A CALCULUS ON LÉVY EXPONENTS AND SELFDECOMPOSABILITY ON BANACH SPACES

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Abstract: In infinite-dimensional Banach spaces there is no complete characterization of the Lévy exponents of infinitely divisible probability measures. Here we propose a calculus on Lévy exponents that is derived from some random integrals. As a consequence we prove that each selfdecomposable measure can be factorized as another selfdecomposable measure and its background driving measure that is s-selfdecomposable. This complements a result from the paper of Iksanov, Jurek and Schreiber in the Annals of Probability (2004).

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