

**Opportunity Title:** Earth Science: Land Water Distribution with Changing Climate:

Flows between Lakes, Rivers, Soils, Vegetation, and Atmosphere

**Opportunity Reference Code:** 0021-NPP-MAR25-GISS-EarthSci

**Organization** National Aeronautics and Space Administration (NASA)

**Reference Code** 0021-NPP-MAR25-GISS-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.

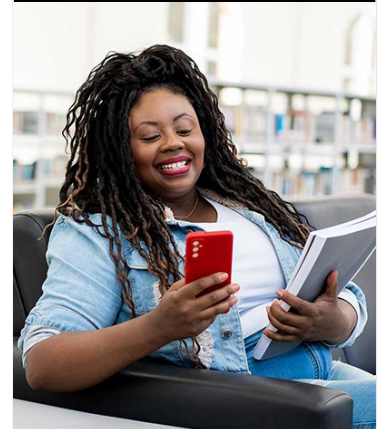
**Description:**

The distribution of water on land in lakes, rivers, soils, aquifers, and vegetation varies not only seasonally but has changed through Earth's history and is undergoing shifts now with climate change as well as with human land use. These several components of land surface hydrology are not always clearly distinct from each other, as demonstrated by recent extreme climate events, like flooding, or by trends in human land use, such as draining of peatlands.

At NASA GISS, we develop and conduct experiments with an Earth System Model, ModelE, which has played a key role in predicting climate change. The land surface model in ModelE quantifies important metrics for impacts of climate change on surface temperature, precipitation, drought, lake water storage, river flow, snow, land biogeochemistry, and more.

Postdoctoral fellows are invited to propose research to investigate the role of land surface hydrology and its coupling with different aspects of the climate system. Studies could involve, but are not not limited to:

- (1) wetlands coupling of vegetation, soils, and peatlands
- (2) dynamics of lakes and rivers
- (3) flooding with climate change scenarios
- (4) model evaluation with remote sensing observations from missions such



Whether you are just starting your career or already at a senior level, ORAU offers internships, fellowships, research opportunities, and contract positions that can provide you with invaluable experience. Download the ORAU Pathfinder mobile app and find the right opportunity to propel you along your career path!

Visit ORAU Pathfinder [↗](#)



**Opportunity Title:** Earth Science: Land Water Distribution with Changing Climate:

Flows between Lakes, Rivers, Soils, Vegetation, and Atmosphere

**Opportunity Reference Code:** 0021-NPP-MAR25-GISS-EarthSci

as SWOT, SMAP, GRACE, or others.

Successful applicants should have experience with mathematical modeling, computer programming, and analyzing field and remote sensing datasets. Background in the following is highly desirable: Earth, Physical, and/or Computing Sciences, advanced statistics, programming in a compiled language like C or FORTRAN95, and scripting with python or R.

**Field of Science:** Earth Science

**Advisors:**

Nancy Kiang

Nancy.Y.Kiang@nasa.gov

(212) 678-5553

Gary Russell

Gary.L.Russell@nasa.gov

(212) 678-4787

Allegra LeGrande

Allegra.N.LeGrande@nasa.gov

(212) 678-5556

**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](mailto:npp@orau.org)

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