

A Lévy-Hinčin type characterization for bi-free infinitely divisible distribution

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Abstract: We derive the bi-free analogue of the Lévy-Hinčin formula for compactly supported planar probability measures which are infinitely divisible with respect to the additive bi-free convolution introduced by Voiculescu. We also provide examples of bi-free infinitely divisible distributions with their bi-free Lévy-Hinčin representations. If time permits, we will discuss some other bi-free probability related concepts and results.