J Material Sci Eng 2017, 6:7 (Suppl)
DOI: 10.4172/2169-0022-C1-080

Non-linear excitations of blood flow in large arteries under thermal radiations and magnetic field

Conrad Bertrand Tabi
Botswana International University of Science and Technology, Botswana

A non-linear model of blood flow in large vessels is addressed. The influence of radiations, viscosity and uniform magnetic fields on velocity and temperature distribution waveforms is studied. Exact solutions for the studied model are investigated through the F–expansion method. Based on the choice of parameter values, single-, multi-soliton and Jacobi elliptic function solutions are obtained. Viscosity and permanent magnetic field bring about wave spreading and reduce the velocity of blood, while radiations have reversed effects with strong impact on the waveform frequency of both the velocity and temperature distribution.

tabic@biust.ac.bw