

**MAGNETOHYDRODYNAMIC (MHD) BOUNDARY LAYER  
FLOW IN DOUBLE STRATIFICATION MEDIUM WITH  
RADIATION EFFECT**

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## ABSTRACT

This study focuses on magnetohydrodynamic (MHD) boundary layer flow in double stratification medium with radiation effect. This study aims to understand the transformation the governing boundary layer equations from partial differential equations (PDEs) to ordinary differential equations (ODEs) by using the similarity transformation. Other than that, this study aims to solve the transformed boundary layer equations using the Runge-Kutta method with shooting technique. At the end of this study, the results reveal the effects of various parameters on velocity, temperature, and concentration profiles. The research findings indicate that by incorporating radiation effect into the energy equation with different combination of parameters can have significant effects in the skin friction coefficient, heat transfer rate and mass transfer rate. The findings of this study have provided valuable insight into the behavior of magnetohydrodynamic (MHD) boundary layer flow in double stratification medium with radiation effect. Besides this study can contribute to understand of relevant physical phenomena and offering potential of applications in engineering and science fields.

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