Game Theory Syllabus

Overview. This is an advanced course in game theory, intended for students who are interested in pursuing micro theory research or who want a good theory background to do applied work. The course will cover a combination of standard results and current research topics. The prerequisite is familiarity with the basic ideas of game theory — Nash equilibrium, subgame perfection, incomplete information — as introduced in the first year PhD Microeconomic Theory I. Please talk to me if you haven’t taken this or another equivalent class. I am indebted to Jonathan Levin for sharing with me his notes, on which ours are based. I am also grateful to Andy Skrzypacz and Debraj Ray for letting me use theirs.

Logistics. The class meets TR 9:00am–10:15am in room 3153. Please feel free to bring food (and coffee!) to the class. I will not have office hours in any fixed time slot and you can come see me in my office any afternoon, or you can contact me to make an appointment. My email address is tsadzik@econ.ucla.edu, and my office is in room 9359 in the Economics department. I’ll post lecture notes on the web for this course few days before each lecture, and assignments as indicated below.

Assignments and Grading. There will be one problem set for each week, and it will be posted on the web within 24h after the meeting. The solution will be due the following week. Grades are based on a weighted average of assignments (40%) and the exam (60%). I encourage you to collaborate so long as solutions are written up individually. I’ll post solutions on the course web page. The exam will have a 24 hour take-home format, with a several day window for taking it, starting on or just before the reading day.

Reading. As noted above, the notes for each meeting will be available on the blackboard. The lectures notes will have detailed references; virtually all the papers can be downloaded easily. There are also several books you may find useful.


The first two are general texts and have substantial overlap. Both are excellent, but over fifteen years old. The Mailath and Samuelson book is freshly released, and will be the best general reference for the second half of the course.
Outline of Topics

We have 10 weeks and we will go over the following topics:

1. Solution concepts (Intro Class)
2. Incomplete Information Games with application to Global Games
3. Single Good Auction Theory, Information Aggregation
4. Perfect Monitoring Repeated Games
5. Imperfect Public Monitoring Repeated Games
6. Repeated Adverse Selection
7. Complete and Incomplete Information Bargaining
8. Reputation, Bargaining with Reputation