

Social, Behavioral and Environmental Determinants of Life Expectancy in the US Communities

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Opportunity Title

Social, Behavioral and Environmental Determinants of Life Expectancy in the US Communities

Reference Code

EPAORDNHEERLEPHD201607

Description

A research opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) Office of Research and Development (ORD)/National Health and Environmental Effects Research Laboratory (NHEERL). This appointment will be served with the Environmental Public Health Division (EPHD) in Chapel Hill, NC.

The participant will collaborate with a team of EPA scientists on several papers and research efforts describing a range of community based associations of human morbidity and mortality with environmental stressors, including modifiable community characteristics and factors relevant to environmental justice. The public health indicators would include proportional morbidity/mortality ratios for each US county and life expectancy for Core based Statistical Areas and their Metropolitan Divisions throughout the United States, both age, sex, and race adjusted and stratum specific life expectancies for ethnic groups. Modifiable community characteristics would include population density, commuting patterns, land use, transportation infrastructure, green space, walkability, housing stock and methods for domestic heating and cooling. Factors relevant to environmental justice would include age distribution, racial composition and segregation, income level and inequality, and marital status.

The research may also support a web based, interactive tool that would be based on the Shiny package in the R programming language. For 960 metropolitan areas, the tool would display in two or three dimensions the relationships between health indicators and environmental stressors over the entire US as well as the identification of a selected geographic area within that association. Finally, these public health indicators could be incorporated into existing SHC tools, including CFerst, TFirst, EnviroAtlas, and Environmental Quality Index.

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 epidemiology, biostatistics, statistics, environmental or occupational health sciences, demography, public health or a related field within five years of the desired start date, or all requirements for the degree are expected within two months of the start date. Knowledge of advanced regression techniques, such as variance decomposition (principal components analysis, hierarchical clustering, discriminant analysis, etc.), correlated residuals (spatial and temporal autocorrelation, repeated measures, random effects, etc.) is desired. Training and interest in spatiotemporal modeling and Bayesian hierarchical modeling, and an understanding of air quality monitoring, demography (life expectancy), and epidemiology are also desired.

The appointment is fulltime 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 and stakeholder venues. No funding will be made available to cover travel costs for preappointment 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 mentors for this project are Tim Wade (wade.tim@epa.gov (<mailto:wade.tim@epa.gov>)) and Lucas Neas (neas.lucas@epa.gov (<mailto:neas.lucas@epa.gov>)). The desired start date for this appointment is August 1, 2016.

How To Apply

A complete application consists of:

- An application (<https://www.zintellect.com/Home/Applicant>)
- Transcripts – Click here for detailed information about acceptable transcripts (<http://orise.ornl.gov/sepreview/transcripts.html>)
- 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@ornl.org (<mailto:EPArpp@ornl.org>). Please include the reference code for this opportunity in your email.

Number of Openings

1

Program

Office of Research and Development/National Health and Environmental Effects Research Laboratory (ORD/NHEERL)

Academic Levels

- Postdoctoral
- PostMaster's

Eligibility Requirements

- Degree: Currently pursuing a Doctoral degree or Master's degree or have received one of these degrees within 60 months.
- Discipline(s):
 - Mathematics and Statistics**
 - Analysis
 - Biometrics and Biostatistics
 - Probability and Statistics
 - Life Health and Medical Sciences**
 - Bioinformatics
 - Environmental Health
 - Epidemiology
 - Occupational Health
 - Population Medicine, Public Health and Epidemiology
 - Public Health
 - Social and Behavioral Sciences**
 - Demography
 - Geography
 - Public Policy
 - Sociology (except Social Work)
- Veteran Status: None required