UBDC Training Programme: Short Courses (August 2015)

Introduction to Spatial Analysis in R

Course instructor: Dr. Jing Yao, University of Glasgow

Course duration: 2 days (Thursday 27th – Friday 28th August 2015, 9:30am – 4:30pm, lunch break included)

Course location: Lab A (912A), Adam Smith Building, University of Glasgow

Audience: Social scientists, students and practitioners

Pre-requisite knowledge: An Introduction to R or equivalent knowledge, and previous experience with GIS/spatial analysis.

Course summary: GIS-based spatial analysis is a powerful tool to explore and investigate questions of interest in the social sciences, such as changes in real estate markets, urban segregation and inequities in access to public services (e.g. public transport and public health) and so on. There are an increasing number of packages in R supporting a variety of spatial analysis functionalities. The purpose of this course is to introduce some common functions in R in relation to spatial analysis, ranging from basic data operation to more advanced spatial statistics. By the end of the course, you will be able to load geographic data into R, manipulate the data and perform basic spatial analysis. This course builds on the skills developed in Introduction to R and would benefit participants who want to use a powerful, open-source and customisable tool for spatial analysis, which can be applied to a range of topics in urban planning and policy-making.

Course contents:

- Read geographic data from a variety of data files
- Visualisation of spatial data
- Point data pattern analysis
- Lattice data analysis