Muthucumaraswamy, R.; **Lal, Tina**; **Ranganayakulu, D.**

Effects of rotation on MHD flow past an accelerated isothermal vertical plate with heat and mass diffusion. (English) Zbl 1299.76307

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Summary: An exact analysis of rotation effects on unsteady flow of an incompressible and electrically conducting fluid past a uniformly accelerated infinite isothermal vertical plate, under the action of transversely applied magnetic field has been presented. The plate temperature is raised and the concentration level near the plate is also raised. The dimensionless governing equations are solved using Laplace-transform technique. The velocity profiles, temperature and concentration are studied for different physical parameters like thermal Grashof number, mass Grashof number, Schmidt number, Prandtl number and time. It is observed that the velocity increases with increasing values of thermal Grashof number or mass Grashof number.

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