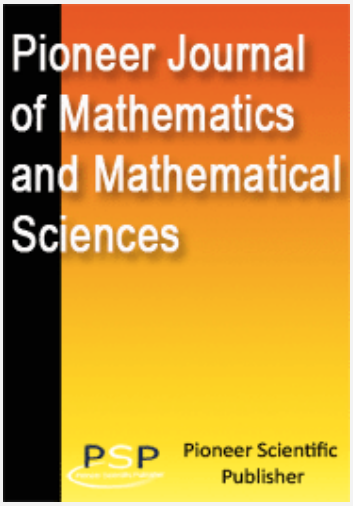
Pioneer Journal of Mathematics and Mathematical Sciences
Volume 29, Issue 2, Pages 201-204 (July 2020)

ISSN: 2230-9829



DIFFERENTIAL EQUATIONS OF ASSOCIATED 2-VARIABLE 1-PARAMETER LEGENDRE-TYPE POLYNOMIALS $S_n^{\alpha}(x, y; c)$

Tadayoshi Takebayashi

Received December 14, 2019

Abstract

Dattoli et al. [G. Dattoli, S. Lorenzutta, A. M. Mancho and A. Torre, Generalized polynomials and associated operational identities, J. Comput. Appl. Math. 108(1-2) (1999), 209-218] (see also [Giuseppe Dattoli, Paolo E. Ricci and Clemente Cesarano, A note on Legendre polynomials, Int. J. Nonlinear Sci. Numer. Simul. 2(4) (2001), 365-370]) defined the generating function of 2-variable Legendre-type polynomials $S_n(x, y)$. We define associated 2-variable 1-parameter Legendre-type polynomials $S_n^{\alpha}(x, y; c)$ and examine differential equations satisfied by them.

Keywords and phrases: differential equations, associated 2-variable 1-parameter Legendre-type polynomials.