

Opportunity Title: Autonomous Sensorwebs for Natural Hazard Response

Opportunity Reference Code: 0152-NPP-NOV23-JPL-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0152-NPP-NOV23-JPL-EarthSci

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

Description Basic and applied research in autonomous and semi-autonomous systems for data interpretation and response as relating to remote sensing, in-situ sensing and including space, aerial, in-situ and processing elements. Special focus on the use of multiple modalities of data, but with a special interest in radar processing. Use cases of special interest involve detection and alerts of natural hazards such as volcanic eruptions, flooding, earthquake, tsunami, and subsidence, with response es including notification, identification of response assets (space, air and other), in some cases automation of request and tasking of said assets, fusion and analysis of acquired data into higher level products such as damage assessments. Specific scenarios include (a) volcanic activity detection by in-situ seismic sensors, automatic identification and image requests made of radar and thermal sensor capable space assets, and electronic delivery of analysis products to relevant authorities.

Desired areas of expertise include Artificial Intelligence Planning and Scheduling, and autonomous systems with applications to spacecraft autonomy, as well as multi-agent systems, sensorwebs, and integrated autonomous systems including perception (including radar, image, and spectral processing) , deliberation, and execution. For further information see aria.jpl.nasa.gov, sensorweb.jpl.nasa.gov, and ai.jpl.nasa.gov.

Location:

Jet Propulsion Laboratory
Pasadena, California

Field of Science: Technology Development

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/oiiir/export-control>.



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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.