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APPROXIMATION OF HYPERGEOMETRIC FUNCTIONS WITH MATRICIAL ARGUMENT THROUGH THEIR DEVELOPMENT IN SERIES OF ZONAL POLYNOMIALS*

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Abstract. Hypergeometric functions with matricial argument are being used in several fields of mathematics. This article tries to obtain a good approximation of this family of functions, since there are no general expressions for them, calculating zonal polynomials of high degrees and developing the functions in a truncated series.

Key words. hypergeometric functions with matricial argument, zonal polynomials.

AMS subject classifications. 33C20, 33C99, 12Y05.

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