THE UNIVERSITY OF CHICAGO
Booth School of Business
Business 41912-50, Spring Quarter 2020, Mr. Ruey S. Tsay

Homework Assignment #3

Due Date: May 19, 2020 before 8:30 am CDT.

Assignment: Select one of the following three problems. Write a two-page report in which you summarize the key contributions of each paper, discuss their weaknesses, and compare the two articles.

1. Read the articles by Tibshirani (1996, JRSSB) and by Yuan and Lin (2006, JRSSB) concerning LASSO and group LASSO, respectively.

2. Read the article by Tibshirani (1996, JRSSB) of LASSO and the SCAD paper by Fan and Li (2001, JASA).

3. Read the paper on sparse PCA by Zou, Hastie, and Tibshirani (2006, Journal of Computational and Graphical Statistics, vol. 15, p. 265-286). Also, read the paper on diffusion index to forecasting by Stock and Watson (2002, Journal of Business and Economic Statistics, Vol. 20, pp. 147-162), which uses PCA.