

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship in Greenhouse Gas

Emissions Modeling

**Opportunity Reference Code:** USDA-ARS-2022-0063

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

**Reference Code** USDA-ARS-2022-0063

**How to Apply** *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!

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** 2/8/2022 3:00:00 PM Eastern Time Zone

**Description** \*Applications are 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 US Department of Agriculture (USDA), Agricultural Research Service (ARS), Delta Water Management Research Unit located in Jonesboro, Arkansas.

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 the agency is to provide global leadership in agricultural discoveries through scientific excellence.

**Research Project:** Research projects will be conducted in irrigated agricultural fields in the Lower Mississippi River Basin. The project will investigate the impacts of innovative water and crop management practices on greenhouse gas emissions, yield, and grain quality. The project will use but is not limited to the eddy covariance method to quantify greenhouse gas emissions from fields. The project will also improve the methodology of post-processing algorithms and data analysis.

Under the guidance of a mentor, the participant will be involved in the following activities:

- Conduct field measurements and analyses of GHG fluxes, analyze experimental data using advanced statistical procedures, systematically manage meteorological and eddy covariance data, and able to oversee maintenance of multiple eddy covariance systems
- Actively engage with members of an interdisciplinary scientific research group
- Write peer-review scientific journals articles, summary of progress report and present findings at conferences or scientific meetings.

**Learning Objectives:** Under the guidance of a mentor, the participant will increase her/his knowledge of agricultural greenhouse gas emissions, including measurements, post-processing data, and modeling. The research participant will have the opportunity to collaborate with USDA-



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ARS and collaborating university scientists, and scientists from state and federal agencies in researching and evaluating the impact management has on mitigating agricultural greenhouse gas emissions. Also, this opportunity will provide the participant with exposure to technical and policy issues surrounding climate smart agriculture.

**Mentor(s):** The mentors for this opportunity are Chris Delhom ([chris.delhom@usda.gov](mailto:chris.delhom@usda.gov)) and Dr. Michele Reba ([michele.reba@usda.gov](mailto:michele.reba@usda.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** Winter 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, 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.

**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.

Preferred skills:

- Experience with rice cropping systems, environmental sciences, and micrometeorological systems
- Ability to use SAS, MS EXCEL, R and Matlab software for data analysis
- Experience in data management especially with post-processing and presenting eddy covariance data

- Eligibility Requirements**
- **Degree:** Doctoral Degree.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#) 👁)
    - **Earth and Geosciences** ([21](#) 👁)
    - **Engineering** ([27](#) 👁)
    - **Environmental and Marine Sciences** ([3](#) 👁)

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- **Life Health and Medical Sciences** ([4](#) 👁)
- **Physics** ([16](#) 👁)