

Opportunity Title: High-resolution ocean model parameter identification using machine learning

Opportunity Reference Code: 0264-NPP-MAR25-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0264-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:

To support NASA earth science missions, the Global Modeling and Assimilation Office (GMAO) advances earth system models. This present opportunity invites proposals that are focused on **improving ocean and sea ice modeling at high-resolutions at global and/or regional-scales**. Models configured at high spatial resolutions simulate certain process better than those at coarse resolutions (for example, representation of eddies, their propagation, tides, internal waves, etc). However, these simulations are computationally expensive. Also, identification of model parameters is non-trivial. Investigations that propose to:

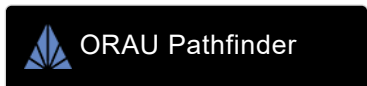
- Conduct and study high-resolution ocean, sea-ice modeling simulations,
- Compare with NASA's satellite and reanalysis data,
- Use machine learning methods on high performance computing platforms with open-source software,
- Improve fidelity of model simulations,

are highly encouraged.

Field of Science: Earth Science

Advisors:

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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

Eligibility Requirements

- **Degree:** Doctoral Degree.