G-JITTER EFFECTS ON THE MIXED CONVECTION FLOW OF NANOFLUID PAST AN INCLINED STRETCHING SHEET

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ABSTRACT

Mixed convection flows of nanofluid past an inclined stretching sheet with g-jitter effect is studied in this paper. Water based nanofluid containing copper, copper oxide, aluminium oxide and silver nanoparticles are concerned. Coupled nonlinear partial differential equations are solved using Keller-box method. The effect of solid nanoparticles volume fraction parameter, frequency of oscillation and inclination angle parameter is observed to reduce the skin friction and heat transfer coefficients whereas mixed convection parameter increases both skin friction and heat transfer coefficients. Present study also shows that, the heat transfer coefficient is highest for silver nanofluid.

Keywords: gravity modulation, numerical solution, solid nanoparticles.