

**Research Participation Program  
U.S. Environmental Protection Agency  
Office of Research and Development  
National Exposure Research Laboratory  
Research Triangle Park, North Carolina**

**Project #: EPA-ORD/NERL-AMAD-2009-02**

A research project training opportunity for graduate students or recent graduates of a doctoral program is currently available at the U.S. Environmental Protection Agency (EPA) National Exposure Research Laboratory (NERL), Atmospheric Modeling and Analysis Division (AMAD) in Research Triangle Park, North Carolina.

**Project Description:** This project is part of a growing climate initiative within the Atmospheric Modeling and Analysis Division. The goals of the AMAD climate initiative are to understand the impact of emission control strategies on regional and global climate, human health, and ecosystem services. An important aspect is developing tools that can be used to understand the combined impacts of greenhouse gases (GHG) and air pollutants. These analyses require global circulation and chemistry models coupled with chemical transport models. This project is to analyze and develop best-practices for coupled regional-global chemical transport models. These methods will be applied specifically using the GEOS-Chem global model and the CMAQ regional model.

**Specific Tasks:** In collaboration with AMAD, the participant may be involved in addressing these scientific questions:

- Do global and regional models predict domestic oxidant concentrations (and sensitivity to emissions) with similar accuracy?
- Do global and regional models predict similar domestic contribution to global GHG burden?
- How do future global conditions alter efficacy of domestic air quality control strategies?
- How do future domestic air quality conditions alter efficacy of global GHG control strategies?

The participant will be mentored by an AMAD team member. The participant will have latitude in exercising independent initiative and judgment in the research commensurate with the level of training.

**Qualifications and Skills:** Candidates should be currently enrolled or recently completed a doctoral program in environmental engineering, atmospheric science, or related field. A doctoral degree must have been received with five years of the desired starting date. Applicants must possess working knowledge of climate and chemistry models as well as communication and project management skills. To understand the key differences between the models, applicants should have experience in developing process-analysis and diagnostic evaluation techniques.

The program is open to all qualified individuals without regard to race, sex, religion, color, age, physical or mental disability, national origin, or status as a Vietnam era or disabled veteran. U.S. citizenship or lawful permanent resident status is preferred (but can also hold an appropriate visa status, however, an H1B visa is not appropriate). **The participant does not become an EPA employee.**

The appointment may be part- or full-time for one year and may be renewed for up to two additional years upon recommendation of EPA and subject to availability of funds. The participant will receive a monthly stipend. The participant must show proof of health and medical insurance. Funding may be made available to reimburse the research 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 interviews, relocation costs, costs of tuition/school fees, or a participant's health insurance.

The Research Participation Program for EPA is administered by the Oak Ridge Institute for Science and Education. ***Please reference Project #EPA-ORD/NERL-AMAD-2009-02 when calling or writing for information.*** For additional information and application materials contact: Research Participation Program/EPA, Attn: Betty Bowling, Oak Ridge Institute for Science and Education, P.O. Box 117, Oak Ridge, Tennessee 37831-0117, Phone: (865) 576-8503 FAX: (865) 241-5219 e-mail: [betty.bowling@ornl.gov](mailto:betty.bowling@ornl.gov).

An application can be found at [www.ornl.gov/orise/edu/EPA/app-gugrgpd.pdf](http://www.ornl.gov/orise/edu/EPA/app-gugrgpd.pdf).