REPRESENTATION OF LIE ALGEBRA $\tilde{K}_5$ AND 3-VARIABLE HERMITE-MODIFIED LAGUERRE POLYNOMIALS

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Abstract

Using the 3-variable Hermite-modified Laguerre polynomials [S. Khan and N. Raza, Hermite-Laguerre matrix polynomials and generating relations, Reports on Math. Phys. 73 (2014), 137-164], 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].