
RENJIN JIANG, Center for applied Math., Tianjin University
Some recent progress on Riesz transform on manifolds

In this report, we shall report some recent progress regarding progress on Riesz transform on manifolds, especially where the lower Gaussian bound for the heat kernel fails. We shall divide the situation into three cases: 1) $1 < p < 2$, 2) $2 < p < \dim$, 3), $\dim \leq p < \infty$. In these cases the Riesz transform has substantially different behaviors.