

Fatimata Dianda

### Abstract: Attractors in Dynamical Systems

The study of dynamical systems is a branch of mathematics that attempts to understand how a real world quantity changes over time. The reason behind my interest in the study of dynamical systems is to understand the use of dynamical modelling quantitative fields such as physics, mechanics, finance, economics, applied mathematics, astronomy, biology, neuroscience, meteorology and so on. My work on dynamical system has helped me understand why I should know calculus, linear algebra, discrete mathematics, abstract mathematics and so on. Moreover I learnt how to apply my knowledge as an undergraduate student in mathematics to figure out situations in which mathematics sometimes fails. I found interesting articles describing how Newton's method is used to locate the imaginary  $i$  in the equation  $x^2 + 1 = 0$  which gave me a deep understanding of dynamical modelling.