

## ABSTRACT

In this research work, we investigate Magnetohydrodynamics boundary layer flow of rate type fluid over an oscillating inclined infinite plate with slip and Newtonian heating at the boundary. The plate is oscillating, the transverse magnetic field is applied to the plate and there is slip condition on the plate. A modern definition of fractional derivative operator recently introduced by Atangana and Beleanu will be used to formulate the fractional model. Temperature and rate of heat transfer for non-integer and integer order derivative are computed. Moreover, in order to get insight of the physical significance of the considered problem regarding velocity, relaxation time, fractional parameter and Grasshof number, some graphical representations are made using Mathcad software. Finally, velocity of the fluid decrease with increase in fractional parameter and in comparison between Viscous fluid (fractional and ordinary) and Maxwell fluid (fractional and ordinary), it was discovered that viscous fluid is faster than Maxwell fluids with zero and non-zero at the wall.