

## Documents

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**Unsteady free convection flow past a vertical plate with heat and mass fluxes in the presence of thermal radiation**  
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### Abstract

The problem of unsteady free convection flow past an infinite vertical plate with heat and mass fluxes in the presence of thermal radiation is studied. The dimensionless coupled linear partial differential equations governing the flow are solved by employing the Laplace transform technique. Exact solutions have been obtained for the fluid velocity, temperature and mass concentration for the cases of both uniform heat flux (UHF) and uniform wall temperature (UWT). The numerical results for the fluid velocity, temperature and mass concentration are presented graphically for various pertinent flow parameters and discussed in detail.

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