



**REPRESENTATION OF THE LIE ALGEBRA  $sl(2)$   
AND 2-VARIABLE LAGUERRE  
MATRIX POLYNOMIALS**

Tadayoshi Takebayashi

Received October 04, 2019

**Abstract**

In [S. Khan and N. A. M. Hassan, 2-variable Laguerre matrix polynomials and Lie algebraic techniques, J. Phys. A: Math. Theor. 43(23) (2010), 1-21, 235204], S. Khan and N. A. M. Hassan constructed a representation of the Lie algebra  $sl(2)$  by using the 2-variable Laguerre matrix polynomials. We give another representation of  $sl(2)$  by the similar method.

**Keywords and phrases:** 2-variable Laguerre matrix polynomials, Lie algebra  $sl(2)$ .

Pioneer Journal  
of Mathematics  
and Mathematical  
Sciences



Pioneer Scientific  
Publisher