عنوان مقاله:

Hydromagnetic Mixed Convective Nanofluid Slip Flow past an Inclined Stretching Plate in the Presence of Internal Heat Absorption and Suction

نویسندگان:

S. P. Anjali Devi - *Department of Applied Mathematics, Bharathiar University, Coimbatore - ۶۴۱ ۰۴۶, TamilNadu, India*

P. Suriyakumar - *Department of Applied Mathematics, Bharathiar University, Coimbatore - ۶۴۱ ۰۴۶, TamilNadu, India*

خلاصه مقاله:

The steady two-dimensional mixed convective boundary layer flow of nanofluid over an inclined stretching plate with the effects of magnetic field, slip boundary conditions, suction and internal heat absorption have been investigated numerically. Two different types of nanoparticles, namely copper and alumina with water as the base fluid are considered. Similarity transformations are employed to transform the governing nonlinear partial differential equations into coupled non-linear ordinary differential equations. The influence of pertinent parameters such as magnetic interaction parameter, angle of inclination, volume fraction, suction parameter, velocity slip parameter, thermal jump parameter, heat absorption parameter, mixed convection parameter and Prandtl number on the flow and heat transfer characteristics are discussed. A representative set of results are displayed graphically to illustrate the issue of governing parameters on the dimensionless velocity and temperature. Numerical values of skin friction coefficient and the Nusselt number are shown in tabular form. A comparative study between the previously published work and the present results in a limiting sense reveals excellent agreement between them.

کلمات کلیدی:

Inclined plate, MHD, Mixed convection, Slip flow, Suction, Nanofluid

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