Mathematica Balkanica

Mathematical Society of South-Eastern Europe
A quarterly published by
the Bulgarian Academy of Sciences – National Committee for Mathematics

---

Mathematica Balkanica

New Series Vol. 6, 1992, Fasc. 3

Comments on the Paper "A Generalization of Khan's Result Involving Kampé de Fériet's Double Hypergeometric Function of Superior Order"

I. A. Khan

The main object of this note is to discuss some important aspects of the results given by S. L. Bhattacharya [1].

S. L. Bhattacharya [1] did not give the conditions of validity of any of his results established in the paper. However the conditions of validity for his : main result, are

$$p+q<1+r \text{ or } p+q=1+r \text{ with}$$
$$|xy|^{1/p-r}+|y|^{1/p-r}<1 \quad (p-r>0) \text{ and}$$
$$|xy|<1, \ |y|<1 \quad (p-r\leqq 0).$$

It is worthwhile to point out here that Bhattacharya's two results [1, p. 18 (1.1) and (1.3)] are not new, as these were established by Khan [2, p. 1208 (5.2) and (5.3)] in a more comprehensive form for generalized Rice's polynomials and Bedient's polynomials, three years earlier than the work of Bhattacharya. Also I. A. Khan [2, p. 1209 (5.4) and (5.5)] had deduced the generating relations for Gegenbauer and Legendre polynomials and he had discussed a large number of very interesting known and unknown particular cases [2, pp. 1212-1214 (6.16) to (6.26)] involving different important functions and polynomials.

References

[1] S. L. Bhattacharya. A generalization of Khan's result involving Kampé de Fériet's double hypergeometric function of superior order. *Mathematica Balkanika*, 5 : 3, 1975, 17-20.

[2] I. A. Khan. On generalized Rice's polynomials. *Indian J. Pure and Applied Maths.*, 3, No 6, 1972, 1203-1215.

Applied Mathematics
Department
B. N. College of Engineering
Pusad-445215
INDIA