with a starting date no later than January 1st 2021.

Duties and Responsibilities

The researcher will be expected to run, visualize, interpret, and present results from crop, ecological or land surface models. Test model sensitivity (e.g., using a Bayesian framework). Meet regularly to present results to a multidisciplinary team and the funding agency. Publishing of results in scientific journals. Document work to support open and reproducible science. Work in an iterative, agile environment to promote infrastructure for open science.

Specific Responsibilities:

- Run, calibrate and validate crop and ecological models
- Develop, refactor, test, and document scientific workflows
- Implement new ecophysiological mechanisms in existing models
- Identify and communicate data needs to researchers
- Create and improve visualizations and interpretation of results
- Writing reports and peer-review manuscripts.

Minimum Qualifications

- Doctoral degree in related field of research.
- Experience in scientific software development
- Proficiency in R or Python
- Experience with crop, ecological or land surface models
- Demonstrated ability to adapt and learn new skills.
- Excellent organizational skills.
- Demonstrated ability to work collaboratively in a team and publish scientific manuscripts.

Preferred Qualifications

Additional experience or interest in learning Bayesian modeling, data management, project management, version control, high performance computing. Proficiency in a compiled language such as C, C++, or FORTRAN.

Documents Needed to Apply

- Cover Letter
- Curriculum Vitae
- Publications 1-2 (examples in electronic format)
- Names and contact information of three references

The University of Delaware is an Equal Opportunity Employer which encourages applications from Minority Group Members, Women, Individuals with Disabilities and Veterans. The University's Notice of Non-Discrimination can be found at <http://www.udel.edu/aboutus/legalnotices.html>

The University of Delaware (www.udel.edu) is one of the oldest land-grant institutions in the nation, one of 19 sea-grant institutions, and one of only 13 space-grant institutions. UD is designated as a high research activity university (Carnegie rated) and ranks among the top 100 universities in federal R&D support for science and engineering. Additionally, UD is located in Newark, Delaware, within 2 hours of New York, Philadelphia, Baltimore, and Washington, D.C.

Please direct questions to Dr. Rodrigo Vargas (rvargas@udel.edu)