

Opportunity Title: USDA-ARS ORISE Postdoctoral Fellowship for Using NISAR Radar Data to Characterize Agricultural Fields at Sub-Field Scales

Opportunity Reference Code: USDA-ARS-NEA-2026-0082

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-NEA-2026-0082

How to Apply *To submit your application, scroll to the bottom of this opportunity and click APPLY.*

A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Click [here](#) for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations
- A copy of an abstract or reprint of an article

All documents must be in English or include an official English translation.

Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!"

Application Deadline 4/10/2026 3:00:00 PM Eastern Time Zone

Description *Applications are reviewed on a rolling-basis.

ARS Office/Lab and Location: A postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Hydrology and Remote Sensing Laboratory. This opportunity is in Beltsville, Maryland.

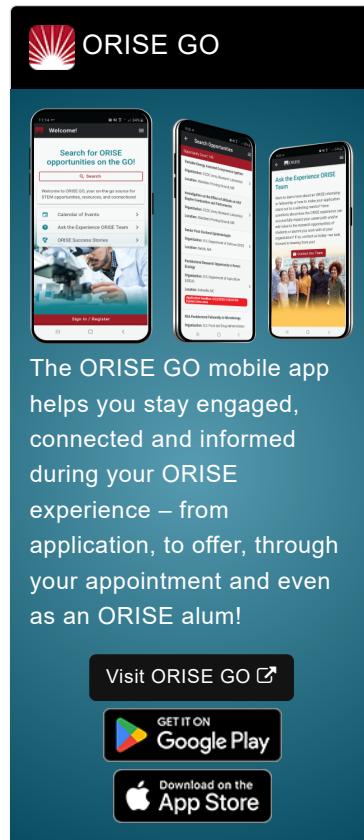
The Agricultural Research Service (ARS) is the U.S. Department of Agriculture's chief scientific in-house research agency with a mission to find solutions to agricultural problems that affect Americans every day from field to table. ARS will deliver cutting-edge, scientific tools and innovative solutions for American farmers, producers, industry, and communities to support the nourishment and well-being of all people; sustain our nation's agroecosystems and natural resources; and ensure the economic competitiveness and excellence of our agriculture. The vision of the agency is to provide global leadership in agricultural discoveries through scientific excellence.

Research Project: The Postdoctoral Program of the USDA ARS offers research opportunities to motivated postdoctoral fellows interested in solving agriculture-related problems at a range of spatial and temporal scales, from the genome to the continent, and sub-daily to evolutionary time scales.

This postdoctoral opportunity entails two major goals. One goal is for the





OAK RIDGE INSTITUTE
FOR SCIENCE AND EDUCATION




ORISE GO

The ORISE GO mobile app helps you stay engaged, connected and informed during your ORISE experience – from application, to offer, through your appointment and even as an ORISE alum!

Visit ORISE GO 

GET IT ON
 Google Play

Download on the
 App Store

Opportunity Title: USDA-ARS ORISE Postdoctoral Fellowship for Using NISAR

Radar Data to Characterize Agricultural Fields at Sub-Field Scales

Opportunity Reference Code: USDA-ARS-NEA-2026-0082

candidate to gain experience in situ monitoring by establishing a soil moisture monitoring network within agricultural fields for validating NISAR products. The second goal is for the candidate to learn about new technologies in radar and optical remote sensing (e.g., satellite, aircraft, drone, pheno-camera) to address current issues in agriculture, such as improving the cropland and soil moisture mapping results from NISAR.

In collaboration with researchers at USDA-ARS, the participant will have opportunities to:

- Leverage new data and products from the NASA-ISRO Synthetic Aperture Radar (NISAR) mission to evaluate agricultural and soil moisture products within agricultural fields during growing season.
- Participate in a cross-site field experiment that will capture soil moisture and other ancillary field data to help with ground truthing the satellite products, collaborating with USDA-ARS scientists across the country.
- Investigate the differences between the NISAR soil moisture and agricultural products (Crop Area) and provide recommendations on their relative strength and weaknesses for end-users.
- Help develop new or improve existing soil moisture estimates using NISAR and other datasets utilizing artificial intelligence (AI) and machine learning.

The outcome from the project is anticipated to advance scientific knowledge in support of the USDA research of “Promoting Soil Health to Regenerate Long-Term Productivity of Land”.

Learning Objectives: The candidate will have opportunities to improve their knowledge with radar and optical data, geographical information systems, and field measurements such as soil moisture.

Mentor(s): The mentor for this opportunity is Simon Kraatz (simon.kraatz@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: **May 4, 2026.** Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of ARS and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The anticipated stipend range is \$90,000 - \$100,000 annually.**

Citizenship Requirements: This opportunity is available to U.S. citizens only.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak

Opportunity Title: USDA-ARS ORISE Postdoctoral Fellowship for Using NISAR

Radar Data to Characterize Agricultural Fields at Sub-Field Scales

Opportunity Reference Code: USDA-ARS-NEA-2026-0082

Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and ARS. Participants do not become employees of USDA, ARS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: Please visit our [Program Website](#). After reading, if you have additional questions about the application process, please email ORISE.ARS.Northeast@oraui.org and include the reference code for this opportunity.





Qualifications The qualified candidate should have received a doctoral degree in the one of the relevant fields. Degree must have been received within the past five years.

Preferred skills:

- Experience with analysis of large, diverse datasets including field experimental data, geospatial data, and time series data.
- Experience with machine learning and statistical learning.
- Familiarity with various management practices in the US agriculture.
- Proficiency in R, Python, Matlab, or other common programming languages (e.g., C/C++).
- Strong computational skills.
- Strong oral and written communication skills.

Stipend \$90,000.00 – \$100,000.00 Yearly

Point of Contact [Janeen](#)

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree received within the last 60 month(s).
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([3](#) )
 - **Earth and Geosciences** ([2](#) )
 - **Environmental and Marine Sciences** ([2](#) )
 - **Life Health and Medical Sciences** ([2](#) )
 - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).