PALEY INEQUALITY FOR THE WEYL TRANSFORM AND ITS APPLICATIONS

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Abstract:

In this talk, we prove several versions of the classical Paley inequality for the Weyl transform. As an application, we discuss L^p-L^q boundedness of the Weyl multipliers and prove a version of the Hörmander's multiplier theorem. We also prove Hardy-Littlewood inequality. Finally, we study vector-valued versions of these inequalities. In particular, we consider the inequalities of Paley, Hausdorff-Young, and Hardy-Littlewood and their relations.