

Analysis of Massive Spatial Data

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Abstract: Massive spatial data are collected in many environmental, ecological and agricultural studies. Traditional methods such as likelihood-based inferences and Bayesian inferences are difficult to be implemented due to the huge covariance matrix. I review some methods that are developed for the analysis of huge amount of correlated spatial data, and discuss a new approach and apply it to some real datasets.

Keywords: Approximation to likelihood function; Covariance tapering; Process convolution; Massive data