Professor Colin Stewart
Department of Economics
University of Toronto
Max Gluskin House, Room 223, 150 St. George St.
email: colinbstewart@gmail.com

Office Hours: by appointment

ECO2100H1S: Advanced Microeconomic Theory I
Winter 2013

Classes: Wednesdays 4:10-6:00pm, GE 100

Evaluation:
Two referee reports, due February 6th and March 13th - 15% each
Presentation - 30%
Research proposal, due April 12th - 40%

This course is intended to help prepare students to conduct research in microeconomic theory and related fields. The course will focus on recent research papers on the topics of coordination, common knowledge, and Bayesian learning (covering optimal experimentation and social learning). Each week I will announce the papers that will be covered in the next class; you are expected to read those papers prior to the lecture.

The evaluations for the course, described below, are all designed to develop essential skills for success in research.

Referee reports: There will be two referee reports on papers from the reading list that are not being covered in class. One report will be on a paper from the section on coordination and common knowledge, and the other from the section on Bayesian learning. You must not write a report on the same paper as another student. Papers will be allocated on a first-come first-served basis.

Referee reports should be 3–5 pages in length, consisting of a 1/2–1 page summary of the paper, with the remaining length offering a critical discussion. A good report identifies strengths and weaknesses of the paper, explains precisely how it contributes to the literature, and, importantly, offers concrete and feasible suggestions for improvement. The report can address any aspects of the paper from broad conceptual issues to details of modeling and presentation.

Presentation: Presentations will be 50 minutes long, and will take place during the final weeks of class (with the exact schedule depending on final enrolment). Each presentation will cover one paper from the reading list or an alternative paper subject to my approval. Papers to present will be allocated on a first-come first-served basis.

You should arrange a meeting with me to take place no later than the Friday before the presentation to go over the presentation slides. A good presentation will convey the main points of the paper while offering a critical perspective. It is important to precisely describe the model and main results without getting lost in technical details.

Research proposal: The research proposal must describe a novel project on any topic in microeconomic theory; it need not be directly related to material covered in the class. As a rough guideline, I expect most proposals to be 6–10 pages in length. A good proposal clearly motivates the research project, discusses how it fits with related literature, and precisely describes a framework for studying the problem. Be sure to describe what sort of results you hope would come out of the project. One approach that can work well is to fully solve a simple example and then discuss how it could be extended to a more general setting.

I strongly encourage you to meet with me to discuss any ideas for the proposal before you start writing. Note that you are responsible for doing a thorough enough literature search to be confident that your proposed research is indeed novel.

READING LIST:

1 Coordination and common knowledge

[1] G.M. Angeletos, C. Hellwig, and A. Pavan. Signaling in a global game: Coordination and policy traps. *Journal of Political Economy*, 114(3):452–484, 2006.

[2] G.M. Angeletos and I. Werning. Crises and prices: Information aggregation, multiplicity, and volatility. *American Economic Review*, 96(5):1720–1736, 2006.

[3] R.J. Aumann. Agreeing to disagree. *Annals of Statistics*, 4(6):1236–1239, 1976.

[4] A. Brandenburger and E. Dekel. Hierarchies of beliefs and common knowledge. *Journal of Economic Theory*, 59:189–189.

[5] E. Bueno de Mesquita. Regime change and revolutionary entrepreneurs. *American Political Science Review*, 104(3):446–466, 2010.

[6] H. Carlsson and E. Van Damme. Global games and equilibrium selection. *Econometrica*, 61(5):989–1018, 1993.

[7] S. Chassang. Fear of miscoordination and the robustness of cooperation in dynamic global games with exit. *Econometrica*, 78(3):973–1006, 2010.

[8] S. Chassang and G.P. i Miquel. Conflict and Deterrence under Strategic Risk. *Quarterly Journal of Economics*, 125(4):1821–1858.

[9] E. Dekel, D. Fudenberg, and S. Morris. Interim correlated rationalizability. *Theoretical Economics*, 2(1):15–40, 2007.

[10] C. Edmond. Information manipulation, coordination and regime change. Working paper, 2012.

[11] J.C. Ely and M. Peski. Hierarchies of belief and interim rationalizability. *Theoretical Economics*, 1:19–65, 2006.

[12] J.C. Ely and M. Peski. Critical types. *The Review of Economic Studies*, 78(3):907–937, 2011.

[13] D.M. Frankel, S. Morris, and A. Pauzner. Equilibrium selection in global games with strategic complementarities. *Journal of Economic Theory*, 108(1):1–44, 2003.

[14] J. Geanakoplos. Common knowledge. In *Proceedings of the 4th conference on Theoretical aspects of reasoning about knowledge*, pages 254–315. Morgan Kaufmann Publishers Inc., 1992.

[15] I. Goldstein, E. Ozdenoren, and K. Yuan. Learning and complementarities in speculative attacks. *The Review of Economic Studies*, 78(1):263–292, 2011.

[16] J.Y. Halpern and Y. Moses. Knowledge and common knowledge in a distributed environment. *Journal of the ACM (JACM)*, 37(3):549–587, 1990.

[17] Q. Liu. On redundant types and bayesian formulation of incomplete information. *Journal of Economic Theory*, 144(5):2115–2145, 2009.

[18] J.F. Mertens and S. Zamir. Formulation of Bayesian analysis for games with incomplete information. *International Journal of Game Theory*, 14(1):1–29, 1985.

[19] D. Monderer and D. Samet. Approximating common knowledge with common beliefs. *Games and Economic Behavior*, 1(2):170–190, 1989.

[20] S. Morris and H.S. Shin. Unique equilibrium in a model of self-fulfilling currency attacks. *American Economic Review*, pages 587–597, 1998.

[21] S. Morris and H.S. Shin. Social value of public information. *American Economic Review*, 92(5):1521–1534, 2002.

[22] S. Morris and H.S. Shin. Global games: theory and applications. In *Advances in Economics and Econometrics: theory and applications, Eighth world Congress*, volume 1, pages 56–114, 2003.

[23] S. Morris and H. Song Shin. Contagious adverse selection. *American Economic Journal: Macroeconomics*, 4(1):1–21, 2012.

[24] D.P. Myatt. On the Theory of Strategic Voting. *Review of Economic Studies*, 74(1):255–281, 2007.

[25] D.P. Myatt and C. Wallace. Endogenous information acquisition in coordination games. *Review of Economic Studies*, 79(1):340–374, 2012.

[26] A. Penta. Higher order uncertainty and information: Static and dynamic games. *Econometrica*, 80(2):631–660, 2012.

[27] A. Penta. On the structure of rationalizability for arbitrary spaces of uncertainty. *Theoretical Economics*, 2012.

[28] A. Rubinstein. The Electronic Mail Game: Strategic Behavior Under" Almost Common Knowledge". *American Economic Review*, 79(3):385–391, 1989.

[29] J. Sakovics and J. Steiner. Who matters in coordination problems? *American Economic Review*, 102:3439–3461, 2012.

[30] M. Shadmehr and D. Bernhardt. Collective action with uncertain payoffs: Coordination, public signals, and punishment dilemmas. *American Political Science Review*, 105(4):829–851, 2011.

[31] J. Weinstein and M. Yildiz. A structure theorem for rationalizability with application to robust predictions of refinements. *Econometrica*, 75(2):365–400, 2007.

[32] J. Weinstein and M. Yildiz. A structure theorem for rationalizability in infinite-horizon games. Forthcoming in *Review of Economic Studies*, 2012.

[33] M. Yang. Coordination with flexible information acquisition. Working paper, 2012.

2 Bayesian learning

[34] D. Acemoglu, M.A. Dahleh, I. Lobel, and A. Ozdaglar. Bayesian learning in social networks. *Review of Economic Studies*, 78(4):1201–1236, 2011.

[35] U. Akcigit and Q. Liu. The role of information in competitive experimentation. Working paper, 2011.

[36] A. Banerjee and D. Fudenberg. Word-of-mouth learning. *Games and Economic Behavior*, 46:1–22, 2004.

[37] A.V. Banerjee. A simple model of herd behavior. *Quarterly Journal of Economics*, 107(3):797–817, 1992.

[38] D. Bergemann and J. Välimäki. Learning and strategic pricing. *Econometrica*, 64:1125–1149, 1996.

[39] D. Bergemann and J. Välimäki. Bandit problems. Working paper, 2009.

[40] S. Bikhchandani, D. Hirshleifer, and I. Welch. A theory of fads, fashion, custom, and cultural change as informational cascades. *Journal of Political Economy*, 100(5):992–1026, 1992.

[41] P. Bolton and C. Harris. Strategic experimentation. *Econometrica*, 67(2):349–374, 1999.

[42] A. Bonatti and J. Hörner. Collaborating. *American Economic Review*, 101:632–663, 2011.

[43] S. Callander. Bandwagons and momentum in sequential voting. *Review of Economic Studies*, 74(3):653–684, 2007.

[44] S. Callander. The informational efficiency of taking turns. Working paper, 2012.

[45] S. Callander and J. Hörner. The wisdom of the minority. *Journal of Economic Theory*, 144(4):1421–1439, 2009.

[46] C. Chamley. *Rational herds: Economic models of social learning*. Cambridge University Press, 2004.

[47] C. Chamley and D. Gale. Information revelation and strategic delay in a model of investment. *Econometrica*, pages 1065–1085, 1994.

[48] A. Guarino and P. Jehiel. Social learning with coarse inference. Forthcoming in *American Economic Journal: Microeconomics*, 2012.

[49] F. Gul and R. Lundholm. Endogenous timing and the clustering of agents' decisions. *Journal of Political Economy*, 103(5):1039–1066, 1995.

[50] J. Hörner and L. Samuelson. Incentives for Experimenting Agents. Working paper, 2012.

[51] G. Keller and S. Rady. Strategic experimentation with Poisson bandits. *Theoretical Economics*, 5(2):275–311, 2010.

[52] G. Keller and S. Rady. Breakdowns. Working paper, 2012.

[53] G. Keller, S. Rady, and M. Cripps. Strategic experimentation with exponential bandits. *Econometrica*, 73(1):39–68, 2005.

[54] I. Monzón and M. Rapp. Observational learning with position uncertainty. Working paper, 2012.

[55] G. Moscarini and F. Squintani. Competitive experimentation with private information: The survivor's curse. *Journal of Economic Theory*, 145(2):639–660, 2010.

[56] P. Murto and J. Välimäki. Learning and Information Aggregation in an Exit Game. *Review of Economic Studies*, 78:1426–1461, 2011.

[57] D. Rosenberg, E. Solan, and N. Vieille. Social Learning in One-Arm Bandit Problems. *Econometrica*, 75(6):1591–1611, 2007.

[58] L. Smith and P. Sørensen. Pathological outcomes of observational learning. *Econometrica*, 68(2):371–398, 2000.

[59] B. Strulovici. Learning while voting: Determinants of collective experimentation. *Econometrica*, 78(3):933–971, 2010.

[60] C. Thomas. Strategic experimentation with congestion. Working paper, 2012.

Important Dates:
February 6th: first referee report due
February 20th: reading week, no class
March 13th: second referee report due
April 3rd: last class
April 12th: research proposal due