

Opportunity Title: Biosignatures Detection and Interpretation
Opportunity Reference Code: 0134-NPP-NOV23-JPL-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0134-NPP-NOV23-JPL-PlanetSci

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

Description We explore new approaches to in situ detection of extraterrestrial life in icy worlds by quantitatively distinguishing biotic from abiotic systems. One of these approaches is to by using local entropy (or "order") which is reduced by life by preferentially consuming and synthesizing some compounds over others and causing more even distribution within the abiotic compounds. Various analytical and modeling techniques are explored to answer a key research question in Astrobiology: Can the non-biological processes mimic a particular biosignature? if yes, how can we distinguish these false positives.

Location:

Jet Propulsion Laboratory
Pasadena, California

Field of Science: Planetary Science

Advisors:

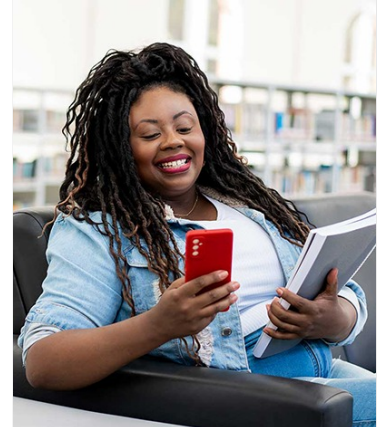
Isik Kanik
Isik.Kanik@jpl.nasa.gov
818-354-7233

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.



Whether you are just starting your career or already at a senior level, ORAU offers internships, fellowships, research opportunities, and contract positions that can provide you with invaluable experience. Download the ORAU Pathfinder mobile app and find the right opportunity to propel you along your career path!

Visit ORAU Pathfinder [↗](#)

