James Patrick King* (james.king3@cameron.edu), Cameron University, and Gokul R. Kadel (gkadel@cameron.edu), Cameron University. Comparison of Numerical Solutions of Nonlinear Schrödinger Equation.

In this project we consider time dependent Schrödinger equation that describes the quantum dynamics of many-particle systems under the influence of a variety of forces. A number of numerical techniques will be used to compute the solution. In addition to this, we investigate accuracy, reliability, consistency, stability, and overall cost effectiveness of different methods. (Received September 16, 2015)