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NESTED SUBCLASSES OF SOME SUBCLASS OF THE CLASS OF TYPE G SELFDECOMPOSABLE DISTRIBUTIONS ON $\mathbb{R}^D$

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Abstract: Nested subclasses, denoted by $M_n(\mathbb{R}^d)$, $n = 1, 2, \ldots$, of the class $M(\mathbb{R}^d)$, a subclass of the class of type G and selfdecomposable distributions on $\mathbb{R}^d$ are studied. An analytic characterization in terms of Lévy measures and a probabilistic characterization by stochastic integral representations for $M(\mathbb{R}^d)$ are known. In this paper, analytic characterizations for $M_n(\mathbb{R}^d)$, $n = 1, 2, \ldots$, are given in terms of Lévy measures as well as probabilistic characterizations by stochastic integral representations are shown. A relationship with stable distributions is given.

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