

## **Research Method Workshop I**

**January 14, 2016, 8 am - 12 Noon**

**Title: Geographical Information Systems: Applications for Social Work Research and Evaluation**

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**Abstract:** This workshop focuses on learning how to use Geographic Information Systems (GIS) to analyze data and disseminate results specific to social work related research. GIS is an underutilized tool in the field of social work that offers policy makers, researchers, administrators, and workers a lens through which to view the data they work with every day. Using GIS we are able to overlay demographic data (e.g., poverty, population density, and household size), social work data (e.g., client numbers, service availability, and housing needs) and geographic boundaries (e.g. state and county borders, ZIP Codes, neighborhoods) creating a layered approach to decision support, program evaluation, and research. Maps created with GIS are powerful decision-making tools, helpful when seeking funding, evaluating where programs have the greatest impact, and monitoring the quality of services.

**Objectives:** Using examples drawn from social work and social sciences participants in this workshop will learn about how mapping is currently used in the field, how to create maps using real world data and publish these maps online, and how GIS enhances data analysis in support of research. Participants will gain knowledge in the following topics through session lectures, discussions and groups learning activities.

- **Mapping with administrative boundaries** (census tract, city, county, state, country). The easiest map you have ever made. Which polygons will work best with your data?
- **Integrating program data with other data sources** (Social Vulnerability Index, Census, market segmentation). How to enhance your data with publically available GIS ready datasets.
- **Geocoding addresses** – Where are your study participants located? Does their location impact how they access services?
  - **Address data quality assurance** – How do you make sure your points are accurately located?
- **Network analysis** – How far do study participants travel for services? Where is the best location for a new services hub?
- **Spatial autocorrelation** (global Moran's I, local Getis) – Clusters of address points or polygons may not be a random effect. How do you know if your data is spatially correlated?
- **GIS and sensitive data** – Online mapping programs may not keep your data secure. How do you create mapping products with sensitive data?

**Career level and pre-requisites:** This GIS workshop is ideal for social work researchers interested in gaining knowledge in Geographic Information Systems and novel data analysis methodologies. It is appropriate for all SSWR attendees.

**Preferred maximum number of registrations:** 30 – 40