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**On Lévy bases in free probability**

A free Lévy basis is the free probability analog of an infinitely divisible independently scattered random measure (a.k.a. a classical Lévy basis). The latter were thoroughly studied in a seminal paper by B.S. Rajput and J. Rosinski from 1989, which included inter alia a theory for integration of deterministic functions with respect to a classical Lévy basis.

In this talk we present a general existence result for free Lévy bases and a theory of integration with respect to such in parallel to the theory developed by Rajput and Rosinski. We further apply the presented integration theory to establish a Lévy-Itô type decomposition for a general free Levy basis.