U.S. Environmental Protection Agency
National Exposure Research Laboratory
Research Triangle Park, NC

Project # NERL-RTP 2004-01

A project is available through the Internship/Research Participation Program for the National Exposure Research Laboratory at Research Triangle Park (NERL-RTP), U.S. Environmental Protection Agency (EPA) for a research fellow to participate in the NOx Initiative project. The NOx Initiative project is the first phase of a potentially multiphased project aimed at identifying and developing analytical tools to support the analysis of control strategy effectiveness. Significant reductions in NOx emissions from stationary sources have occurred in the eastern United States, and additional reductions are anticipated from these and other sources in the future due to regulations. The initiative seeks to assess the effectiveness of these required reductions through analysis of air quality model outputs and monitoring data.

An important purpose of the team's work is to detect and investigate any changes in ambient air quality that may be associated with the reductions of NOx emissions. To this end, the participant will explore air quality monitoring data that measures the levels of NOx-related pollutants, such as ozone, at monitoring stations located around the United Sates. Statistical and numerical tools will be used to help identify any long-term "signal" (trend). Advanced methods will likely be required to investigate the nature and extent of the temporal and spatial variability given the available data, which has good temporal resolution but is spatially sparse. The participant will be expected to focus on the development and application of statistical/numerical techniques to assess temporal and/or spatial patterns with an emphasis on ozone extreme values (maximum daily 1-hour and 8-hour levels).

The applicant should have received a mater's or doctoral degree in statistics or a related field (physical sciences, engineering, etc.) with substantive experience with statistical techniques for either time series analysis or analysis of spatially correlated data. In addition, the candidate should have substantive experience in applying and interpreting statistical modeling techniques and be proficient with one or more statistical software packages (R, S-Plus, SAS, etc.). S/he should have familiarity with environmental data and have previously worked with either time series or spatially correlated data. Some experience in scientific/statistical programming and algorithm development is also important.

The appointment is for one year, though it may be renewed upon recommendation of NERL for an additional year. The participant will receive a monthly stipend commensurate with education and prior experience. U.S. citizenship or permanent resident alien status is preferred. The participant must provide proof of medical insurance.

The Internship/Research Participation Program for EPA NERL is administered by the Oak Ridge Institute for Science and Education. ***Please reference Project # NERL-RTP 2004-01 when calling or writing for information.*** **For additional information and application material contact: Internship/Research Participation Program for EPA NERL, Attn: Betty Bowling, Science and Engineering Education - MS 36, Oak Ridge Institute for Science and Education, P.O. Box 117, Oak Ridge, Tennessee 37831 Phone: (865) 576-8503 Fax: (865) 241-5219 email: bowlingb@orau.gov**