

Distribution of a random functional of a Ferguson-Dirichlet process over the unit sphere

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Abstract

Jiang, Dickey, and Kuo [12] gave the multivariate c -characteristic function and showed that it has properties similar to those of the multivariate Fourier transformation. We first give the multivariate c -characteristic function of a random functional of a Ferguson-Dirichlet process over the unit sphere. We then find out its probability density function using properties of the multivariate c -characteristic function. This new result would generalize that given by [11].

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