

# The Johns Hopkins Spatial Science for Public Health Center

## Harnessing the Power of Geography in Public Health

*Where is the risk? How does the interaction between the environment and population contribute to the risk? Where should we invest our efforts to improve public health?*

### Mission

Location information, now routinely collected with health data and also obtainable from advancing technologies such as smart phones, tablets, and Google Earth, provide a gateway for researchers and practitioners to examine the role of geography in public health. Coupled with the emerging field of spatial statistics, new and novel directions for public health research are being forged.

The purpose of the center is to provide the necessary research, training and service for JHU faculty, students, and staff to harness this advancing field by improving study design, analysis, and prevention, as well as intervention, control and policy efforts.

### Paradigm for Success

The center will promote a comprehensive spatial science paradigm to encompass:

Spatial Data technologies for the collection and creation of location information

GIS software for mapping and integrating spatial data

Spatial Statistics for testing hypotheses and going "beyond the map"

### Structure

The center will be structured around Research, Education, and Service.

The **Research** arm of the center will involve the development and application of spatial statistical methodology.

The **Education/Training** arm of the center will involve both didactic courses and practice-based training. The four-term spatial analysis course sequence already in place is planned to provide the foundation for a certificate in Spatial Analysis. Recently launched was the School's first fully online Masters of Applied Science degree program in Spatial Analysis for Public Health.

The **Service** arm of the center will meet the growing requests for spatial analysis consultation at JHU, thereby continuing to build a successful translational research agenda in spatial analysis at the University.

### Operation

The spatial science paradigm will be applied in the context of epidemiology and environmental public health with focus spanning: *exposure, disease, injury, practice and policy.*

### Positioning

The center will embrace an all-inclusive interpretation of the environment, including the physical, social & behavioral, built, and food environments, as well as many other constructs and environmental based initiatives such as climate change. Such a wide-ranging framework will situate the center as a core unit supporting multidisciplinary collaborative efforts on several current and future school-wide driven projects as well as reaching outside the school to projects at the university and community level.

Given the expertise of our faculty and our collaborative work environment, we are uniquely positioned to offer this center in support of the growing interest in spatial analysis research and education.

### Vision

To become an established and recognized center of excellence in spatial analysis for public health research and practice

### Contact

Frank Curriero  
Department of Epidemiology  
[fcurriero@jhu.edu](mailto:fcurriero@jhu.edu)