Dual solutions of stagnation point flow and heat transfer of Maxwell fluid over a permeable stretching/shrinking sheet in the presence of nanoparticles

Rahimah Jusoh[1] and Roslinda Nazar[2]
[1] Faculty of Industrial Sciences & Technology, Universiti Malaysia Pahang, 26300 Gambang, Pahang, Malaysia
[2] School of Mathematical Sciences, Faculty of Science and Technology, Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor, Malaysia

ABSTRACT
Numerical investigation for stagnation point flow and heat transfer of Maxwell fluid over a stretching/shrinking sheet in the presence of nanoparticles has been performed. A similarity transformation has been used to transform the governing partial differential equations to a system of nonlinear ordinary differential equations. The transformed equations are solved numerically using the built in bvp4c function in Matlab. Graphical results are plotted for the local Nusselt number and the local Sherwood number for various values of the emerging parameters. Final conclusion has been drawn on the basis of both numerical and graphical results. Dual solutions exist and the first solution is found to be stable.

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