

ADVANCED MICROECONOMIC THEORY II

MARCIN PESKI

The goal of this class is to introduce second-year students to the current research in two areas of economic theory: repeated games and matching. The class will be divided into two blocks of 7 and 5 weeks each. The grade will come from two take-home problem sets (30% each) and a class presentation (40%). The presentations will take place in the last week of each block. The class will meet on Monday, 9-11am, in GE 100. I will have regular office hours on Tuesday, 9-11am, or by appointment.

There is a very good, up-to-date book on repeated games, [Mailath and Samuelson \(2006\)](#), and I strongly recommend that you buy it. There is no up-to-date book on matching, however, if you think that you may be working on matching in the future, it seems a good idea to read [Roth and Sotomayor \(1992\)](#).

Below, I list topics that I intend to cover in class. I also list some papers that are going to be discussed or that are somehow related to the topics discussed in the class. The list and the recommended readings are only an indication of what we are going to talk about and they may change from one to another lecture.

Class information, as well as the links to problem sets will be posted on the class website: <http://individual.utoronto.ca/mpeski/ECO2101S.html>

Topics on Repeated Games:

- (1) Introduction to Repeated Games (minimax payoffs, standard discounted folk theorem, Nash threat vs. minimax folk theorem, public randomization, etc).
 - (a) Book (i.e., [Mailath and Samuelson \(2006\)](#)): chapter 1, 2.1, 2.2, 3.
 - (b) classics: [Abreu et al. \(1994\)](#),
 - (c) alternative payoffs criteria: [Mertens et al. \(1994\)](#)[Aumann and Maschler \(1995\)](#), [Lehrer and Pauzner \(1999\)](#)
- (2) Self-generation
 - (a) book: chapter 2.5
 - (b) self-generation:[Abreu et al. \(1990\)](#)

- (3) Imperfect monitoring
 - (a) book: chapters 7-9, 12
 - (b) imperfect public monitoring [Radner et al. \(1986\)](#), [Fudenberg et al. \(1994\)](#), [Fudenberg and Levine \(1994\)](#)
 - (c) imperfect private monitoring in Prisoner's Dilemma: [Piccione \(2002\)](#), [Ely and Valimaki \(2002\)](#),
 - (d) Folk Theorems [Ely et al. \(2005\)](#), [Horner and Olszewski \(2006\)](#), [Sugaya \(2010\)](#)
- (4) Reputation
 - (a) classics: [Kreps and Wilson \(1982\)](#), [Milgrom and Roberts \(1982\)](#)
 - (b) review: [Sorin \(1999\)](#)
 - (c) extensions: [Fudenberg and Levine \(1992\)](#), [Schmidt \(1993\)](#), [Cripps and Thomas \(1997\)](#), [Chan \(2000\)](#), [Cripps et al. \(2005\)](#)
- (5) Repeated games with incomplete information
 - (a) no-discounting: [Aumann et al. \(1966-68\)](#), [Hart \(1985\)](#), [Koren \(1992\)](#), [Shalev \(1994\)](#). Book: [Aumann and Maschler \(1995\)](#)
 - (b) discounting, one-sided incomplete information [Cripps and Thomas \(2003\)](#), [Cripps et al. \(2005\)](#), [Peski \(2008\)](#)
 - (c) discounting, two-sided incomplete information [Horner and Lovo \(2009\)](#), [Athey and Bagwell \(2008\)](#), [Peski \(2011\)](#)
 - (d) markovian private information [Athey and Bagwell \(2008\)](#), [Escobar and Toikka \(2011\)](#), [Fudenberg and Yamamoto \(2011\)](#),
- (6) Stochastic games
 - (a) perfect monitoring, [Dutta \(1995\)](#)
 - (b) imperfect monitoring: [Horner et al. \(2011\)](#)
 - (c) infrequent transitions: [Peski and Wiseman \(2012\)](#)

Topics on matching

- (1) Introduction to matching
 - (a) classic: [Gale and Shapley \(1962\)](#), [Roth and Sotomayor \(1992\)](#)
 - (b) uniqueness: [Clark \(2006\)](#), [Pycia \(2011\)](#)
 - (c) identification: [Echenique](#)

- (2) Matching and incentives in large markets
 - (a) large markets: Roth and Peranson (1999), Immorlica and Mahdian (2005), Kojima and Pathak (2009), Lee (2011)
 - (b) asymptotic efficiency of allocation mechanisms: Che and Kojima (2010), Liu and Pycia (2012)
- (3) Matching in continuum markets: Azevedo and Leshno (2011), Peski (2011)
- (4) Other topics:
 - (a) Matching with contracts: Kelso and Crawford (1982), Hatfield and Milgrom (2005)
 - (b) Many-to-many matching: Pycia (2011), Hatfield and Kominers (2011)
 - (c) school choice problem: Aytekin-Ergin, etc., Umut, matching with money

Possible suggestions for class presentations :

- (1) repeated games (7th class): Li (2012), Plan (2012), Sugaya' (2012), Escobar and Toikka (2011),
- (2) matching (12th class): Azevedo (2012), Lee (2012), Leshno (2012), Azevedo and Leshno (2011), Liu and Pycia (2012)

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