

# Assignment 12

PM522b Introduction to the Theory of Statistics Part 2

Due: May 3, 2018

1. If  $\hat{\theta}_1$  and  $\hat{\theta}_2$  are two asymptotically efficient estimators, what can you say about their scaled difference  $\sqrt{n}(\hat{\theta}_1 - \hat{\theta}_2)$ ?
2. CB 10.23 b) and c) (we did a) in class)
3. CH 10.34
4. CB 10.35
5. CB 10.37
6. Let  $X_1, \dots, X_n \sim \text{Bin}(n, p)$ , derive an asymptotic  $1 - \alpha$  CI for  $p$  using the variance stabilizing function  $g(p) = 2 \sin^{-1}(\sqrt{p})$ .