Selfdecomposable variables, their background driving distributions(BDDF), log-gamma variables and some graphs

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Abstract. *Selfdecomposable variables (distributions) or Lévy class L*, arise as a natural generalization of the central limit theorem. It is a quite large class and includes many classical distributions such as stable , gamma, log-gamma, t-Student, logistic, stochastic area under planar Brownian motion, Bessel-K, Bessel densities, Fisher z-distribution, etc. All class L distributions admit the *random integral representation* – a random integral with respect to some Lévy process Y, called as *background driving Lévy process*, in short BDLP. Probability distribution of $Y(1)$ is called *background driving distribution*, in short: BDDF. In the lecture we will present the formulas for BDDF (and for some variables) in a such way that might be more useful for a simulation.

References:

[1] zjj (2022) *Theory Probab. Appl.* vol. 67(1), pp. 105-117;

[2] zjj (2021) *Mathematica Applicanda*, vol. 49(2), pp. 85-109.