

## Article Abstract

<b>Title:</b>	Mixed convection of a micropolar fluid in a vertical channel with boundary conditions of third kind
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<b>Abstract:</b>	The problem of heat source/sink on fully-developed mixed convection for the laminar flow of a micropolar fluid in a parallel plate vertical channel has been investigated analytically. The plates exchange heat with an external fluid. Both conditions of equal and of different reference temperatures of the external fluid are considered. The effect of important parameters, namely vortex viscosity parameter, ratio of Grashof number to Reynolds number and heat source/sink on the velocity, microrotation velocity and temperature have been discussed. It is found that the increase in the vortex viscosity parameter decreases the velocity for both assisting and opposing flow whereas it reduces the microrotation velocity for assisting flow and increases the microrotation velocity for opposing flow. The heat sink reduces the flow field at the right wall and increases at the left wall and converse result is observed for heat source for equal Biot numbers.
<b>Keywords:</b>	mixed convection; micropolar fluid; boundary conditions of third kind