ECO2100H1S: Advanced Microeconomic Theory I
Winter 2021

Instructors: Gabriel Carroll, Yoram Halevy, Marcin Pęski, Anne-Katrin Roesler, Colin Stewart

Description: This course is intended to help prepare students to conduct research in microeconomic theory and related fields. A variety of topics will be covered, combining some seminal papers with the current frontier of research. Lectures will cover only a subset of the papers listed below.

Classes: Class times will be arranged by each instructor in consultation with participating students. In addition to class lectures, students are expected to attend departmental theory workshops and Canadian Economic Theory Conference events whenever possible.

Assessment: Each student will give a presentation of a research idea during the week of April 5th and submit a written research proposal by April 30th.

Schedule:

- Weeks of January 11, 18, and 25: Matching (Pęski)

- Weeks of February 1 and 8: Stochastic Choice (Halevy)

- Weeks of February 22 and March 1: Multidimensional Screening (Carroll)

- Weeks of March 8 and 15: Information Design (Roesler)

- Weeks of March 22 and 29: Rational Inattention and Bayesian Learning (Stewart)

- Week of April 5: student presentations

Reading list:

1   Matching (Pęski): see list posted separately

2   Stochastic Choice (Halevy): to be posted

3   Multidimensional Screening (Carroll)

[1] Gabriel Carroll. Robustness and separation in multidimensional screening. *Econometrica*, 85(2):453–488, 2017.

[2] Constantinos Daskalakis. Multi-item auctions defying intuition? *ACM SIGecom Exchanges*, 14(1):41–75, 2015.

[3] Constantinos Daskalakis, Alan Deckelbaum, and Christos Tzamos. Mechanism design via optimal transport. In *Proceedings of the 14th ACM Conference on Electronic Commerce*, EC '13, pages 269–286, 2013.

[4] Sergiu Hart and Noam Nisan. Approximate revenue maximization with multiple items. *Journal of Economic Theory*, 172:313–347, 2017.

[5] Sergiu Hart and Philip J. Reny. Maximal revenue with multiple goods: Nonmonotonicity and other observations. *Theoretical Economics*, 10(3):893–922, 2015.

[6] R. Preston McAfee, John McMillan, and Michael D. Whinston. Multiproduct monopoly, commodity bundling, and correlation of values. *Quarterly Journal of Economics*, 104(2):371–383, 1989.

[7] Jean-Charles Rochet and Philippe Choné. Ironing, sweeping, and multidimensional screening. *Econometrica*, 66(4):783–826, 1998.

[8] Jean-Charles Rochet and Lars Stole. The economics of multidimensional screening. In *Advances in Economics and Econometrics: Theory and Applications, Eighth World Congress, Vol. I*, pages 150–197. Cambridge University Press, New York, 2003.

4 Information Design (Roesler): to be posted

5 Rational Inattention and Bayesian Learning (Stewart)

[9] D. Bergemann and J. Välimäki. Bandit problems. In Steven N. Durlauf and Larry E. Blume, editors, *The New Palgrave Dictionary of Economics*. Palgrave Macmillan, 2008.

[10] 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.

[11] J Aislinn Bohren. Informational herding with model misspecification. *Journal of Economic Theory*, 163:222–247, 2016.

[12] Steven Callander. Searching and learning by trial and error. *American Economic Review*, 101(6):2277–2308, 2011.

[13] Andrew Caplin and Mark Dean. Revealed preference, rational inattention, and costly information acquisition. *American Economic Review*, 105(7):2183–2203, 2015.

[14] Andrew Caplin, Mark Dean, and John Leahy. Rational inattention, optimal consideration sets, and stochastic choice. *Review of Economic Studies*, 86(3):1061–1094, 2018.

[15] Mira Frick, Ryota Iijima, and Yuhta Ishii. Misinterpreting others and the fragility of social learning. *Econometrica*, 88(6):2281–2328, 2020.

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

[17] G. Keller and S. Rady. Breakdowns. *Theoretical Economics*, 10:175–202, 2015.

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

[19] Filip Matêjka, Alisdair McKay, et al. Rational inattention to discrete choices: A new foundation for the multinomial logit model. *American Economic Review*, 105(1):272–98, 2015.

[20] Stephen Morris and Philipp Strack. The Wald problem and the relation of sequential sampling and ex-ante information costs. Working paper, 2019.

[21] Luciano Pomatto, Philipp Strack, and Omer Tamuz. The cost of information. Working paper, 2020.

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

[23] Jakub Steiner, Colin Stewart, and Filip Matĕjka. Rational inattention dynamics: Inertia and delay in decision-making. *Econometrica*, 85(2):521–553, 2017.

[24] Weijie Zhong. Optimal dynamic information acquisition. Working paper, 2019.