Opportunity Title: Remote sensing applications for mapping and monitoring global forest carbon stock and dynamics
Opportunity Reference Code: 0111-NPP-MAR23-ARC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0111-NPP-MAR23-ARC-EarthSci

How to Apply All applications must be submitted in Zintellect

Application Deadline 3/1/2023 6:00:00 PM Eastern Time Zone

Description **Description:**

This postdoc opportunity is for candidates with special interest in the remote sensing of global forest carbon dynamics. The successful candidate will work with optical and microwave remote sensing data to estimate and map above ground forest structure, biomass, and changes driven by anthropogenic and climate forcing. The candidate will participate with a team of scientists conducting original research using various statistical and machine learning approaches to develop regional and global products and improve our understanding of the drivers of carbon stock changes across a variety of ecosystems. The candidate will collaborate with the team to integrate a series of optical (e.g., Landsat, Sentinel-2, SBG, PlanetScope) and microwave/radar (ALOS, Sentinel-1, and in future, NISAR and BIOMASS) satellite imagery with airborne and satellite lidar (GEDI, ICESAT-2) measurements of forest structure and conventional ground-based forest inventory data to map and monitor changes of forest structure and biomass and attribute the changes to land use activities and environmental effects. The selected candidate may also engage with mapping forest disturbance (land use, logging, and tree mortality), fire fuel loads, and biomass carbon change across various forest ecosystems. Also, the candidate may further analyze data products (e.g., fire fuel loads, disturbance type) to improve ecosystem and fire modeling. The candidate will help improve the quantification of the global carbon cycle as a result of human and climate-induced changes and better understand the short-term and long-term responses of ecosystems to climate change. Candidates will be required to formulate a research project in close collaborations with their advisors, perform technical analysis, document algorithms and codes developed for data processing, analysis, science product generation, present at technical conferences, and lead peer-reviewed publications.

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;

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- 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

Eligibility Requirements

- **Degree:** Doctoral Degree.