Opportunity Title: Postdoctoral Fellowship in Quantitative Ecology
Opportunity Reference Code: USDA-APHIS-2022-0111

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-APHIS-2022-0111

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
- 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. At least one recommendation must be received in order for the mentor to view your application.

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

Application Deadline 4/7/2022 3:00:00 PM Eastern Time Zone

Description

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

APHIS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Center for Epidemiology and Animal Health located in Fort Collins, Colorado.

The U.S. Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Veterinary Services, Center for Epidemiology & Animal Health (CEAH) Domestic Animal Health Analytics (DAHA) examines host-environment-pathogen factors that affect animal health and veterinary public health, including estimating the likelihood of a damaging event and the resulting consequences. Multidisciplinary teams of specialists use information from a wide variety of sources to conduct epidemiological, ecological, economic, geospatial, and environmental analyses and other assessments of present, future, and emerging threats to animal health and communicate this information to other health professionals, animal producers, and decision makers for follow-up actions.

Research Project: The participant will collaborate with veterinary medical officers, statisticians, economists and ecologists specializing in epidemiology, risk analysis, disease modeling, economic evaluation, and surveillance to operationalize and when needed to improve analytical tools. Activities will support rapid risk assessment, emergency preparedness, and surveillance planning for disease transmission from feral to domestic swine or other livestock. The fellowship will provide opportunities for the participant to learn about and aid in ensuring functional analytical tools are applied to support national programmatic decisions and policy.

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Learning Objectives:

- Operationalize, and where needed improve, previously developed Bayesian spatio-temporal feral swine abundance model allowing predictions to be generated quickly and regularly
- Modify model(s) that support risk-based targeted surveillance of FADs in feral swine to enable surveillance priorities to be generated quickly and at regular intervals based on changing risks
- Develop Bayesian statistical approaches to integrate diverse information and build analytic tools in support of operational objectives – specifically efforts to reduce impacts of feral swine on U.S. animal agriculture
- Collaborate with subject matter experts and decision makers to ensure analytical tools are developed in a way that meets program needs
- Participate in professional shadowing experiences or short details to enhance knowledge and skills in disease risk modeling and application to support programmatic decisions and policy

Mentor(s): The mentors for this opportunity are Karl Musgrave (karl.musgrave@usda.gov) and Ryan Miller (ryan.s.miller@usda.gov). If you have questions about the nature of the research please contact the mentors.

Anticipated Appointment Start Date: Spring/Summer 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 APHIS and is contingent on the availability of funds.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant(s) will receive a monthly stipend commensurate with educational level and experience.

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) 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 APHIS. Participants do not become employees of USDA, APHIS, 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-APHIS@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 expected by Spring/Summer 2022.

Strongly preferred skills:

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- Experience in Bayesian Statistical Analyses, R, and the use of MCMC samplers such as JAGS, STAN, or NIMBLE.
- Experience with population and modeling, disease modeling, or similar ecological approaches.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Environmental and Marine Sciences** (2 👁)
  - **Life Health and Medical Sciences** (13 👁)
  - **Mathematics and Statistics** (6 👁)