



REPRESENTATION OF LIE ALGEBRA K_5 AND
GENERALIZED 2-VARIABLE HERMITE
GENERALIZED HERMITE MATRIX
POLYNOMIALS

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Abstract

G. Yasmin and S. Khan [Ghazala Yasmin and Subuhi Khan, Hermite matrix based polynomials of two variables and Lie algebraic techniques, Southeast Asian Bull. Math. 38(4) (2014), 603-618] defined the generalized 2-variable Hermite generalized Hermite matrix polynomials ${}_H H_{n,m}^\lambda(x, y; A)$. 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 , generalized 2-variable Hermite generalized Hermite matrix polynomials.

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