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Keywords: Bregman strongly non-expansive, equilibrium problem, Bregman Projection, inertial component, strong convergence.

OE 016
ANALYSIS OF VISCOUS DISSIPATION AND BUOYANCY EFFECTS OF MAGNETOHYDRODYNAMIC OF A NANOFLUID FLOW OVER A STRETCHING SHEET

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Abstract: A one dimensional analysis of viscous dissipation and buoyancy effects of MHD stagnation point flow of a steady nanofluid over a stretching sheet is presented. Using some similarity transformation variables, the governing Partial differential equation representing the problem was reduced to ordinary differential equation. The transformed equations were solved using the Adomian decomposition method which results were compared with existing results in the literatures and a good agreement was observed between the present work and the existing literature. The physical parameters that occurred in the solutions such as Gasthof numbers, Lewis number, velocity ratio, Prandtl number, Eckert number were varied to determine their respective effects. It was observed that the Gasthof numbers enhances the velocity profile, Eckert number enhances the fluid temperature while Prandtl number and magnetic parameter ware observed to be a reduction agent to the fluid temperature.

Keywords: Adomian Decomposition Method, Eckert number, Gasthof numbers, Nanofluid, Thermophoresis.

OE 017
ANALYSIS OF HEAT TRANSFER ON FLOW OF A NANOFLUID IN A POROUS MEDIUM WITH HEAT GENERATION

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Abstract: Analysis of heat transfer on flow of a nanofluid in a porous medium with heat generation is presented. The partial differential equation representing the problem was reduced to ordinary differential equation using some similarity transformation variables. The transformed equations were solved using the Adomian decomposition method which results were compared with existing results in the literatures. A good agreement was established between the new method and the existing ones, which shows the reliability of the present method. The physical parameters that occurred in the solutions such as magnetic parameter, Darcy number, Ekcert number, Prandtl number, Schmidt number were varied to determine their respective effects on the flow. It was observe that the Magnetic parameter and inverse Darcy number are all reduction agents of the fluid velocity.

Keywords: Adomian decomposition method, Brownian motion, Darcy number, Eckert number,