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Title: Multivariate stochastic integrals with respect to independently scattered random measures on δ-rings

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In this paper we construct general vector-valued infinitely-divisible independently scattered random measures with values in $\mathbb{R}^m$ and their corresponding stochastic integrals. Moreover, given such a random measure, the class of all integrable matrix-valued deterministic functions is characterized in terms of certain characteristics of the random measure. In addition, a general construction principle is presented.

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