1125-60-169   **Jin Sixian*** (`sixian.jin@cgu.edu`), 710 N. College Ave., Claremont, CA 91711, and **Schellhorn Henry** and **Vives Josep**. *Dyson type formula for pure jump Lévy processes and applications.* Preliminary report.

In this talk, we obtain a Dyson type formula for pure jump Lévy processes, that is, we represent the conditional expectation of a functional of pure jump Lévy processes as a convergent series in terms of the Malliavin derivatives evaluated along a "frozen path". When the target random variable depends on a discrete trajectory of Lévy processes, this series can be simplified to a backward Taylor expansion. These series representations turn out to be useful for different applications. In particular in Quantitative Finance, we present the application on the option pricing problem of Lévy quadratic model. (Received August 07, 2016)