

Noncommutative free Levy–Hincin formula

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There is a version of the classical Levy–Hincin formula for the free convolution: a compactly supported probability measure on \mathbb{R} is free infinitely divisible if and only if the so called R -transform of the measure is a Pick function. After reviewing the necessary background from free probability, I will discuss a similar result in the operator-valued case. It turns out that the correct analogue of the R -transform is now a noncommutative function over a C^* -algebra.

This talk is based on a joint work with M. Popa.