

# Lab Assignment - 5

Instructor: Dr. Arabin Kumar Dey

## 1 Due date:

- 11/9/2014.

## 2 Notes:

- Submit the codes in all R / SAS corresponding to the questions.
- Make a proper documentation preferably in latex or using some other software and submit the printout of the report in .pdf form.
- Each student needs to write his/ her own solutions, even though discussions of the assignments between students are encouraged.

## 3 Assignments:

(a) Consider the problem (b) of lab assignment 4, use inversion of likelihood ratio test to find out the 95% confidence interval. Find out the coverage probability for different sample sizes.

(b) Consider the daily stock return of the Citigroup (tick symbol C) and the Standard and Poor's 500 Composite index from January 2001 to December 2008. The data are simple returns and in the file d-csp0108.txt (three columns with date, C-rtn, SP-rtn).

(i) Test the null hypothesis that the skewness measure of the log-returns is zero; (ii) Test the null hypothesis that the excess kurtosis of the log-returns is zero.