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عنوان مقاله:

MHD Boundary Layer Flow near Stagnation Point of Linear Stretching Sheet with Variable Thermal Conductivity via He’s Homotopy Perturbation Method

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خلاصه مقاله:

MHD boundary layer flow near stagnation point of linear stretching sheet with variable thermal conductivity are solved using He’s Homotopy Perturbation Method (HPM), which is one of the semi-exact method. Similarity transformation has been used to reduce the governing differential equations into an ordinary non-linear differential equation. The main advantage of HPM is that it does not require the small parameter in the equations and hence the limitations of traditional perturbations can be eliminated. In this paper firstly, the basic idea of the HPM for solving nonlinear differential equations is briefly introduced and then it is employed to derive solution of nonlinear governing equations of MHD boundary layer flow with nonlinear term. The influence of various relevant physical characteristics are presented and discussed.

کلمات کلیدی:

MHD, Thermal conductivity, Homotopy perturbation method (HPM), stretching sheet

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