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Boundary Layer Flow Over a Stationary Wedge

Nasreen Bano[1] and Sayyed S. R.[2]
Assistant Professor, Department of Mathematics, G. M. Vedak College of Science, Tala, Dist. Raigad(M.S), India[1]
Assistant Professor, Department of Mathematics,
Doshi Vakil Arts and G.C.U.B. Science and Commerce College Goregaon, Dist. Raigad(M.S), India[2]
snasreenbano@yahoo.in[1] and srsayyed786@gmail.com[2]

Abstract: *The primary aim of this research is to scrutinize the Falkner-Skan boundary layer flow past a wedge, taking into account the velocity slip condition. The governing partial differential equations describing the physical system are transformed into ordinary differential equations through similarity transformations. The ensuing ordinary differential equation is subsequently addressed utilizing the differential transform method (DTM) augmented by Pade approximations. The obtained velocity profiles are presented, and an in-depth analysis of the impact of the slip parameter on the flow is provided. The credibility of our solutions is affirmed through comparison with previously published results.*

Keywords: Velocity slip, Differential Transform Method, Pade Approximation, Similarity transformation, Stationary wedge.

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