

Opportunity Title: Earth Science: Land-Atmosphere Interaction and Coupling
Impacts on Energy and Water Cycle Prediction

Opportunity Reference Code: 0139-NPP-MAR25-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0139-NPP-MAR25-GSFC-EarthSci

How to Apply All applications must be submitted in [Zintellect](#)

Please visit the NASA Postdoctoral Program website for application instructions and requirements: [How to Apply | NASA Postdoctoral Program \(orau.org\)](#).

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 3/1/2025 6:00:59 PM Eastern Time Zone

Description About the [NASA Postdoctoral Program](#)


The [NASA Postdoctoral Program \(NPP\)](#) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

The Hydrological Sciences Laboratory at NASA's Goddard Space Flight Center is seeking a post-doc candidate to conduct research in the area of land-atmosphere interactions and coupling. The Lab has been leading community-wide efforts to improve quantification of the impact of land surface fluxes and states on water and energy cycling and atmospheric prediction. In addition, both the Land Information System (LIS) and the NASA-Unified Weather Research and Forecasting (NU-WRF) system are developed by experts in the Lab, and are combined with satellite remote sensing observations of the land surface and planetary boundary layer (PBL) to evaluate and improve coupled prediction. Research opportunities exist in all areas of land-atmosphere coupling including components, processes, and diagnostics linking soil moisture to evapotranspiration to PBL growth to clouds and precipitation. Studies may also utilize the optimization/calibration and data assimilation components of the LIS and NU-WRF systems in order to demonstrate the impact and improvement in fusing models with observations on prediction skill. The ideal candidate will have demonstrated an active research interest in the modeling, observation, and evaluation of land-PBL processes and interactions. A focus on local to regional prediction is desired, but not necessary, as land-atmosphere coupling assessments need to be made across scales up to and including global and climate model results. To this end, collaboration



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with NASA's Global Modeling and Assimilation Office (GMAO) and their coupled climate modeling systems are also possible through this opportunity.

Location:

Goddard Space Flight Center
Greenbelt, Maryland

Field of Science:Earth Science

Advisors:

Joseph A. Santanello, Jr.
Joseph.A.Santanello@nasa.gov
301-286-7450

Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found at: <https://www.nasa.gov/oiir/export-control>.

Eligibility is currently open to:

- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

Questions about this opportunity? Please email npp@orau.org

Point of Contact [Mikeala Lambertucci](#)

Eligibility Requirements • **Degree:** Doctoral Degree.