

**UNSTEADY BOUNDARY LAYER FLOW OVER A PERMEABLE CURVED
STRETCHING/SHRINKING SURFACE**

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ABSTRACT

A theoretical study has been presented to study the unsteady boundary layer flow of a viscous fluid over a permeable curved stretching/shrinking surface. The governing nonlinear partial differential equations are converted into ordinary differential equations by similarity transformation, which are then solved numerically using the shooting method. Results for the skin friction coefficient and velocity profiles are presented through graphs and tables for several sets of values of the parameters. The effects of stretching/shrinking parameter, unsteadiness parameter and dimensionless curvature on boundary layer flow in the presence of suction are thoroughly examined.