

عنوان مقاله:

Analysis of Magneto-hydrodynamics Jeffery-Hamel Flow with Nanoparticles by Hermite-Padé Approximation

محل انتشار:

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خلاصه مقاله:

The combined effects of nanoparticles and magnetic field on the nonlinear Jeffery-Hamel flow are analyzed in the present study. The basic governing equations are solved into series solution using a semi-numerical analytical technique called Hermite- Padé approximation. The velocity profiles are presented in divergent channel for various values of nanoparticles solid volume fraction, Hartmann number, Reynolds number and channel angle. The dominating singularity behavior of the problem is analysed numerically and graphically. The critical relationship between the parameters is studied to observe the instability of the problem for nanofluid

کلمات کلیدی:

, Jeffery-Hamel Flow , Magneto-hydrodynamic , Nanofluid , Dominating Singularity , Hermite- Pade Approximation

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