

EFFECTS OF HEAT AND MASS TRANSFER ON FLOW PAST AN OSCILLATING VERTICAL PLATE IN PRESENCE OF THERMAL RADIATION

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Abstract

The effects of heat and mass transfer on flow past an oscillating vertical plate in presence of thermal radiation have been studied. The dimensionless governing equations are tackled using Finite element method. The effects of velocity, temperature and concentration are studied for different parameters like radiation parameter, Schmidt number, Prandtl number, Phase angle, Thermal Grashof number(Heat transfer) and Solutal Grashof number(Mass transfer) are studied. It is observed that the velocity and temperature are increases with the increasing of radiation parameter.

Keywords: Thermal radiation, Oscillating, Vertical plate, Heat and Mass transfer, Finite Element Method.