Opportunity Title: Exobiology: Living Systems Science
Opportunity Reference Code: 0112-NPP-NOV23-ARC-Astrobiology

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0112-NPP-NOV23-ARC-Astrobiology

How to Apply All applications must be submitted in Zintellect

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

Description **Description:**

Astrobiology fits the description of a systems science: it can be simultaneously 'holistic' – tackling for example the complex interactive phenomena of planetary climate at a global level ? and highly detailed, studying the fine-grained nature of phenomena, such as organisms' differing, but interactive and adaptive metabolic behavior and the consequences across multiple scales. The Living Systems Science effort seeks to further system science approaches in astrobiology and to enhance existing work at Ames, and across NASA's programs, with research that spans mission-related development, the creation of powerful modeling and analysis tools for the community, and work on the fundamental principles of life and habitability. A major component of this initiative is to develop a near- and long-term capability in machine-learning applications for astrobiology.

Areas of investigation include:

- Living systems detection and characterization

- Mars sample return science and tools.

- Standards of evidence in life detection and implications for techniques

- Fundamental patterns in living systems, from energy flow to environmental occupancy

- Cosmic environmental zones, including exoplanets and planetary system architectures

- Blue-sky astrobiology, from alternate biosignatures to mission concepts

We seek a postdoctoral researcher with an appropriate skill set who is interested in these areas and particularly in machine-learning applications across any of these areas. Applicants will have the opportunity to explore both their own research directions and to participate in the design and proposal of projects and to work in collaboration to support cross-cutting efforts in astrobiology at NASA Ames.

Field of Science: Astrobiology

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

Eligibility Requirements

- **Degree:** Doctoral Degree.