

# Outcomes of Non-uniform Heat Source/Sink on Micropolar Nanofluid Flow in Presence of Slip Boundary Conditions

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**Abstract** Present study communicates the theoretical outline for the flow of an incompressible electrically conducting micropolar nanofluid over a moving vertical surface in accordance with surface skid and jump of temperature in attendance of non-consistent heat source/sink. The leading flow connected equations are condensed to a collection of coupled ODEs by introducing similarity transformations and then unravelled numerically by means of RK-4 method with shooting practice. The obtained results are presented through diagram, tables and the physical sides of the problem are talked about.

**Keywords** Micropolar nanofluid · Slip velocity · Thermal slip · Internal heat source/sink

**Mathematics Subject Classification** 76W05

## Introduction

The dynamics of micropolar fluids has intensified the whole world and researchers because of its massive applicative submission in industrial sector. Such truthful submission can be encountered as the flow of exotic lubricants or colloidal fluids or solidification for liquid crystals or extrusion of polymer fluids or blood of animal or fluids in the body and many other circumstances. An outstanding assessment regarding micropolar fluid technicalities and its appliance was considered by numerous researchers [1–5]. A significant quantity of research has been initiated based on micropolar fluid flow along with heat transfer originated by continuous deformation of stretched or moving surfaces in accordance with various states of affairs and in occurrence of diverse physical characteristics has been reported [6–9]. Microp-

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