

# Spatial autocorrelation, Moran coefficient properties and applications

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## Abstract

For data collected at particular geographic localities as the measure of their dependence is often used a autocorrelation which in that case called "spatial autocorrelation". Moran (1950) formulated an index  $I$  (the most commonly used) to measure the amount of spatial autocorrelation in a georeferenced data set. The index shows whether and to what extent the particular observations influence each other via the structure of the network. Properties and extreme values of Moran's  $I$  were studied by many authors, see Griffith (2003). We comment known results, analyse some further extreme properties of the index  $I$ , compare it with other measures of spatial autocorrelation, and present some empirical cases.

## Keywords

Spatial autocorrelation, Moran's  $I$ , Geary's  $c$ , Spatial effects, Spatial dependence.

## References

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