<center>**Invited Talk**</center>

<center>**on**</center>

"Numerical solution of nonlinear equations by different iterative scheme".

Invited Talk Brief:(Report)

Solving non linear equations is one of the most important and challenging problems in science and engineering applications. The root finding problem is one of the most relevant computational problems. It arises in a wide variety of practical applications in Physics ,Chemistry, Bio sciences, Engineering, etc. As a matter of fact, the determination of any unknown appearing implicitly in scientific or engineering formulas, gives rise to root finding problem . Relevant situations in Physics where such problems are needed to be solved include finding the equilibrium position of an object, potential surface of a field and quantized energy level of confined structure .The common root-finding methods include: Bisection, Newton-Raphson, False position, Secant methods etc. Different methods converge to theroot at different rates. That is, some methods are faster in converging to the root than others. The rate of convergence could be linear, quadratic or otherwise. The higher the order, the faster the method converges . The study is at comparing the rate of performance(convergence) of Bisection, Newton-Raphson and Secant as methods of root-finding. Obviously, Newton-Raphson method may converge faster than any other method but when we compare performance, it is needful to consider both cost and speed of convergence. An algorithm that converges quickly but takes a few seconds per iteration may take more time overall than an algorithm that converges more slowly, but takes

only a few milliseconds per iteration.