

Opportunity Title: USDA-ARS Agricultural and Hydrological Modeling
Postdoctoral Fellowship
Opportunity Reference Code: USDA-ARS-NE-2023-0084

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-NE-2023-0084

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A complete application consists of:

- An application
- Transcripts – [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

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

Application Deadline 4/14/2023 3:00:00 PM Eastern Time Zone

Description ***Applications will be reviewed on a rolling basis, and this opportunity could close before the application deadline.**

ARS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Hydrology and Remote Sensing Laboratory located 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 USDA, Agricultural Research Service, Hydrology and Remote Sensing Laboratory in Beltsville, Maryland, is seeking a POSTDOCTORAL RESEARCH FELLOW for a TWO-YEAR APPOINTMENT.

This appointment affords the opportunity for the fellow to:

- Conduct research within a group of scientists applying agricultural, hydrologic, and ecosystem modeling to inform sustainable agricultural management under environmental change.
- Contribute to multi-disciplinary, multi-institution collaborative research projects investigating the sustainability of agricultural landscapes, ecosystem carbon cycling, and the potential impacts of climate change on water resources.
- Contribute science to aid USDA-ARS staff in decision-making on challenges of food and water security under climate change and provides opportunities for collaboration and integration across



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disciplines.

Learning Objectives: As a result of this opportunity, the participant will improve their skills in modeling hydrologic and biogeochemical processes at the watershed scale, analyzing large GIS/RS dataset to characterize terrestrial ecosystems, and exploring sustainable agricultural development solutions under climate change.

Mentor(s): The mentors(s) for this opportunity are Dr. Xuesong Zhang (xuesong.zhang@usda.gov) and Glenn E. Moglen (glenn.moglen@usda.gov). For further information on the Postdoctoral Research Associate appointment and for complete application instructions, please email the mentors.

Anticipated Appointment Start Date: July 1, 2023. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for two years, 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 (\$78,592 - \$102,166 per year and a health insurance supplement will be provided to defray the cost of health insurance coverage).

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the [Guidelines for Non-U.S. Citizens Details page](#) of the program website for information about the valid immigration statuses that are acceptable for program participation.

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

USDA-ARS is an equal opportunity provider.

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

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion before the appointment start date.

Preferred Skills:

- Experience in operating ecosystem models (e.g., SWAT, CLM, EPIC, DNDC, and DayCent) and working in GIS/RS and database environments (e.g., ArcGIS and Quantum GIS).
- Computer programming skills with Fortran, Python or R

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- Eligibility Requirements**
- **Degree:** Currently pursuing a Doctoral Degree to be received by 6/30/2023 11:59:00 PM.
 - **Discipline(s):**
 - **Earth and Geosciences** ([3](#))
 - **Environmental and Marine Sciences** ([5](#))
 - **Life Health and Medical Sciences** ([5](#))