World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:10, No:05, 2016

Radiation Effect on MHD Casson Fluid Flow over a Power-Law Stretching Sheet with Chemical Reaction

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Abstract : This article addresses the boundary layer flow and heat transfer of Casson fluid over a nonlinearly permeable stretching surface with chemical reaction in the presence of variable magnetic field. The effect of thermal radiation is considered to control the rate of heat transfer at the surface. Using similarity transformations, the governing partial differential equations of this problem are reduced into a set of non-linear ordinary differential equations which are solved by finite difference method. It is observed that the velocity at fixed point decreases with increasing the nonlinear stretching parameter but the temperature increases with nonlinear stretching parameter.

Keywords : boundary layer flow, nonlinear stretching, Casson fluid, heat transfer, radiation
Conference Title : ICAMNA 2016 : International Conference on Applied Mathematics and Numerical Analysis
Conference Location : London, United Kingdom
Conference Dates : May 23-24, 2016