Future Scope

The work reported in the thesis suggests several future areas of research especially for the problems in Reiner-Rivlin fluid. In the present work, we have not considered Reiner-Rivlin fluid outside the body both in infinite and confined medium. There are other fluids like couple stress fluid, second ordered fluid, power law fluid, etc. which can be considered in place of Newtonian fluid. There is a wide scope in this regard. Also, the influence of slip condition on the surface of the solid body can be taken into account, which is not considered in the present work. On the other hand, future work on the problems of Reiner-Rivlin fluid can be extended for more general geometry and by taking the medium to be porous.

The study reported here is restrained to Reiner-Rivlin liquid body only. An important extension is, therefore, to consider the flow past micropolar liquid body in different geometries. We, thus, anticipate that our models and the results deduced will not only guide to the researchers for interesting and more challenging problems in non-Newtonian fluids, but will also ignite them to utilize an innovative numerical approach to again solve these problems practically. The study seems to have opened a new dimension in the field of multiphase flows with different assumptions, parameters and geometries.