

## Unsteady shrinking sheet with mass transfer in a rotating fluid

### ABSTRACT

In this paper, the problem of unsteady flow induced by a shrinking sheet with mass transfer in a rotating fluid is studied. The transformed boundary layer equations are solved numerically by an implicit finite-difference scheme known as the Keller-box method. The influence of rotation, unsteadiness and mass suction parameters on the reduced skin friction coefficients  $f''(0)$  and  $g''(0)$ , as well as the lateral velocity and velocity profiles are presented and discussed in detail.

**Keyword:** Unsteady flow; Boundary layer; Mass transfer; Rotating fluid; Shrinking sheet; Numerical solution