

APPLICATIONS OF ABELIAN AND TAUBERIAN THEOREMS TO FREE PROBABILITY

Rajat Subhra Hazra, University of Zurich, Zurich

Krishanu Maulik, Indian Statistical Institute, Kolkata

In this talk we first introduce the notion of free subexponentiality, which extends the notion of subexponentiality in the classical probability setup to the noncommutative probability spaces under freeness. We show that the distributions with regularly varying tails belong to the class of free subexponential distributions. In particular, we present some Abelian and Tauberian theorems for Stieltjes transform and Voiculescu transform of measures with regularly varying tails. (This talk is based a joint work with Krishanu Maulik.)