Magnetohydrodynamic 3D Maxwell Fluid Flow Towards a Horizontal Stretched Surface with Convective Boundary Conditions

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Abstract : The study deals with the steady, 3D MHD boundary layer flow of a non-Newtonian Maxwell fluid flow due to a horizontal surface stretched exponentially in two lateral directions. The temperature at the boundary is assumed to be distributed exponentially and possesses convective boundary conditions. The governing nonlinear system of partial differential equations along with associated boundary conditions is simplified using a suitable transformation and the obtained set of ordinary differential equations is solved through numerical techniques. The effects of important involved parameters associated with fluid flow and heat flux are shown through graphs.
Keywords : boundary layer flow, exponentially stretched surface, Maxwell fluid, numerical solution

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