

FUNCTIONAL BOUNDS FOR EXTON'S DOUBLE HYPERGEOMETRIC X FUNCTION

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Abstract. Functional and uniform bounds for Exton's generalized hypergeometric X function of two variables and an associated incomplete Lipschitz–Hankel integral, as an auxiliary result, are obtained. A by-product for the Srivastava–Daoust generalized hypergeometric function of three variables is given by another derivation method. The main tools are certain representation formulae for the McKay I_ν Bessel probability distribution's cumulative distribution function established recently in [3, 5].

Mathematics subject classification (2020): 26D15, 33C10, 33C70, 33E20, 60E05.

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