

عنوان مقاله:

A Decomposition Method for Volume Flux and Average Velocity of Thin Film Flow of a Third Grade Fluid Down an Inclined Plane

محل انتشار:

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خلاصه مقاله:

Perturbation methods depend on a small parameter which is difficult to be found for real-life nonlinear problems. To overcome this shortcoming, a powerful analytical method is introduced to solve the thin film flow problem with a third grade fluid on an inclined plane. Here, Adomian Decomposition method is applied to solve nonlinear equation of the velocity field. The results obtained by this method are then compared with the traditional perturbation method to illustrate the effectiveness of this method. Finally volume flux and average film velocity is given graphically

کلمات کلیدی:

Decomposition Method; Perturbation method; Thin film flow; Third grade fluid; Volume flux

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