Models for Spatial Weights: A Systematic Look
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General properties of spatial weights models, in particular Markovian properties, are systematically investigated. The role of stationary spatial distribution (interpretable as an importance-centrality index) is emphasized, and related to autocorrelation, aggregation and large/short distances issues. Ten examples (involving flows and distance decay approaches, Dirichlet-Voronoi tessellations, Go game, integral geometry, stochastic explorers in flat or non-flat landscapes) illustrate the main concepts, with a particular geometrical emphasis. We suggest how stochastic explorers models could found and unify geographic fields and potentials concepts, thus making irrelevant the borrowing of objects from Physics.