REPRESENTATION OF LIE ALGEBRA K_5 AND GEGENBAUER-HERMITE POLYNOMIALS

Tadayoshi Takebayashi

Abstract

Dattoli et al. [G. Dattoli, P. E. Ricci, C. Cesarano and L. Vázquez, Special polynomials and fractional calculus, Mathematical and Computer Modelling 37(7-8) (2003), 729-733] defined the polynomials $_vH_n(x, y; \alpha)$. We call them Gegenbauer-Hermite polynomials, and using them, we give a representation of the Lie algebra K_5.