

## JUREK-VERVAAT REPRESENTATION

This mathematical term was coined in the monograph *Mathematical Methods for Financial Markets* by Monique Jeanblanc, Marc Yor and Marc Chesney, Springer Verlag, 2009 , Proposition 11.1.2.3 on page 597.

The representation in question says the following:

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A random variable  $X$  is selfdecomposable (or Lévy class  $L$ ) iff

$$X = \int_0^\infty e^{-t} dY(t), \text{ and } Y \text{ is a Lévy process with } E[\log(1+||Y(1)||)] < \infty;$$

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[1] Z.J. Jurek and W.Vervaat (**1983**), An integral representation for selfdecomposable Banach space valued random variables. *Z. Wahrscheinlichkeitstheorie und verw. Gebiete*, vol. 62 , pp. 347-362.

[2] Z. J. Jurek (**1985**), Relations between the s-selfdecomposable and selfdecomposable measures. *Ann. Prob.* vol.13, pp. 592-608.

For the operator-selfdecomposability we refer to:

[3] Z.J.Jurek (**1982**), An integral representation of operator-selfdecomposable random variables . *Bull. Acad. Pol. Sci.* vol.30, pp. 385-393.

[4] Z.J. Jurek and J.D. Mason (**1993**), *Operator-limit distributions in probability theory*. Wiley Series in Probability and Mathematical Statistics, New York