

# On Local Times of Anisotropic Gaussian Random Fields

by

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## **Abstract**

There has been an increased interest in modeling random phenomena by using anisotropic Gaussian random fields to capture their anisotropic nature in recent years. In this talk, we study the joint continuity of local times for a large class of anisotropic Gaussian random fields, establish sharp local and global Hölder conditions for the local times under corresponding anisotropic metrics, and apply these results to study sample path properties of the fields. Furthermore, we compare our results with those under Euclidean metric. This talk is based on a joint work with Yimin Xiao.