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# STUDY OF AXI-SYMMETRIC FLOW OF AN ELECTRICALLY CONDUCTING FLUID OVER A RADIALLY STRETCHING SURFACE UNDER A TRANSVERSE MAGNETIC FIELD

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**Abstract**

The steady laminar flow of an electrically conducting Newtonian fluid over a surface due to radially stretching sheet is considered for investigation in presence of transverse magnetic field. The axi- symmetric flow of conducting fluid is introduced due to linear stretching. First, perturbation solutions of non linear ordinary differential equation for the case of large magnetic parameter are derived. Crocco's transformation technique is then used to determine an accurate expression for the approximate skin-friction co-efficient on the stretching sheet. Finally, a direct numerical solution of the resulting similarity equation (ODE) is presented by using a Runge-Kutta Shooting algorithm with Newton iteration in double precision. The influences of the magnetic field on the velocity and skin-friction co-efficient are analyzed in this discussion.

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Key Words : *Electrically conducting Newtonian fluid, Stretching sheet, Magnetic field.*

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