

**CERTAIN CLASSES GENERATING FUNCTIONS ASSOCIATED  
 WITH THE ALEPH-FUNCTION OF SEVERAL VARIABLES II**

**Frédéric Ayant**

Teacher in High School, France  
 E-mail: fredericayant@gmail.com

**Abstract:** In this paper, we present two new generating functions involving multivariable Aleph-function, the I-function of several variables and Aleph-function of two variables. The mains results of our document are quite general in nature and capable of yielding a very large number of generating functions involving polynomials and various special functions occurring in the problem of mathematical analysis and mathematical physics and mechanics.

**Keywords and Phrases:** Generalized multivariable Aleph-function, Aleph-function of two variables, generating functions, multivariable I-function.

**2010 Mathematics Subject Classification:** 33C99, 33C60, 44A20.

**1. Introduction and preliminaries**

The Aleph-function of several variables is an extension of the multivariable I-function defined by C.K. Sharma and Ahmad [4], itself is an generalisation of G and H-functions of multiple variables defined by Srivastava et al [6]. The multiple Mellin-Barnes integral occurring in this paper will be referred to as the multivariable Aleph-function throughout our present study and will be defined and represented as follows.

We have,

$$\aleph(z_1, \dots, z_r) = \aleph_{p_i, q_i, \tau_i; R: p_i(1), q_i(1), \tau_i(1); R^{(1)}; \dots; p_i(r), q_i(r), \tau_i(r); R^{(r)}}^{0, n: m_1, n_1, \dots, m_r, n_r}$$

$$\left( \begin{array}{c} z_1 \\ \cdot \\ \cdot \\ \cdot \\ z_r \end{array} \middle| \begin{array}{l} [(a_j; \alpha_j^{(1)}, \dots, \alpha_j^{(r)})_{1, n}], [\tau_i(a_{ji}; \alpha_{ji}^{(1)}, \dots, \alpha_{ji}^{(r)})_{n+1, p_i}] : [(c_j^{(1)}, \gamma_j^{(1)})_{1, n_1}], \\ \dots\dots\dots [\tau_i(b_{ji}; \beta_{ji}^{(1)}, \dots, \beta_{ji}^{(r)})_{m+1, q_i}] : [(d_j^{(1)}, \delta_j^{(1)})_{1, m_1}], \end{array} \right.$$