

## Documents

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### **Study of Flow and Heat Transfer on a Stretching Surface in a Rotating Casson Fluid**

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#### **Abstract**

The steady, boundary layer flow and heat transfer on a stretching surface in rotating fluid has been examined. Using suitable similarity transformations, the partial differential equations governing the flow and heat transfer phenomenon convert to a system of non-linear ordinary differential equations. The obtained equations are solved by using the shooting technique with fifth order Runge–Kutta–Fehlberg method. The parameters involving in the problem are Casson fluid parameter  $\beta$ , non-dimensional parameter  $\lambda$  that signifies the importance of rotation rate to stretching rate and Prandtl number  $Pr$ . The effects of these parameters on physical quantities such as velocity and temperature profiles, skin frictions and Nusselt number are inspected with the aid of graphs and tables. © 2015, The National Academy of Sciences, India.

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