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SUMMABILITY AND NUMERICAL APPROXIMATION OF THE SERIES INVOLVING LAURICELLA'S TRIPLE HYPERGEOMETRIC FUNCTIONS

By

M.A. Pathan

Centre of Mathematical Sciences, Pala Campus,
Annapuram, P.O. Pala-686574, Kerala, India
E.mail: mapathan@gmail.com

Hemant Kumar, Harish Srivastava

Department of Mathematics
D.A-V. Postgraduate College, Kanpur-208001, Uttar Pradesh, India
E.mail: palhemant2007@rediffmail.com, harishsrivastava@rediffmail.com

and

R.C. Singh Chandel

Department of Mathematics
D.V. Postgraduage College, Orai-285001, Uttar Pradesh, India
E.mail: rc_chandel@yahoo.com

ABSTRACT

Here, in our investigations, we prove that the series of integrals, involving Exton's joint–moments due to Dirichlet density in three dimensional space, is summable and then make its applications to obtain summability and numerical approximation of many series involving Lauricella's triple hypergeometric functions.

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1. Introduction. Srivastava and Singhal [38] studied many of the classical statistical distributions, which are associated with the beta and gamma distributions. Further Exton [13] discussed generalized beta and gamma distributions with other special multivariable distributions, like Dirichlet distributions and multivariable normal distributions. He also discussed the expectations of some functions involving Lauricella's multiple hypergeometric functions [12].

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