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## UNSTEADY FLOW OF MICROPOLAR FLUID IN A RECTANGULAR CHANNEL UNDER A TRANSVERSE MAGNETIC FIELD

## J. V. RAMANA MURTHY AND N. K. BAHALI

## Abstract

In this paper, the unsteady flow generated due to periodic pressure gradient of an incompressible conducting micro polar fluid through a rectangular channel with uniform cross-section in the presence of a transverse magnetic field is considered. Neglecting the induced magnetic and electric fields, velocity and micro-rotation vectors are obtained in terms of Fourier series. The volumetric flow rate is calculated and the effects of micro-rotation parameter, geometric parameter and Hartman number on the volumetric flow rate are graphically shown.