Opportunity Title: EPA Aviation Emissions Modeling and Programing Fellowship
Opportunity Reference Code: EPA-OTAQ-2022-01

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-OTAQ-2022-01

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 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.

Description ***Applications will be reviewed on a rolling-basis and this posting will remain open until filled.** Click **here** for information about the selection process.

EPA Office/Lab and Location: A research training opportunity is available at the Environmental Protection Agency's (EPA) Office of Transportation and Air Quality (OTAQ), National Vehicle and Fuel Emissions Laboratory (NVFEL) located in Ann Arbor, Michigan.

Research may start remote while the agency's facility remains closed due to Covid-19. Upon reopening of the facility, you are required to perform your research at the facility; telework will not be allowed except under special circumstances such as closure due to extreme weather. You will be given six weeks notice prior to needing to start coming to the facility.

Research Project: The selected candidate(s) will be involved in research and development of databases and modeling methods to improve EPA's aircraft performance and emissions models. It includes researching data sources, measurements, and models to improve emission inventories; conducting rigorous analysis of aircraft and engine emissions data and flight activities to support modeling or regulations; developing methods to improve post-processing of emissions data for air quality models; and researching methods to improve validation of emission inventories compared to ambient air quality measurements and satellite monitoring data.

Learning Objectives: The participant will engage with engineers and scientists at the NVFEL, aircraft and aircraft engine manufacturers, and other government agencies and research laboratories (such as FAA, DOT/Volpe Center, EASA, NASA, Wright-Patterson AFRL, and SwRI) that collaborate with NVFEL personnel. The participant will receive input on their project from EPA experts on emissions modeling and emissions measurement. There may be opportunities to present and publish results at conferences and in professional journals.

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In addition, the participant will have the opportunity to learn how EPA constructs emissions inventories and conducts air quality modeling of future emission scenarios; learn about tools used by EPA in emissions modeling; develop skills to analyze large datasets; and develop skills in scientific writing and public presentations.

Mentor(s): The mentor to contact for questions about this opportunity is David Yen (yen.david@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: May 2022 or earlier. All start dates are flexible and vary depending on numerous factors. Click **here** for detailed information about start dates.

Appointment Length: The appointment may be initially be for one year and may be renewed four additional years upon EPA recommendation and subject to availability of funding.

Level of Participation: The appointment can be full-time or part-time, depending on the participant's schedule. If part-time, a minimum of 10 hours per week is required.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. Click **here** for detailed information about full-time stipends.

EPA Security Clearance: Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA.

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 EPA. Participants do not become employees of EPA, 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.

ORISE offers all ORISE EPA graduate students and Postdocs a free 5 year membership to the National Postdoctoral Association (NPA).

Questions: Please see the FAQ section of our website. After reading, if you have additional questions about the application process please email ORISE.EPA.REG@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a bachelor's, master's or doctoral degree in computer sciences, engineering, environmental sciences, natural resources, mathematics, a physical science, or a closely related field, or be currently pursuing a master's or doctoral degree. Degree must have been received within the past five years.

Eligibility

- **Citizenship:** U.S. Citizen Only

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Requirements

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (1 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Mathematics and Statistics** (10 👁)
  - **Physics** (16 👁)

Affirmation I have received a bachelor's, master's or doctoral degree within the past 5 years OR am currently pursuing a master's or doctoral degree.