REPRESENTATION OF LIE ALGEBRA T_3 AND GENERALIZED BESSEL FUNCTIONS $J_n^q(x, y, t)$

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Abstract

Dattoli et al. [G. Datt, A Torre, S. Lorenzutta, G. Maino and C. Chiccoli, Generalized Bessel functions within the group representation formalism, Il Nuovo Cimento B 111(2) (1996), 143-164] defined the generalized Bessel functions $J_n^q(x, y, t)$. Using them, we give a representation of the Lie algebra T_3 [Willard Miller, Jr., Lie theory and special functions, Mathematics in Science and Engineering, Vol. 43, Academic Press, New York and London, 1968].