



**LIE ALGEBRA AND 2-VARIABLE LEGENDRE
POLYNOMIALS $S_n(x, y)$**

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Abstract

Using the 2-variable Legendre polynomials $S_n(x, y)$ [Giuseppe Dattoli, Paolo E. Ricci and Clemente Cesarano, A note on Legendre polynomials, Int. J. Nonlinear Sci. Numer. Simul. 2(4) (2001), 365-370], we construct a Lie algebra [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, 2-variable Legendre polynomials.

