L1-Convergence of Modified Trigonometric Sums

Authors : Sandeep Kaur Chouhan, Jatinderdeep Kaur, S. S. Bhatia

Abstract : The existence of sine and cosine series as a Fourier series, their L1-convergence seems to be one of the difficult question in theory of convergence of trigonometric series in L1-metric norm. In the literature so far available, various authors have studied the L1-convergence of cosine and sine trigonometric series with special coefficients. In this paper, we present a modified cosine and sine sums and criterion for L1-convergence of these modified sums is obtained. Also, a necessary and sufficient condition for the L1-convergence of the cosine and sine series is deduced as corollaries.

Keywords : conjugate Dirichlet kernel, Dirichlet kernel, L1-convergence, modified sums

Conference Title : ICM 2016 : International Conference on Mathematics

Conference Location : Toronto, Canada

Conference Dates : June 13-14, 2016