

## Radiation effects on Marangoni boundary layer flow in Micropolar fluid with suction/injection

### ABSTRACT

The influence of radiation on the Marangoni boundary layer flow in micropolar fluid with suction/injection is studied in this study. It is the extension of the previous study by Saleh et al. where the interface temperature is assumed to be a quadratic function of the distance  $x$  along the interface. A set of nonlinear ordinary differential equations are obtained by using the technique of similarity transformations, transformed from the general governing partial differential equations and solved numerically by using the shooting method. The solutions of each profiles is presented in the form of tables and figures along with the results of the velocity, microrotation gradient and heat transfer at the surface. The problem is considered for two different values of  $n$  which is  $n = 0$  and  $n = 0.5$  where it is represented the strong and the weak concentration, respectively with different values of radiation parameter along with the suction/injection parameter.

**Keyword:** Radiation effects; Marangoni convention; Boundary layer; Micropolar fluid; Shooting method; Radiation parameter