

## A STUDY OF $\bar{H}$ - FUNCTION

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**Abstract:** The subject of Fourier series of the generalized hypergeometric functions occupies an important place in the field of special functions. Certain Fourier series of the generalized hypergeometric function play an important role in the development of the theory of special functions and certain Fourier series of the generalized hypergeometric functions enable us to obtain general solutions of some boundary value problems. The Fourier series of the generalized hypergeometric functions were given from time to time by various mathematicians with certain restrictions in parameters. An adequate list of references given here together with sources indicated in these references provide a good coverage of the subject. In this paper we have defined Fourier series for  $\bar{H}$ -function and also we derived integral involving sine function, exponential function, the product of Kampé de Fériet functions and the  $\bar{H}$ -function to evaluate three Fourier series.

**Keywords and Phrases:** Kampé de Fériet functions,  $\bar{H}$ -function and Fourier Series.

**2010 Mathematics Subject Classification:** 33C05.

### 1. Introduction

The  $\bar{H}$ -function is defined by Inayat and Hussain, [5,6]. For the convergence and other details of the  $\bar{H}$ -function, we refer the original paper of Inayat and Hussain, [5,6].