Summary: A quantum version of classical Sylvester-Franke theorem is presented. After reviewing some representation theory of the quantum group $GL_q(n, \mathbb{C})$, the commutation relations of the matrix elements are verified. Once quantum determinant of the representation matrix is defined, the theorem follows naturally.

MSC:
- 20G42 Quantum groups (quantized function algebras) and their representations
- 81R50 Quantum groups and related algebraic methods applied to problems in quantum theory

Keywords:
- quantum general linear group; Sylvester-Franke theorem

Full Text: DOI