Syllabus for SS-223A: Advanced Topics in Econometric Theory:

Asymptotics of Optimization Estimators

Fall, 2013

Room: 19 Baxter
Days and Times: Tuesdays and Thursdays, 10:30am - 11:55am

Instructor: Bob Sherman
   Office: 119 Baxter
   Phone: 4337
   Office Hours: By appointment

Secretary: Sabrina Boschetti
   Office: 123 Baxter
   Phone: 4228

Course Description: Almost all estimators (econometric or otherwise) of population parameters are optimization estimators, that is, they are obtained by optimizing sensible random criterion functions. Notable examples include least squares estimators and maximum likelihood estimators, but include many other interesting estimators as well. This course develops methods for determining the asymptotic distributions of such estimators. Such results are required to do asymptotic inference about the population parameters. This class will (i) develop a general framework that will cover standard as well as nonstandard estimators (including optimizers of convex or concave criterion functions) and (ii) provide a brief introduction to empirical process methods, time permitting.

Grading: Grades will be determined by performance on 4 homework sets. No exams.

Final letter grades will be determined as follows:
   A: 90% or higher
   B: 80-89%
   C: 70-79%
   D: 60-69%
   F: Below 60%

Collaboration Policy: You are encouraged to freely collaborate on the homework sets. That is, you may discuss and even work out solutions to the homework sets together. However, you
must write up your own solutions. No copying.

Some reference texts:


* means on reserve at Sherman-Fairchild Library (inquire at the circulation desk)

Some papers that I may hand out to you eventually or have on reserve at Millikan:


Here’s a tentative schedule for the term:

Week 1 1st HW assigned
Week 3 1st HW due, 2nd HW assigned
Week 5 2nd HW due, 3rd HW assigned
Week 7 3rd HW due, 4th HW assigned
Week 9 4th HW due
12/05 last day of class