

**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-AMD-2009-01

Faculty Research Project

A research project training opportunity for a university faculty member is currently available at the U.S. Environmental Protection Agency (EPA) National Exposure Research Laboratory, Atmospheric Modeling and Analysis Division (AMAD) in Research Triangle Park, North Carolina.

Project Description: This project is part of a growing climate initiative to better understand the impacts of emissions control strategies on regional and global climate, human health, and ecosystems. These analyses require global climate models coupled with chemical-transport models. This project is to couple the GISS ModelE global climate model with the GEOS-Chem global chemical-transport model. A similar interface between the GISS Model III and GEOS-Chem has already been used to investigate the impact of climate change on future air quality. ModelE offers significant improvements over previous models, particularly in upper-atmosphere temperatures and winds, cloud heights, precipitation, and sea level pressure. The improved coupled climate-chemistry model can be used to explore the impacts of controls on anthropogenic emissions relevant to global trace gas concentrations.

Specific Tasks: In collaboration with AMAD staff, the participant may be involved in the following activities:

- Linking GISS ModelE to GEOS-Chem
- Using archived data from GISS ModelE, simulate global chemistry using GEOS-Chem for current conditions, the recent past, and for future scenarios
- Assisting AMAD scientists on downscaling these results for use in regional climate and chemistry models

The participant will be mentored by an AMAD scientist. The participant will have broad latitude in exercising independent initiative and judgment.

Qualifications and Skills: Applicants must be a faculty member at an accredited U.S. college or university. Applicants should have a strong research track record in global chemistry modeling and have considerable experience with the GISS climate models and GEOS-Chem. Applicants must also possess strong communication and project management skills.

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 appointment may be part- or full-time for one year and may be renewed for up to two additional years upon recommendation of NERL and subject to availability of funds. The participant will receive a monthly stipend. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee.**

The participant will receive a stipend commensurate with his/her regular pay. 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 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-AMD- 2009-01 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.

An application can be found at www.ornl.gov/orise/edu/EPA/app-gugrgpd.pdf