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On Kendall's problem in spherical space

Joint with Andreas Reichenbacher

Stochastic geometry in Euclidean space $\mathbb{R}^d$ has been studied extensively and much progress has been made within the last two decades. In many situations, the Euclidean setting is particularly convenient and fruitful, since the geometry is reasonably easy to visualize and Euclidean functionals are thoroughly understood.

One of the challenging problems of stochastic geometry in Euclidean space goes back to David Kendall. It is concerned with the problem of determining the asymptotic or limit shape (if it exists) of large random cells in Poisson driven random tessellations. The topic has been successfully explored in a sequence of contributions since 2004 jointly with Rolf Schneider.

Recently, stochastic geometry in *spherical space* has come into focus. Here we consider a spherical version of Kendall's problem. Apparently, the problem has to be modified since "large cells" cannot occur. We indicate some progress on this problem, which is usually connected to interesting results of isoperimetric type.