**ABSTRACT**

In this paper linear stability of a viscous incompressible fluid saturated porous medium under the influence of rotation is investigated. Closed form solutions of velocity, temperature and fluid vorticity in terms of wave number as perturbation parameter have been obtained. The influence of various nondimensional parameters such as Taylor number, Grashof number, Prandtl number, Darcy number, porosity and wave number on stability characteristics of flow field are discussed numerically.