#### Instructor

Annie Liang

Office: 462 McNeil Building Email: anliang@upenn.edu

## Description

This is a topics course, designed for economics Ph.D. students in their second or third year who are interested in pursuing microeconomic theory. Topics covered will include hierarchies of beliefs, the common prior assumption, model uncertainty, equilibrium selection, and learning.

#### Grading

Grades will be based equally on (1) class presentations, (2) a referee report on a paper not presented in class, and (3) a take-home exam. Optionally, (2) and (3) can be replaced by (4) a research paper that develops a model to address a novel question. If you wish to pursue this option, let me know by April 1, and your grade will then be based 60% on the paper, 40% on class presentations.

## **Preliminary List of Readings**

This is a preliminary list of readings that may evolve over the course of the lecture. The starred\* readings will be covered in class. Readings marked with a † can be chosen for the in-class presentations.

Part 1: Common Knowledge and Common p-Belief (2 lectures)

- Aumann (1976)\*
- Geanakoplos and Polemarchakis (1982)\*
- Rubinstein (1989)\*
- Monderer and Samet (1989)\*
- Lipman (2003)\*
- Dekel, Lipman and Rustichini (1998)

Part 2: Common Prior Assumption (1 lecture)

- Samet (1997)\*
- Milgrom and Stokev (1982)\*
- Morris (1995)
- Gul (1998)

• Aumann (1998)

#### Part 3: Universal Type Space (2 lectures)

- Brandenburger and Dekel (1993)\*
- Dekel, Fudenberg and Morris (2006, 2007)\*
- Chen et al. (2010, 2017)\*
- Cripps et al. (2008)\*
- Ely and Peski (2011)<sup>†</sup>
- Dekel and Sinischalchi (2015)

### Part 4: Equilibrium Robustness (2 lectures)

- Weinstein and Yildiz (2007)\*
- Bergemann and Morris (2016)\*
- Fudenberg, Kreps and Levine (1988)<sup>†</sup>

### Part 5: Equilibrium Selection (2 lectures)

- Carlsson and van Damme (1993)\*
- Kajii and Morris (1997)\*
- Morris, Rob and Shin (1995)<sup>†</sup>
- Morris and Shin (2003)<sup>†</sup>

### Part 6: Coordination Games (2 lectures)

- Morris, Shin and Yildiz (2017)\*
- Hellwig and Veldkamp (2009)<sup>†</sup>
- Chamley (1999)<sup>†</sup>
- Myatt and Wallace (2011)
- Golub and Morris (2017)

#### Part 8: Learning in Games (2 lectures)

• Kalai and Lehrer (1993)\*

- Steiner and Stewart (2008)\*
- Jehiel (2005)<sup>†</sup>
- Fudenberg and Levine  $(1993)^{\dagger}$
- Dekel, Fudenberg and Levine (2004)

# Part 9: Pure Learning (2 lectures)

- Acemoglu, Chernozhukov and Yildiz (2015)\*
- Dasaratha, Golub and Hak (2018)\*
- Sethi and Yildiz (2016)\*
- Liang, Mu and Syrgkanis (2017)\*

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Aumann, Robert J. 1998. "Common Priors: A Reply to Gul." Econometrica.

Bergemann, Dirk, and Stephen Morris. 2016. "Bayes correlated equilibrium and the comparison of information structures in games." *Theoretical Economicsi*.

Brandenburger, Adam, and Eddie Dekel. 1993. "Hierarchies of Belief and Common Knowledge." Journal of Economic Theory.

Carlsson, Hans, and Eric van Damme. 1993. "Global Games and Equilibrium Selection." *Econometrica*, 61(5): 989–1018.

**Chamley, Christophe.** 1999. "Coordinating Regime Switches." Quarterly Journal of Economics.

Chen, Yi-Chun, Alfredo di Tillio, Eduardo Faingold, and Siyang Xiong. 2010. "Uniform topologies on types." *Theoretical Economics*.

Chen, Yi-Chun, Alfredo di Tillio, Eduardo Faingold, and Siyang Xiong. 2017. "Characterizing the Strategic Impact of Misspecified Beliefs." Review of Economic Studies.

Cripps, Martin, Jeffrey Ely, George Mailath, and Larry Samuelson. 2008. "Common Learning." *Econometrica*.

Dasaratha, Krishna, Ben Golub, and Nir Hak. 2018. "Bayesian Social Learning in a Dynamic Environment." Working Paper.

**Dekel, Eddie, and Marciano Sinischalchi.** 2015. "Handbook of Game Theory with Economic Applications." Vol. 4, Chapter Epistemic Game Theory.

**Dekel, Eddie, Bart Lipman, and Aldo Rustichini.** 1998. "Standard State Space Models Preclude Unawareness." *Econometrica*.

**Dekel, Eddie, Drew Fudenberg, and David Levine.** 2004. "Learning to Play Bayesian Games." *Games and Economic Behavior*.

**Dekel, Eddie, Drew Fudenberg, and Stephen Morris.** 2006. "Topologies on Types." *Theoretical Economics.* 

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Fudenberg, Drew, David Kreps, and David Levine. 1988. "On the Robustness of Equilibrium Refinements." *Journal of Economic Theory*.

Geanakoplos, John, and Heraklis Polemarchakis. 1982. "We Can't Disagree Forever." Journal of Economic Theory.

Golub, Ben, and Stephen Morris. 2017. "Expectations, Networks, and Conventions." Working Paper.

Gul, Faruk. 1998. "A Comment on Aumann's Bayesian View." Econometrica.

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- Morris, Stephen. 1995. "The Common Prior Assumption in Economic Theory." *Economics and Philosophy*.
- Morris, Stephen, and Hyun Song Shin. 2003. "Global Games: Theory and Applications."
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- Rubinstein, Ariel. 1989. "The Electronic Mail Game: Strategic Behavior Under "Almost Common Knowledge"." American Economic Review, 79.
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