

## Syllabus

**Course description:** This course is designed to cover basic tools and current topics in the modern decision theory and the theory of networks. The focus will be on current research: the vast majority of the readings are 2000+. Whenever necessary, I will provide you with the relevant background. The goal of the course is to give you a solid foundation in several important topics in microeconomic theory and to get you into a habit of critically thinking about research. I strongly encourage you to complete the readings prior to lecture and to discuss the course material with your classmates.

**Contact Information:** rostek {at} wisc.edu. Office hours: Friday, 9:30-10:30am. You are encouraged to e-mail me to set up an appointment.

### Course outline:

#### PART I: CHOICE UNDER UNCERTAINTY:

Savage, Anscombe-Aumann, Multiple priors, Choquet, definitions of ambiguity, robustness, probabilistic sophistication.

#### Readings:

- Schmeidler, D. (1989): "Subjective Probability and Expected Utility without Additivity," *Econometrica*, 57: 571-587.
- Gilboa I. and D. Schmeidler (1989): "Maxmin Expected Utility with Non-unique Prior," *Journal of Mathematical Economics*, 18: 141-153.
- Epstein, L. G. (1999): "A Definition of Uncertainty Aversion," *Review of Economic Studies*, 66: 279-608.
- Klibanoff, P., M. Marinacci and S. Mukerji (2005): "A Smooth Model of Decision Making under Ambiguity," *Econometrica*, 73 (6): 1849-1892.
- Amarante, M. (2005): "States, Models and Information: A Reconsideration of Ellsberg's Paradox," working paper.
- Ghirardato, P. and F. Maccheroni (2004): "Differentiating Ambiguity and Ambiguity Attitude," *Journal of Economic Theory*, 118: 133-173.
- Maccheroni, F., M. Marinacci and A. Rustichini (2004): "Ambiguity aversion, robustness, and the variational representation of preferences," working paper.
- Machina, M. J. and D. Schmeidler (1992): "A More Robust Definition of Subjective Probability," *Econometrica*, 60(4): 745-80.

#### PART II: UNFORESEEN CONTINGENCIES, FLEXIBILITY, AND TEMPTATION:

Preference for flexibility, self-control and temptation, preference for commitment, consumption behavior, time inconsistency.

#### Readings:

- Kreps, D. M. (1979): "A Representation Theorem for 'Preference for Flexibility'," *Econometrica*, 47(3): 565-578.

- Dekel, E., B. Lipman and A. Rustichini (2001): “Representing Preferences with a Unique Subjective State Space,” *Econometrica*, 69: 891-934.
- Dekel, E., B. Lipman and A. Rustichini (2006): "Temptation-Driven Preferences," working paper.
- Gul, F. and W. Pesendorfer (2001): “Temptation and Self-Control,” *Econometrica*, 69: 1403-1436.
- Gul, F. and W. Pesendorfer (2004): “Self-control and the theory of consumption,” *Econometrica*, 72(1): 119-158.
- Li, J. (2006): "Information Structures with Unawareness," working paper.
- Noor, J. (2005): "Temptation, Welfare and Revealed Preference," working paper.
- Epstein, L. G., and M. Marinacci (2005): “Coarse Contingencies,” working paper.

### **PART III: NETWORKS:**

Networks, social networks, network formation, games and equilibrium in networks, allocation rules.

#### **Readings:**

- Bloch, F. and M. O. Jackson "The Formation of Networks with Transfers among Players,” with Francis Bloch, forthcoming *Journal of Economic Theory*.
- Bala, V. and S. Goyal (2000): “A non-cooperative model of network formation,” *Econometrica*, 68, 1181–1230.
- Jackson, M. O. and A. Wolinsky (1996): “A Strategic Model of Social and Economic Networks,” *Journal of Economic Theory*, 71: 44–74.
- Bloch, F. and M. O. Jackson (2006): “Definitions of Equilibrium in Network Formation Games,” working paper.
- Galeotti, A., S. Goyal, M. O. Jackson, A. F. Vega-Redondo, and L. Yariv (2006): “Network Games,” working paper.
- Jackson, M. O. (2004): “A Survey of Models of Network Formation: Stability and Efficiency,” Chapter 1 in *Group Formation in Economics; Networks, Clubs and Coalitions*, edited by Gabrielle Demange and M. Wooders, Cambridge University Press: Cambridge U.K.
- Jackson, M. O. (2005): “The Economics of Social Networks,” Based on a lecture, to appear in the Proceedings of the 9th World Congress of the Econometric Society, edited by R. Blundell, W. Newey, and T. Persson, Cambridge University Press.
- Jackson, M. O. (2003): “The Stability and Efficiency of Economic and Social Networks,” in *Advances in Economic Design*, edited by M. Sertel and S. Koray, Springer-Verlag, Heidelberg 2003; reprinted in *Networks and Groups: Models of Strategic Formation*, edited by B. Dutta and M. O. Jackson, Springer-Verlag: Heidelberg.

#### **Evaluation:**

Your grade will be determined as an average (with weights TBA) of the following assignments:

- (1) 3 problem sets.
- (2) A 15-minute (constructively) critical presentation of a recently published or a yet unpublished paper. You are free to choose a paper; I am also happy to suggest some readings. In any case, please consult your choice with me.
- (3) Research proposal.

Details about these assignments will be discussed in class.