REPRESENTATION OF LIE ALGEBRA $\tilde{K}_5$ AND TRUNCATED POLYNOMIALS $_{[2]}e_n(x, y)$

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Abstract

Dattoli et al. [Giuseppe Dattoli, Clemente Cesarano and Dario Sacchetti, A note on truncated polynomials, Appl. Math. Comput. 134(2-3) (2003), 595-605] defined the truncated polynomials $_{[2]}e_n(x, y)$. 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]).