REPRESENTATION OF LIE ALGEBRA $\tilde{K}_5$ AND 2-VARIABLE MODIFIED LAGUERRE POLYNOMIALS

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Abstract

S. Khan and N. A. M. Hassan [S. Khan and N. A. M. Hassan, 2-variable Laguerre matrix polynomials and Lie algebraic techniques, J. Phys. A: Math. Theor. 43 (2010), 235204, pp. 21] defined the generating function of the 2-variable modified Laguerre polynomials. Using them, we give a representation of the Lie algebra $\tilde{K}_5$ [T. Takebayashi, Representation of Lie algebra $\tilde{K}_5$ and Appell polynomials, Pioneer Journal of Mathematics and Mathematical Sciences 28(2) (2020), 111-116] (see also [Willard Miller, Jr., Lie theory and special functions, Mathematics in Science and Engineering, Vol. 43, Academic Press, New York and London, 1968]).