ANALYSIS OF STAGNATION POINT FLOW OF AN INCOMPRESSIBLE FLUID BETWEEN POROUS PLATES WITH SLIP CONDITIONS

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Abstract - In the present investigation, semi-numerical solution techniques are used to understand the stagnation point viscous flow of an incompressible fluid between porous plates by incorporating suitable velocity slip conditions. The governing equations of motion is solved by two novel techniques: Computer extended series method and Homotopy analysis method. The domain and rate of convergence of the series so generated are further increased by Pade approximants. The above methods admits a desired accuracy. The validity of series solution is extended to a much larger values of R, Reynolds number with different slip coefficients.

Keywords - Computer Extended Series, HAM, Slip Velocity, Stagnation Flow.