

Opportunity Title: Physics Informed Machine Learning for Space Power System
Diagnostics and Control

Opportunity Reference Code: 0039-NPP-MAR26-GRC-Eng

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0039-NPP-MAR26-GRC-Eng

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 3/1/2026 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:

Exploration to deep space will require unprecedented levels of reliability and resilience to ensure mission success. Studies have shown that a high percentage of faults that occur onboard spacecraft were not accounted for in the original fault management design. These unanticipated faults and disturbances present great challenges in the detection, isolation, and control of dynamic systems such as electrical power. Recent advances in machine learning present new opportunities to enhance the level of fault management and control in NASA's future power system applications. This work aims to derive physics informed machine learning techniques to support fault diagnostics and control of space based power systems.

Field of Science: Engineering

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



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at: <https://www.nasa.gov/oiiir/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

- Qualifications**
- Background in engineering, computer science, or a similar field.
 - Background in software tools such as Matlab, Python, and C/C++
 - Experience developing machine learning algorithms
 - Strong mathematical foundation specifically in linear algebra, differential equations, and optimization
 - Solid communication and teamwork skills

Point of Contact [Mikeala](#)

- Eligibility Requirements**
- **Degree:** Doctoral Degree.