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On the coefficients of Neumann series of Bessel functions


Abstract. Recently Pogány and Süli (Proc. Amer. Math. Soc. 137 (7) (2009) 2363–2368) derived a closed-form integral expression for Neumann series of Bessel functions. In this note we precisely characterize the class of functions $\alpha$ that generate the integral representation of a Neumann series of Bessel functions in the sense that the restriction of a function $\alpha$ to the set $N$ of all positive integers is the sequence of coefficients of the initial Neumann series.