Topics in Repeated Games and Signaling
Econ 201, Spring 2005

Course Website: http://webct.ucsd.edu

Instructors:

1st Half:
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2nd Half:
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Office Hours: Tue 10.00am-11.00am

Feel free to make an appointment with either of us by email at any time.

Description: Econ 201 is an advanced topics course in Microeconomics, whose goal is to help you in making a smooth transition from coursework to research. The course content varies per the instructors' interests. This year, it consists of studying two areas of game theory and its applications: repeated games and signaling games.

In the first half of this course, we will study some of the seminal and cutting edge results in the theory of repeated and dynamic games, especially those games with information and monitoring problems. The dynamic programming approach, introduced by Abreu, Pearce, and Stacchetti (1986, 1990) revolutionized this field 15 years ago, but current research is forging ahead to address ever more interesting and general questions. We'll pay special attention to games with private monitoring, in which equilibria in private strategies perform better than perfect public equilibria. We'll also look at games with private information, whether i.i.d. over time, serially correlated, or fixed at the outset. Finally, at the end of the half we'll talk about some robustness considerations in mechanism design, relating to higher order beliefs and renegotiation.

The second half of the course will focus on signaling in games of incomplete information. We will study the theory of information transmission through both costless and costly signaling. We start at a more abstract level by analyzing refinements of Bayesian equilibrium that have special importance for signaling games, such as Stable equilibrium and its implications. A variety of applications of signaling to bargaining, auctions, and social norms will be discussed. We then turn to cheap-talk games, with a study of the canonical model, refinements, and recent generalizations. Applications here will be mainly to organizational theory: delegation, team design, and reputational concerns. Finally, should time permit, we will analyze mechanism design with limited/no commitment.

Logistics: We meet once a week, for 2 hours and 50 minutes. When and where we will meet is still to be determined, but the first meeting will be on Friday, April 1, from 9.00-11.50am in Economics 300.

Pre-requisites: You should have taken the first year Ph.D. sequence in the Economics department, or have received explicit consent from one of the instructors.

Assignments: In keeping with our objective to prepare you for research, you will have two assignments. First, you have to make an in-class presentation on a paper of your choice; second, you have to write a research paper/proposal on a topic of your choice.

Class presentations. For organizational purposes, you have to submit a list of at least two papers you would like to present: one on repeated games, and one on signaling. We recommend you pick one of the papers indicated with a '[P]' in the reading list; but you could suggest a different paper, so long as you check with us in advance. We will then aggregate everyone's preferences and let you know which paper you will present. (Rest assured, within the set of allocations that respect equal number of presentations across the two halves of the quarter, our social choice function will satisfy the Pareto principle.) You should plan on presenting for approximately 40 minutes, followed by a 10 minute discussion.

Research paper/proposal. You are required to write a paper on a topic in Microeconomic theory, broadly defined. It doesn't have to be on a topic we cover in class. Sometime before the end of the Spring quarter, you have to meet with one of us to discuss your topic. The final paper is due on the first day of Fall quarter, September 19. In terms of content, we expect a critical analysis of a body of literature and concrete directions for immediate future research. The hope is that you will have turned some of this "future research" into "current research" when you turn in your paper at the end of the summer.

Grading. Your grade for the course will be a weighted average of your presentation (35%) and your paper (65%). Please note that your transcript will show an incomplete for this course until the Fall quarter, after your paper is turned in.

Required Materials: There are no required textbooks for the course. All papers are available through the course website.

Reading List: Papers marked with a '[*]' are required reading and will form the basis for our lectures. Everything else is optional; keep in mind that papers marked with a '[P]' are suggested for your class presentation.