

**Opportunity Title:** Pollution Reduction and Fuel Economy Savings at U.S. Ports Research

**Opportunity Reference Code:** EPA-OTAQ-2019-0050

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-OTAQ-2019-0050

How to 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. All transcripts must be in English or include an official English translation. Click <u>here</u> for detailed information about
- 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.

If you have questions, send an email to <u>EPArpp@orau.org</u>. Please include the reference code for this opportunity in your email.

## Application Deadline 11/22/2019 3:00:00 PM Eastern Time Zone

# **Description** \*Applications will be reviewed on a rolling-basis.

A research opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) Office of Transportation and Air Quality (OTAQ). This appointment will be served with the Transportation and Climate Division (TCD) at the National Vehicle and Fuel Emissions Laboratory (NVFEL) in Ann Arbor, Michigan or at EPA Headquarters offices in Washington, DC.

The participant will begin by gaining familiarity with the port industry in the United States by reviewing public sources, reports, technical bulletins, and information developed within the EPA Ports Initiative. Participants that already have some basic understanding of the ports industry will augment their knowledge on ports. The participant will then engage in targeted research to further their understanding of port operations, emission reduction opportunities, and efficiency improvements. The participant will acquire knowledge of the EPA Ports Initiative, the port industry, diesel emissions at and around ports, port emission reduction technologies, and community relations and stakeholder engagement dynamics.

The participant will research indicators, metrics and data that will form the basis for strategies, efforts, and policies aimed at reducing emissions at U.S. ports. The participant will evaluate data for usefulness, accuracy, robustness, and the potential to enable emission reductions at ports. Using an Oracle database system, the participant will help to populate the database with their research findings and make recommendations as to optimal display and use of the data, including possible use of a geographic information system (GIS) framework (although the participant need not have prior experience with GIS). At the end of their time, the participant will document the results of their data collection efforts and have the opportunity to present their findings to internal and external audiences.

The participant will learn about the US EPA Ports Initiative, the port industry, port operations and technologies, market based program design principles, fuel saving and emission reduction strategies. The participant will learn how to develop and conduct a real world research study using existing resources and programmatic constraints, execute a program design, develop communication and presentation skills, evaluate data from a data quality and programmatic

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perspective, learn how to identify correlation and demonstrate causality, and use and manipulate data to demonstrate and test a research hypothesis.

The participant will be exposed to policy development, decision-making, ongoing research, and program design work that will benefit their knowledge and understanding of how government works, and will gain a first-hand experience of government operations, rules, and procedures.

The mentor for this project will be Josh Silverblatt (<u>silverblatt.joshua@epa.gov</u>) if the participant is appointed in Ann Arbor, MI or Sarah Froman (<u>froman.sarah@epa.gov</u>) if the participant is appointed in Washington, DC.

#### Anticipated Appointment Start Date: September 2019; start date is flexible

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. This appointment may be full time or part time for one year and may be renewed upon recommendation of EPA and contingent on the availability of funds. The participant will receive a monthly stipend based on level of education. Funding may be made available to reimburse the participant's travel expenses to present the results of his/her research at scientific conferences. No funding will be made available to cover travel costs for pre-appointment visits, relocation costs, tuition and fees, or participant's health insurance. Proof of health insurance is required for participation in this program. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits.

For additional information about this program, please visit https://orise.orau.gov/epa/.

Qualifications The qualified candidate should have received a bachelor's or master's degree in one of the relevant fields, or be currently pursuing a master's degree. Degree must have been received within five years of the appointment start date.

Eligibility • Degree: Bachelor's Degree or Master's Degree.

## Requirements • Discipline(s):

- Chemistry and Materials Sciences (12. )
- Computer, Information, and Data Sciences (4. (20)
- Engineering (27 •)
- Environmental and Marine Sciences (3.)
- Mathematics and Statistics (10 (10)
- Other Non-Science & Engineering (3.)
- Social and Behavioral Sciences (8.)
- Affirmation I have received a bachelor's or master's degree within the past 5 years or am currently pursuing a master's degree.