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Lévy processes in Besov spaces and their applications to the compressibility

In this talk, we analyse and quantify the compressibility of Lévy processes. The compressibility is understood as the speed of convergence of the approximation error of the process in a wavelet basis. We base our analysis on the characterization of the Besov regularity of Lévy processes, which is expressed in terms of their Blumenthal-Gettoor indices. Our theoretical results have important implications supporting the relevance of Lévy processes for the modelling of real-world sparse signals.