

Statistical inference for model of random union of interacting discs

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Abstract

The talk presents statistical results for a model of random set given by a finite union of interacting discs with centers in a bounded set $S \subset \mathbf{R}^2$. This model is described by a density (with respect to a Boolean model), which depends on geometrical characteristics (e.g. area or perimeter) of the given set. Methods for solving edge effects problem, estimating the parameters of the density, testing their relevance and checking the fit of the model will be shown.