

## Maximum pseudolikelihood estimator for exponential family models of marked Gibbs point processes

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### Abstract

This paper is devoted to the estimation of a vector  $\theta$  parametrizing an energy function of a Gibbs point process, via the maximum pseudolikelihood method. Strong consistency and asymptotic normality results of this estimator depending on a single realization are presented. In the framework of exponential family models, sufficient conditions are expressed in terms of the local energy function and are verified on a wide variety of examples.

AMS 2000 subject classifications: Primary 60G55; secondary 60J25.

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