1145-60-2796 **Fatemeh Norouzi*** (fatemeh.norouzi@morgan.edu), 1700 E Cold Spring Lane, Baltimore, MD 21251, and **Isabelle Kemajou-Brown** and **Rachel Kuske**. *Linear Univariate GARCH(p,q) and Pink Noise.*

In this paper, we aim to use the Univariate Generalized Auto Regressive Conditional Heteroskedasticity (GARCH) model which have been using a lot in forecasting the conditional volatility of time series. We investigate the ability of the linear Univariate GARCH(p,q) to reproduce power law statistics and detect whether it has the pink noise out of power spectral density function. For this investigation, we are exploring derivations of stochastic delay differential equations from linear Univariate GARCH(p,q) process. (Received September 25, 2018)