



INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
SHORT ABSTRACT OF THESIS

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SHORT ABSTRACT

In this thesis, the spherical mean of the Métivier group is considered, and we characterize the spherical harmonic coefficients of certain functions, in terms of polynomial growth, by which we infer a support theorem. Additionally, we study the injectivity of the spherical mean for continuous functions in the Métivier group. Further, we study the boundedness and uniqueness of quaternion Weyl transform (QWT). Then, we obtain an analogue of the Benedicks-Amrein-Berthier theorem for QWT.