



Hamilton Institute

Geographically weighted regression: modelling spatial heterogeneity

Martin Charlton

National Centre for Geocomputation
NUIM

Wednesday, March 21st, 2012

Abstract:

Geographically Weighted Regression is a technique for exploratory spatial data analysis. In "normal" regression with data for spatial objects we assume that the relationship we are modelling is uniform across the study area - that is, the estimated regression parameters are "whole-map" statistics. In many situations this is not necessarily the case, as mapping the residuals (the differences between the observed and predicted data) may reveal. Many different solutions have been proposed for dealing with spatial variation in these relationships. GWR provides means of modelling such relationships.

This seminar outlines the characteristics of spatial data and the challenges its use poses for analysis, the ideas underpinning geographically weighted regression and details the process of estimating and interpreting the outputs from GWR models. We finish with a brief survey of current issues in GWR and potential future developments.

Venue: Seminar Room, Hamilton Institute, Rye Hall, NUI Maynooth

Time: 2.00pm - 3.00pm

Travel directions are available at www.hamilton.ie