

Opportunity Title: Improved modeling of air-sea exchange in high-resolution ocean-sea ice and coupled simulations

Opportunity Reference Code: 0271-NPP-NOV23-GSFC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0271-NPP-NOV23-GSFC-EarthSci

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

Application Deadline 11/1/2023 6:00:59 PM Eastern Time Zone

Description Description:

The NASA Global Modeling and Assimilation Office (GMAO) maintains and develops models of the earth system and its components for an earth system analysis and coupled data assimilation. Accurate exchange of heat, momentum and mass across the air-sea interface, between the atmosphere-, ocean-, land- and sea ice is essential for realistic simulations and data assimilation in an earth system model and analysis. This present opportunity invites proposals that are focused on improving parameters within the bulk-flux formulae that are commonly used in ocean, sea ice and coupled simulations. Such parameters have been derived from a limited set of field campaign measurements. Investigations whose goals include (but not limited to):

1. Study the impact of choice of bulk-flux parameterization and parameters on upper- and deep-ocean, air-sea fluxes,
2. Use machine learning methods to identify and improve values of parameters, which ultimately improve simulations at multiple horizontal resolutions in global and/or regional configurations,
3. Evaluate improvements using NASA's satellite and reanalysis data in different ocean basins with a focus on polar oceans

are highly encouraged.

Field of Science: Earth Science

Advisors:

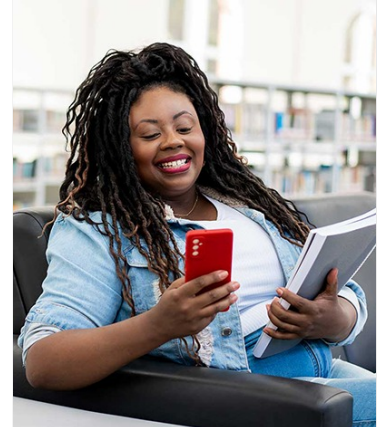
Santha Akella
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(301) 614-5687

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,



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- 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

**Eligibility
Requirements**

- **Degree:** Doctoral Degree.