Opportunity Title: Advanced Modeling of Reactive Nitrogen, Carbon, and Sulfur Air-Surface Exchange in Forest Canopies
Opportunity Reference Code: EPA-ORD-NRMRL-APPCD-2016-02

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply A complete application consists of:

- An application
- Transcripts – 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 references

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

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

Description A postdoctoral research training opportunity is available at the U.S. Environmental Protection Agency's (EPA) Office of Research and Development (ORD)/National Risk Management Research Laboratory (NRMRL). The appointment is with the Air Pollution Prevention and Control Division (APPCD) in Research Triangle Park (RTP), North Carolina.

As a part of EPA's Air, Climate, and Energy Program, the research participant will interact with a multidisciplinary team of measurement and modeling experts in atmospheric and ecological research to develop atmospheric deposition tools to support the secondary National Ambient Air Quality Standards. Specifically, the participant will develop and apply multi-layer source-sink (Eulerian and Lagrangian) and resistance-based models to estimate deposition and emission of reactive nitrogen (e.g., ammonia, nitric acid, nitrous acid, inorganic and organic aerosol), sulfur (sulfur dioxide), and carbon (biogenic VOC, secondary organic aerosol) in forest canopies. Models will be used to link fluxes to specific ecosystem compartments (e.g., canopy, understory, ground). Where practical, models will build on and integrate aspects of bi-directional flux (i.e., ammonia), biogeochemical, and ecophysiological models currently used by EPA to simulate atmospheric deposition and biogenic emissions. The participant will have an opportunity to publish research findings in the peer-reviewed literature and to present research results at professional scientific meetings.

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and EPA.

Qualifications Applicants must have received a doctoral degree in atmospheric science or related field (physical sciences, chemistry, engineering) within five years of the desired starting date, or completion of all requirements for the degree

should be expected prior to the start date.

The appointment is full 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. 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. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee**.

The mentor for this project is John Walker (walker.john@epa.gov). The desired start date is May 16, 2016.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (3)
  - **Earth and Geosciences** (4)
  - **Engineering** (6)
  - **Environmental and Marine Sciences** (5)
  - **Life Health and Medical Sciences** (8)
  - **Mathematics and Statistics** (3)
  - **Physics** (4)