

Opportunity Title: Wildland Fire Impacts, Modeling, and Applications

Opportunity Reference Code: 0113-NPP-NOV23-ARC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

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

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

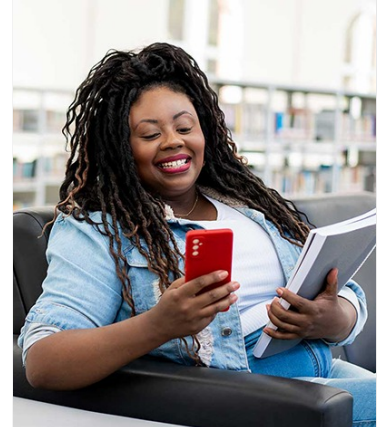
Description Description:

Wildfires in the U.S., and globally, pose an increasing challenge to the natural and human environment, including living with and managing fires. Understanding the fire lifecycle begins with pre-fire ecology and landscape, drought conditions and other climate-related factors, as well as human factors of individual, communal, state, and federal priorities. During active fire events, detection, tracking, and information sharing is a strength and a goal of NASA Science work. In the post-fire phase, active and post-fire impacts on air quality and atmospheric chemistry, ecology, land surface changes, risk of negative impacts on water and food security, and intersections with community needs to rebuild, become more resilient, and to protect resources. Further, cascading hazards like post-fire increases of landslide risk susceptibility are hard to detect, quantify and predict, and even harder to communicate to partners, stakeholders, and the public.

At NASA Ames, wildfire has been a key priority for over four decades. Ames wildfire science includes **R&A** (research and analysis - e.g., data science, atmospheric composition and air quality, ecological assessments and forecasting), **T&D** (technology development - e.g., IT solutions including the NASA Earth Exchange/NEX, remote-sensing and in-situ instrumentation to observe the pre-fire, active fire, and post-fire atmosphere and land surface cover, and uncrewed aerial systems), and especially **Applications** (as part of the Applied Science Wildland Fires Program). NASA Ames participates in the agency's wildfire initiative through aeronautics, project management, and science.

The Ames Earth Science Division hosts the NASA SMD FireSense project office, as well as Wildland Fire Applications associate program officers. The NASA Airborne Sensor Facility builds and operates thermal infrared and other multi-and hyperspectral airborne imaging instruments, including the MASTER instrument ([MODIS/ASTER Airborne Simulator \(MASTER\)| NASA Airborne Science Program](#)). Collaboration with the NASA Earth Exchange (NEX: <https://www.nasa.gov/nex>) for high-end computing needs is possible. We are a dynamic and diverse team and welcome applicants from all backgrounds.

In R2A (Research-to-Applications) efforts at NASA, building lasting relationships, communities, and alliances can unleash the innovative power of NASA to enable more effective fire landscape management by stakeholders. The successful candidate will explore pathways and intersections of R&A and T&D efforts with the needs of the stakeholder community, and as part of the Ames wildfire team engage with the



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stakeholder community and our partners, including the US Forest Service, USGS, Department of Interior, other NASA centers, as well as NGO and state, local, and tribal agencies and partners, embedded in both the Wildfire Applications Program, and the FireSense project. Proposed projects focused on the U.S., including Alaska and Hawai'i, and larger international regional areas (boreal, Arctic, tropics, etc.) would be appropriate. Potentially global-scale projects will be applicable dependent upon the methodologies to be used and identification of the appropriate stakeholder community.

NPP Fellows are expected to provide tangible value to the program, publish their work in top ranked journals, and present at meetings and conferences. Some travel may be required.

Field of Science: Earth Science

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/oair/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.