

**Opportunity Title:** USDA-ARS Postdoctoral Hydrologic Modeler Fellowship

**Opportunity Reference Code:** USDA-ARS-2022-0127

**Organization** U.S. Department of Agriculture (USDA)

**Reference Code** USDA-ARS-2022-0127

**How to Apply** **Connect with ORISE...on the GO!** Download the new ORISE GO mobile app in the Apple or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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. All transcripts must be in English or include an official English translation. 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** 4/27/2022 3:00:00 PM Eastern Time Zone

**Description** \*Applications may be reviewed on a rolling-basis and this posting could close before the deadline.

**ARS Office/Lab and Location:** A postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) located in Stoneville, Mississippi.

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 participant will conduct research projects using data from the Lower Mississippi River Basin, Oklahoma, and other locations. The participant will be involved in multiple hydrologic modeling projects that will be built to investigate the impacts of best management practices in cropping and pasture systems on runoff water quality and quantity. These projects will also be used to improve the methodology of pre- and post-processing modeling results, including calibration, validation, and sensitivity analysis.

**Learning Objectives:** Under the guidance of a mentor, the participant will be involved in the following research activities:

- Building, calibrating, and validating hydrologic models based on measured field data



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- Helping to improve calibration, validation, and sensitivity analysis procedures
- Actively engaging with members of an interdisciplinary scientific research group
- Writing peer-review scientific journals articles, summary of progress reports, and presenting findings at conferences or scientific meetings.

**Mentor(s):** The mentor for this opportunity is Amanda Nelson ([amanda.nelson@usda.gov](mailto:amanda.nelson@usda.gov)).

If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** April 2022. 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.

**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 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 [USDA-ARS@ornl.gov](mailto:USDA-ARS@ornl.gov) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a doctoral degree in one of the relevant fields (e.g. Hydrology, Agricultural Sciences, Physical Sciences, Water Science).

Preferred skills:

- Experience with hydrologic modeling, calibration and validation, and programming
- Ability to use R, Python, or other programming language for model output analysis
- Experience in data management especially with post-processing

**Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**

- **Computer, Information, and Data Sciences** (1👁)
- **Environmental and Marine Sciences** (1👁)
- **Life Health and Medical Sciences** (1👁)