Abstract

In Time Series Analysis, many methods used in testing lack of fit in ARMA processes, use the residual autocorrelations. A special case of those tests are the Portmanteau Type tests. In this thesis, we mainly deal with the asymptotic distribution of some test statistics used in those tests. We also consider the asymptotic power of those tests and propose a new test statistic, based on power consideration. Monte-Carlo simulations conducted support this new test statistic.