



**LIE ALGEBRA AND RELATIVISTIC LAGUERRE
POLYNOMIALS**

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Received November 11, 2019

Abstract

Dattoli et al. [G. Dattoli, S. Lorenzutta, G. Maino and A. Torre, The generating function method and properties of relativistic Hermite polynomials, *Nuovo Cimento Soc. Ital. Fis. B* (12) 113(5) (1998), 553-560] (see also [Subuhi Khan and Rehana Khan, Modified relativistic Laguerre polynomials, Monomiality and Lie algebraic methods, *Georgian Math. J.* 23(3) (2016), 381-386]) defined the relativistic Laguerre polynomials. Using them, 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, relativistic Laguerre polynomials.

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