



REPRESENTATION OF LIE ALGEBRA K_5 AND
2-INDEX 3-VARIABLE 2-PARAMETER
HERMITE POLYNOMIALS

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Abstract

Dattoli et al. [G. Dattoli, P. L. Ottaviani, A. Torre and L. Vázquez, Evolution operator equations: integration with algebraic and finite-difference methods, Applications to physical problems in classical and quantum mechanics and quantum field theory, Riv. Nuovo Cimento Soc. Ital. Fis. (4) 20(2) (1997), 1-133] defined the 2-index 3-variable 2-parameter Hermite polynomials $H_{m,n}^{(r,s)}(x, y, z)$. Using them, we give a representation of the Lie algebra K_5 [Willard Miller, Jr., Lie theory and special functions, Mathematics in Science and Engineering, Vol. 43, Academic Press, New York and London, 1968].

Keywords and phrases: Lie algebra K_5 , 2-index 3-variable 2-parameter Hermite polynomials.

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