Opportunity Title: High Frequency Devices and Circuits
Opportunity Reference Code: 0047-NPP-MAR26-JPL-TechDev

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0047-NPP-MAR26-JPL-TechDev

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 4/2/2026 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:

This research area is focused on developing semiconductor based devices and circuits operating in the 100 GHz to 5000 GHz frequency range. The devices will be packaged into components that will enable the next generation of NASA instruments for Astrophysics, Earth remote sensing and Planetary discovery and exploration. GaAs based planar Schottky diodes working in the millimeter and submillimeter frequency range have seen extensive use as detectors and multipliers. Novel device design concepts that might lead to higher intrinsic efficieis are strongly encouraged. Similarly, novel circuit configurations that increase functionality per chip or leapfrog current technological boundaries are also encouraged. Device fabrication processes that allow for fast turnaround prototyping with high yields and low critical dimensions can be validated at the Micro Devices Laboratory (MDL). The MDL at JPL is a world class seminconductor device fabrication facility that can allow device researches access to state-of-the-art fabrication and characterization tools.

1) I. Mehdi, et. al., "THz Multiplier Circuits," Proceedings of the IEEE-MTTS Symposium, June 2006.

2) I. Mehdi, et. al., "Submillimeter-Wave Schottky Diode Receivers," Proceedings of the Joint 32nd Intl. Conf. on Infrared and Millimeter-Waves and 15th. Intl. Conf. on Terahertz Electronics, Cardiff, United Kingdom,

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Sept. 2007.

Location:
Jet Propulsion Laboratory
Pasadena, California

Field of Science: Technology Development

Advisors:
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818-354-2001

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.