

Fuchsian groups and Fourier transforms

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Abstract

We present estimates for the Fourier transforms of Gibbs measures associated to iterated function systems generated by linear fractional transformations. As an application we obtain that the Patterson-Sullivan measure and other Gibbs measures on certain Fuchsian groups have a power decay for the Fourier transform and in particular showing that they are Rajchman measures. This yields that the limit sets for these Fuchsian groups have positive Fourier dimension and have a prevalence of numbers with strong equidistribution features. The talk is based on a joint work with Thomas Jordan (Bristol) and Tomas Persson (Lund).