

**Opportunity Title:** Joint Analysis in Large-scale Structure Cosmology

**Opportunity Reference Code:** 0271-NPP-NOV23-JPL-Astrophys

**Organization** National Aeronautics and Space Administration (NASA)

**Reference Code** 0271-NPP-NOV23-JPL-Astrophys

**How to Apply** All applications must be submitted in [Zintellect](#)

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

**Description Description:**

At JPL, our "Dark Sector" cosmology group has been focused on pursuing various strategies to better understand and mitigate experimental and modelling effects on our measurements of cosmological parameters, and conclusions we draw about the nature of dark energy and dark matter. With the advent of ambitious new dark energy surveys this decade, the requirement for the thorough understanding and mitigation of such effects has intensified. We participate in various space- and ground-based cosmology surveys. As one of the main avenues towards addressing observational effects and increasing the precision and accuracy of our measurements of cosmological parameters, we have been making significant efforts towards jointly analyzing data from cosmological large-scale surveys. We are very actively involved in space-based cosmology missions, ESA's Euclid and NASA's Roman, as well as several ground-based experiments, like the Dark Energy Survey. We work on both of the main large-scale structure probes: weak gravitational lensing, as well as galaxy clustering (including redshift-space distortions), and collaborate in building up a joint analysis of the two.

The NPP fellow will conduct independent research on the topic of large-scale structure cosmology, ideally with a specific focus on spectroscopic galaxy clustering. They will closely collaborate with rest of the Dark Sector team on projects furthering our understanding of dark energy cosmology by addressing any combination of the following general topics: combined likelihood analysis, modeling small scales of redshift-space galaxy clustering, or spectroscopic systematic effects. Ideas for further related topics are warmly welcome. Please contact Dida Markovic for further discussion of topics of interest.

**Field of Science:** Astrophysics

**Advisors:**

Katarina Markovic  
katarina.markovic@jpl.nasa.gov  
(818) 354-9981

**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/oiair/export-control>.

Eligibility is currently open to:



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 [↗](#)



**Opportunity Title:** Joint Analysis in Large-scale Structure Cosmology

**Opportunity Reference Code:** 0271-NPP-NOV23-JPL-Astrophys

- 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.