

Higher Efficiency in Block Likelihood Inference via Spread Out Blocks

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Abstract

Block likelihood inference has gained much popularity in recent years as a statistically efficient and yet computationally feasible procedure for large correlated data sets, where inversion of the correlation matrix can be a challenge. The choice of blocks plays a crucial role in such inference and poses a new type of design problem. We show how blocks consisting of dispersed or spread out spatial points, rather than points that are close by, can entail improved estimation efficiency. This is done with reference to both one-dimensional and spatial models. Several open issues are discussed.