A KINGMAN CONVOLUTION APPROACH
TO BESSEL PROCESSES

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Abstract: In this paper we study Bessel processes in terms of the Kingman convolution method. In particular, we propose a higher dimensional model of the Kingman convolution algebras. We show that every Bessel process started at 0 is induced by a Kingman convolution. Moreover, a new concept of increments of stochastic processes is introduced. It permits to regard Bessel processes as "stationary and independent increments processes".

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