

Electronic Journal of Linear Algebra ISSN 1081-3810
A publication of the International Linear Algebra Society
Volume 30, pp. 322-335, July 2015



ON DERIVATIVES AND NORMS OF GENERALIZED MATRIX FUNCTIONS AND RESPECTIVE SYMMETRIC POWERS*

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Abstract. In recent papers, the authors obtained formulas for directional derivatives of all orders, of the immanant and of the m -th ξ -symmetric tensor power of an operator and a matrix, when ξ is a character of the full symmetric group. The operator norm of these derivatives was also calculated. In this paper, similar results are established for generalized matrix functions and for every symmetric tensor power.

Key words. Generalized matrix function, Derivative, ξ -Symmetric tensor power.

AMS subject classifications. 15A69, 15A15.

*Received by the editors on December 23, 2014. Accepted for publication on May 25, 2015.
Handling Editor: Bryan L. Shader.

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