Opportunity Title: Imaging and Modeling Crustal Deformation using Space Geodesy
Opportunity Reference Code: 0101-NPP-NOV26-JPL-EarthSci

Organization National Aeronautics and Space Administration (NASA)

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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 11/1/2026 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:

Space geodetic measurements such as InSAR and GNSS provide capability to image crustal deformation processes at various spatiotemporal scales. Data acquisitions from multiple satellite SAR sensors (e.g, ERS, Envisat, ALOS, Radarsat, TerrarSAR-X, Cosmo-SkyMed, Sentinel-1A/B etc.) now allow us to image time variable deformation with fine spatial resolution over different time scale. The airborne UAVSAR has been acquiring data along the San Andreas Fault system and captured a spectrum of deformation signals associated with fault creep/locking, earthquake and anthropogenic sources, and landslide. Integration of InSAR and GNSS allows noise reduction and reveals deformation signals that are otherwise not possible. These deformation measurements can be combined with advanced analysis and numerical modeling to better constrain fault/volcano source parameters, mechanical and rheological properties, and improve our understanding of earthquake and volcano source processes, strain accumulation, transient fault slip, postseismic deformation, and other tectonic and non-tectonic (e.g., anthropogenic) processes. Interested candidates are sought to work on one or more of the following (but not limited to) research opportunities: 1) Develop novel techniques to separate geophysical signals from noises using InSAR and GPS; 2) Combine GNSS and InSAR data to image transients and investigate their spatiotemporal relation with earthquake, tremor, tectonic and non-tectonic loadings; 3) Utilize multiple satellite and airborne InSAR data to develop time series and deformation map to better resolve fault slip/locking, transient faulting and mechanical processes; 4) Integrate time variable surface deformation observations with state-of-the-art numerical modeling techniques to

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model fault mechanics and earthquake cycle dynamics.

Location:
Jet Propulsion Laboratory
Pasadena, California

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

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.