THREE VARIABLE GENERALIZED CHEBYSHEV-LIKE POLYNOMIALS

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Abstract

G. Dattoli et al. [G. Dattoli, C. Chiccoli, S. Lorenzutta, G. Maino and A. Torre, Generalized Bessel functions and generalized Hermite polynomials, J. Math. Anal. Appl. 178(2) (1993), 509-516] defined the 3-variable generalized Hermite polynomials $H_n(x, y, z)$. Using them, we define 3-variable generalized Chebyshev-like polynomials $D_n^{(j)}(x, y, z)$ including Chebyshev polynomials of the first and second kinds associated to Chebyshev-like polynomials $D_n^{(j)}(x)$ ([T. Takebayashi, Chebyshev-like polynomials, Pioneer Journal of Mathematics and Mathematical Sciences 26(1) (2019), 23-28]).