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Opportunity Title: EPA Transportation Supply Chain Greenhouse Gas Emissions Research
Opportunity Reference Code: EPA-OAR-OTAQ-2024-04

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-OAR-OTAQ-2024-04

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. Click here for detailed information about recommendations.

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

Application Deadline 2/14/2025 3:00:00 PM Eastern Time Zone

Description ***Applications may be reviewed on a rolling-basis and this posting could close before the deadline.** Click **here** for information about the selection process.

EPA Office/Lab and Location: A research opportunity is available in the U.S. Environmental Protection Agency's (EPA) Office of Air and Radiation (OAR), Office of Transportation and Air Quality (OTAQ), Transportation and Climate Division, located in Ann Arbor, Michigan or Washington, D.C.

Research Project: The U.S. transportation system moves a daily average of over 51 million tons of freight or about 57 tons of freight per capita. While freight transportation is a key part of the economy that contributes trillion dollars to the US GDP, it is a large contributor to air pollution and greenhouse gas emissions. A well-managed supply chain would not only increase customer satisfaction but also reduce a company's operating expenses as well as its impact on the environment.

The research participant will be involved in the following activities:

- Investigate methodologies and tools used for supply chain carbon and emissions accounting.
- Research key issues and aspects in supply chain logistics management (e.g., material flow from suppliers to customers, infrastructure for freight transportation modes, risk mitigation, trade policies, environmental regulations, and emerging trends).
- Discern proven and new approaches, practices, technical advancements and strategies which help increase supply chain efficiency and lower emissions and costs.
- Conduct comparative analysis between traditional approaches and emerging practices such as near-shoring strategy, automations, deployment of cleaner technologies and best practices in supply chain operation.
- Collaborate or engage with supply chain professionals and environmental experts in the

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transportation sector at technical conferences or workshops.

Learning Objectives: Under the guidance of a mentor, the participant will acquire skills and knowledge of freight transportation operation, key freight corridors for all modes, freight models, and emerging trends. The participant will gain a better understanding and perspective in how different strategies could produce different carbon and emissions footprint for companies. Findings from this research could be presented at national conferences and published to inform the goods movement industry on sustainable freight practices in lowering greenhouse gas emissions, thus reducing freight's negative impact on the environment.

Mentors: The mentor for this opportunity is Chien Sze (sze.chien@epa.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: February/March, 2025. All start dates are flexible and vary depending on numerous factors. Click **here** for detailed information about start dates.

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

Level of Participation: The appointment is full-time.

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.

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility.

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 or be currently pursuing a master's or doctoral degree in one of the relevant fields. Degree must have been received within five years of

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the appointment start date.

Preferred skills/experience:

- Knowledgeable of transportation network, energy and supply chain data is ideal but not necessary.
- Familiarity with programming languages and statistical methods is also optional.

Point of Contact Debi Ash

Eligibility Requirements

- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12)
  - **Computer, Information, and Data Sciences** (17)
  - **Earth and Geosciences** (21)
  - **Engineering** (27)
  - **Environmental and Marine Sciences** (2)
  - **Life Health and Medical Sciences** (1)
  - **Mathematics and Statistics** (11)
  - **Physics** (16)
  - **Social and Behavioral Sciences** (3)

Affirmation I have lived in the United States for at least 36 out of the past 60 months (36 months do not have to be consecutive).