

Opportunity Title: Postgraduate Research Opportunity in Science, Technology, and Engineering

Opportunity Reference Code: USDOT-2020-0002

Organization U.S. Department of Transportation (DOT)

Reference Code USDOT-2020-0002

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 [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.

If you have questions, send an email to USDOT@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline 5/29/2020 3:00:00 PM Eastern Time Zone

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

The future of transportation holds great promise, as well as new challenges. All modes of transportation rely on radiofrequency technology for Communications, Navigation, and Surveillance (CNS) capabilities. Are you ready to be involved with this capability that affects the lives of people across the nation everyday?

Two post-graduate research project and developmental opportunities are currently available at the U.S. Department of Transportation. The appointments will be served within the Office of the Assistant Secretary for Research and Technology (OST-R) in Washington, DC.

Under the guidance of a mentor, the selected participants will have the opportunity to conduct research on existing and emerging technologies, processes, and approaches for communications, navigation, and surveillance technologies that can be used to enhance the future of transportation. This research includes navigation and radiofrequency spectrum technologies for all modes of transportation and looking to the future with the role these technologies will play for automated vehicles. Research also supports radio frequency spectrum management, engineering, and analysis in close coordination with other DOT modal administrations to address issues of harmful frequency interference and operational degradation to transportation applications.

Finally, the participants will have the chance to evaluate and assess backup and Complementary Positioning, Navigation, and Timing (PNT) technologies that can be used for aviation, maritime, and/or surface transportation in the event of a degradation or disruption to GPS and the best mechanism to implement those technologies (e.g., Public Private Partnership, Service Level Agreement, etc.).

Who are we? We are the U.S. Department of Transportation's Office of the Assistant Secretary for Research and Technology (OST-R) where we are responsible for coordinating the US DOT's research programs and are charged with advancing the deployment of cross-cutting technologies to improve our Nation's transportation system. One of these cross-cutting areas within OST-R is the Positioning, Navigation, and Timing (PNT) and Spectrum Management Program.



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Anticipated Appointment Start Date: Anytime between now and June 2020

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 DOT. The initial appointment is for one year but may be renewed upon recommendation of the U.S. DOT contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at DOT in the Washington, DC area. Participants do not become employees of DOT, DOE or the program administrator, and there are no employment-related benefits.

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

Preferred skills:

- Demonstrated experience with radio frequency spectrum requirements, technologies and management
- Comprehensive knowledge on issues of harmful radio frequency interference and operational degradation and performing radio frequency spectrum management and analysis functions
- Knowledge of Positioning, Navigation, and Timing (PNT) technologies
- Experience presenting results in a clear, effective, and attractive manner to inform next steps
- Strong written and verbal communications skills
- Knowledge of U.S. transportation systems
- Ability to collaborate across various offices and with subject matter experts to obtain information, collaborate on related projects, and validate findings and conclusions

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 6/30/2020 11:59:00 PM.
- **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([16](#))
 - **Engineering** ([9](#))