Spatial statistics for functional data

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Abstract: Functional Data Analysis is a relatively new topic in Statistics. We have functional data when a complete function is observed for each individual in the sample. In this work we focus on the case of functional data presenting spatial dependence. The three classic types of spatial processes (geostatistical, lattice and point processes) can be combined with functional data and we give examples of each situation. We also indicate some contributions in the literature on Spatial Statistics for functional data, that at this moment is not extensive.

Keywords: Functional Data Analysis; Geostatistical data; Lattice data; Point processes; Smoothing.