

Multidimensional urban segregation - toward a neural network

measure

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Abstract

This talk will introduce a multidimensional, neural-network approach to reveal and measure urban segregation phenomena, based on the Self-Organizing Map algorithm (SOM). The multidimensionality of SOM allows one to apprehend a large number of variables simultaneously, defined on census or other types of statistical blocks, and to perform clustering along them. Levels of segregation are then measured through correlations between distances on the neural network and distances on the actual geographical map. Further, the stochasticity of SOM enables one to quantify levels of heterogeneity across census blocks. The method will be illustrated on data available for the city of Paris.