Hubalek, F.; **Kyprianou, E.**

Old and new examples of scale functions for spectrally negative Lévy processes. (English)
Zbl 1274.60148

Dalang, Robert C. (ed.) et al., Seminar on stochastic analysis, random fields and applications VI. Centro Stefano Franscini, Ascona, Italy, May 19–23, 2008. Basel: Birkhäuser (ISBN 978-3-0348-0020-4/pbk; 978-3-0348-0021-1/ebook). Progress in Probability 63, 119-145 (2011).

Summary: We give a review of the state of the art with regard to the theory of scale functions for spectrally negative Lévy processes. From this we introduce a general method for generating new families of scale functions. Using this method we introduce a new family of scale functions belonging to the *Gaussian Tempered Stable Convolution* (GTSC) class. We give particular emphasis to special cases as well as cross-referencing their analytical behaviour against known general considerations.

For the entire collection see [Zbl 1213.60017].

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60G51 Processes with independent increments; Lévy processes
60J75 Jump processes (MSC2010)
60G99 Stochastic processes

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