

**CERTAIN CLASS OF EULERIAN INTEGRALS WITH THE
 MULTIVARIABLE I-FUNCTION DEFINED BY PRASAD**

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Abstract: In this paper, first we evaluate a class of MacRobert’s integral associated with the multivariable I-function defined by Prasad [2], secondly we evaluate a class of MacRobert’s integral with. a extension of Hurwitz-Lerch Zeta-function, a general class of polynomials and the multivariable I-function defined by Prasad [2]. We will study several particular cases.

Keywords and Phrases: General class of polynomials, a extension of Hurwitz-Lerch Zeta function, multivariable I-function, Srivastava-Daoust function, multivariable H-function.

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1. Introduction and preliminaries

In this document, we derive an integral involving a extension of Hurwitz-Lerch Zeta-function, a class of multivariable polynomials and the multivariable I-function. For this multivariable I-function, we adopt the contracted notations. The multivariable I-function defined by Prasad [2] is an extension of the multivariable H-function defined by Srivastava et al [5].

The multivariable I-function is defined in term of multiple Mellin-Barnes type integral

$$I(z_1, \dots, z_r) = I_{p_2, q_2, p_3, q_3; \dots; p_r, q_r; p', q'; \dots; p^{(r)}, q^{(r)}}^{0, n_2; 0, n_3; \dots; 0, n_r; m', n'; \dots; m^{(r)}, n^{(r)}} \left(\begin{array}{c|c} z_1 & (a_{2j}; \alpha'_{2j}, \alpha''_{2j})_{1, p_2}; \dots; \\ \cdot & \\ \cdot & \\ \cdot & \\ z_r & (b_{2j}; \beta'_{2j}, \beta''_{2j})_{1, q_2}; \dots; \end{array} \right)$$