

Opportunity Title: USDA-ARS Fellowship in Computational Modeling for Invasive Tropical Pest Management

Opportunity Reference Code: USDA-ARS-PWA-2026-0331

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-PWA-2026-0331

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

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

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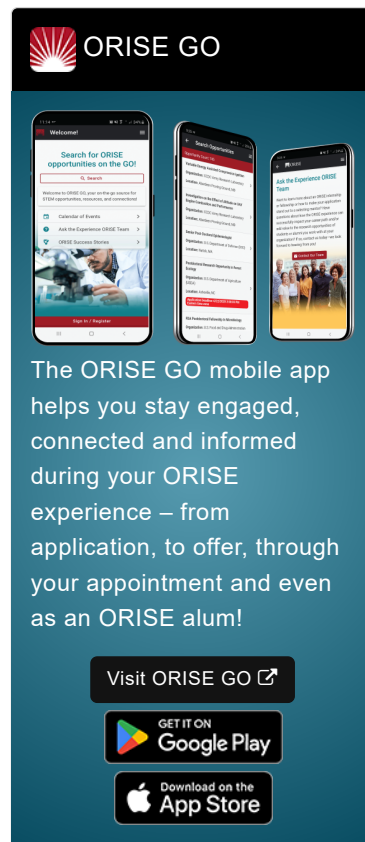
Application Deadline 9/8/2026 3:00:00 PM Eastern Time Zone

Description ***Applications are reviewed on a rolling-basis.**

ARS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), located at the Tropical Crop and Commodity Protection Research Unit (TCCPRU) in Hilo, Hawaii.

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 mission of the Tropical Crop and Commodity Protection Research Unit is to develop pre and postharvest technologies and management strategies for invasive pests, and to open and maintain market access and improved quality of tropical fruit, vegetable and ornamental crops grown in the Pacific Basin.. During this fellowship you will engage with research to extend existing computer models of surveillance traps for invasive insects, necessary to protect United States agriculture from the threat of foreign pest species. You will also have the opportunity to assist in the day-to-day operations of a laboratory, including



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design and execution of experiments, data collection, and data summarization. Specific activities will include helping to implement computer code to simulate insect invasions, searching the literature for parameters to make models realistic, and analyzing output from simulation runs using established statistical techniques. Opportunity exists for novel approaches, and you will be encouraged and supported to publish results of your work in peer-reviewed journals. This opportunity will provide exposure and practice with risk management and modeling of invasive pest insects and the training necessary to prepare the student for an exciting career in agricultural research.

Learning Objectives: Under the guidance of a mentor, you will:

- Learn to extend and refine computational models used to simulate surveillance and management strategies for invasive insects.
- Develop skills in programming and code implementation to build and run invasion-simulation models.
- Strengthen abilities in literature review and parameter identification to support realistic model development.
- Gain experience analyzing model outputs using established statistical techniques to interpret invasion dynamics and risk patterns.
- Build foundational laboratory research skills, including experimental design, data collection, and data summarization.
- Understand principles of risk management and biological invasion modeling within the context of agricultural pest threats.

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

Anticipated Appointment Start Date: **October 5, 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.

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

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through ORISE.

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

Qualifications Candidate should have a Bachelor's or Master's degree in Mathematics, Physics, Engineering, Quantitative Biology, or a related field of study. Knowledge of mathematical modeling, computer programming, statistics, and data collection are desirable. Degree must have been received within the last five years.

Point of Contact [Janeen](#)

- Eligibility**
- **Citizenship:** LPR or U.S. Citizen
- Requirements**
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([4](#) 👁)
 - **Mathematics and Statistics** ([4](#) 👁)
 - **Physics** ([1](#) 👁)