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# THERMAL SCIENCE

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### RADIATIVE HEAT TRANSFER WITH HYDROMAGNETIC FLOW AND VISCOUS DISSIPATION OVER A STRETCHING SURFACE IN THE PRESENCE OF VARIABLE HEAT FLUX

#### ABSTRACT

The boundary layer steady flow and heat transfer of a viscous incompressible fluid due to a stretching plate with viscous dissipation effect in the presence of a transverse magnetic field is studied. The equations of motion and heat transfer are reduced to non-linear ordinary differential equations and the exact solutions are obtained using properties of confluent hypergeometric function. It is assumed that the prescribed heat flux at the stretching porous wall varies as the square of the distance from origin. The effects of the various parameters entering into the problem on the velocity field and temperature distribution are discussed.

#### KEYWORDS

[heat transfer](#), [radiation](#), [magnetic field](#), [viscous dissipation](#)

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