Ph.D. in ECONOMICS 2024-25

INFORMATION DESIGN AND BAYESIAN PERSUASION:
THEORY AND APPLICATIONS

Prof. Mario Gilli and Prof.ssa Irene Valsecchi

PURPOSE:

The purpose of the reading group is to get familiar with the recent evolution of the literature from cheap talk and strategic information transmission to Bayesian persuasion, information design, and partial commitment to information structures.

Accordingly, the focus will switch from the aims of the receivers to those of the senders.
The provisional list of topics is as follows:
- cheap talk
- improved communication through noise and coarse information
- choice of the information structure: Bayesian persuasion and information design
- the impact of partial commitment to signal distributions
- applications.

COURSE DESCRIPTION:

The course consists of two parts:
1. the first is theoretical to get the basis and will be taught by Prof.ssa Irene Valsecchi, and consists of 2 or 3 lectures and students' presentations of well-established papers (12 hours);
2. the second is related to applications and will be taught by Prof. Mario Gilli, and consists of 2 lectures and students' presentations of well-established papers (9 hours).

DETAILED TIMETABLE OF THE LECTURES

	Topic of the lecture	Day	References
Theory			
L1	Introduction - 1		Lecture notes
L2	Introduction - 2		Lecture notes
L3	Introduction – 3		Lecture notes
L4	Presentation – 1		
Applications			
L5	Introduction - 4		Lecture notes
L6	Introduction - 5		Lecture notes
L7	Presentation – 2		

Provisional reading list

Theory

1. Bergemann, Dirk and Stephen Morris. 2016. "Bayes Correlated Equilibrium and the Comparison of Information Strucures in Games.", Theoretical Economics, 11: 487-522
2. Bergemann, Dirk and Stephen Morris. 2019. "Information Design: A Unified Perspective.", Journal of Economic Literature, 57: 44-95
3. Blume A., Board O.J. and KAwamura K. 2007. "Noisy Talk.", Theoretical Economics, 2: 395-440
4. Blume A. (2012). "A Class of Strategy-Correlated Equilibria in Sender-Receiver Games.", Games and Economic Behavior, 75: 510-517
5. Crawford, Vincent P. and Joel Sobel. 1982. "Strategic Information Transmission.", Econometrica, 1431-1451
6. Fischer, Paul E. and Phillip C. Stocken. 2001. "Imperfect Information and Credible Communication.", Journal of Accounting Research, 39: 119-134
7. Forges F. 2020. "Games with Incomplete Information: From Repetition to Cheap Talk and Persuasion.", Annals of Economics and Statistics, 136ì7: 3-30
8. Gentzkov, Matthew and Emir Kamenica. 2017. "Disclosure of Endogenous Information.", Economic Theory Bulletin, 5: 47-56
9. Guo, Yingni and Eran Shmaya. 2021. "Costly Miscalibration.", Theoretical Economics, 16: 477-506
10. Ivanov, Maxim. 2010. "Informational Control and Organizational Design.", Journal of Economic Theory, 145: 721-751
11. Kamenica, Emir. 2019. "Bayesian Persuasion and Information Design.", Annal Review of Economics, 11: 249-272
12. Kamenica, Emir and Matthew Gentzkov. 2011. "Bayesian Persuasion.", American Economic Review, 101: 2590-2615
13. Kamenica, Emir, Kim Kyunghim and Andriy Zapechelnyuk. 2021. "Bayesian Persuasion and Information Design: Perspectives and Open Issues.", Economic Theory, 72: 701-04
14. Koessler, Frederic and Vasiliki Skreta. 2023. "Informed Information Design.", Journal of Political Economy, 131: 3186-3282
15. Lin, Xiao and Ce Liu. "Credible Persuasion.", Journal of Political Economy, forthcoming
16. Lipnowski, Elliot and Doron Ravid. 2020. "Cheap Talk with Transparent Motives.", Econometrica, 88: 1631-1660
17. Lipnowski, Elliot, Doron Ravid and Denis Shishkin. 2022. "Persuasion via Weak Institutions.", Journal of Political Economy, 130: 2705-2730
18. Min, Daehong. 2021. "Bayesian Persuasion under Partial Commitment.", Economic Theory, 72:743-764
19. Nguyen, Anh and Teck Yong Tan. 2021. "Bayesian Persuasion with Costly Messages.", Journal of Economic Theory, 193: 1-35
20. Pei, Harry Di. 2015. "Communication with Endogeneous Information Acquisition.", Journal of Economic Theory, 160: 132-149
21. Perez-Richet, Eduardo and Vasiliki Skreta. 2022. "Test Design under Falsification". Econometrica, 90:1109-1142

22. Taneva, Ina. 2019. "Information Design." American Economic Journal: Microeconomics, 11: 151-185
23. Yang, Ming. 2015. "Coordination with Flexible Information Acquisition.", Journal of Economic Theory, 158: 721-738

Applications

1. Alonso, Ricardo, and Odilon Câmara. 2016. "Persuading Voters." American Economic Review 106 (11): 3590–605.
2. Angeletos, George-Marios, and Jennifer La'O. 2013. "Sentiments." Econometrica 81 (2): 739–79.
3. Bergemann, Dirk, Alessandro Bonatti, and Alex Smolin. 2018. "The Design and Price of Information." American Economic Review 108 (1): 1–48.
4. Bergemann, Dirk, Benjamin Brooks, and Stephen Morris. 2015. "The Limits of Price Discrimination." American Economic Review 105 (3): 921–57.
5. Bergemann, Dirk, Benjamin Brooks, and Stephen Morris. 2016. "Informationally Robust Optimal Auction Design." Cowles Foundation Discussion Paper 2065
6. Bergemann, Dirk, Benjamin Brooks, and Stephen Morris. 2017a. "First-Price Auctions with General Information Structures: Implications for Bidding and Revenue." Econometrica 85 (1): 107–43.
7. Bergemann, Dirk, Benjamin Brooks, and Stephen Morris. 2017b. "Selling to Intermediaries: Optimal Auction Design in a Common Value Model." Cowles Foundation Discussion Paper 2064R.
8. Bergemann, Dirk, and Martin Pesendorfer. 2007. "Information Structures in Optimal Auctions." Journal of Economic Theory 137 (1): 580–609.
9. Brocas, Isabelle, and Juan D. Carrillo. 2007. "Influence through Ignorance." RAND Journal of Economics 38 (4): 931–47.
10. Brooks, Benjamin, and Songzi Du. 2018. "Optimal Auction Design with Common Values: An Informationally-Robust Approach." https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3137227.
11. Calzolari, Giacomo, and Alessandro Pavan. 2006. "Monopoly with Resale." RAND Journal of Economics 37 (2): 362–75.
12. Carroll, Gabriel. 2016. "Informationally Robust Trade and Limits to Contagion." Journal of Economic Theory 166: 334–61
13. Carroll, Gabriel, and Ilya Segal. "Robustly Optimal Auctions with Unknown Resale Opportunities." Review of Economic Studies.
14. Das, Sammy, Emir Kamenica, and Renee Mirka. 2017. "Reducing Congestion through Information Design." In Proceedings of the 2017 55th Annual Allerton Conference on Communication, Control, and Computing, 1279–84. Piscataway, NJ: IEEE.
15. Daskalakis, Constantinos, Christos Papadimitriou, and Christos Tzamos. 2016. "Does Information Revelation Improve Revenue?" In Proceedings of the 2016 ACM Conference on Economics and Computation, 233–50. New York: Association for Computing Machinery.
16. Ely, Jeffrey C. 2017. "Beeps." American Economic Review 107 (1): 31–53.
17. Ely, Jeffrey C., Alexander Frankel, and Emir Kamenica. 2015. "Suspense and Surprise." Journal of Political Economy 123 (1): 215–60.

18. Hellwig, Christian, and Venky Venkateswaran. 2009. "Setting the Right Prices for the Wrong Reasons." Journal of Monetary Economics 56 (Supplement): S57–77.
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20. Ivanov, Maxim. 2010. "Informational Control and Organizational Design.", Journal of Economic Theory, 145: 721-751
21. Lehrer, Ehud, Dinah Rosenberg, and Eran Shmaya. 2010. "Signaling and Mediation in Games with Common Interests." Games and Economic Behavior 68 (2): 670–82.
22. Morris, Stephen 2001. "Political Correctness." Journal of Political Economy, vol. 109, N. 2, pp. 231-265.
23. Novshek, William, and Hugo Sonnenschein. 1982. "Fulfilled Expectations Cournot Duopoly with Information Acquisition and Release." Bell Journal of Economics 13 (1): 214–18.
24. Ostrovsky, Michael, and Michael Schwarz. 2010. "Information Disclosure and Unraveling in Matching Markets." American Economic Journal: Microeconomics 2 (2): 34–63.
25. Passadore, Juan, and Juan Pablo Xandri. 2014. "Robust Conditional Predictions in Dynamic Games: An Application to Sovereign Debt." Semantic Scholar.
https://www.semanticscholar.org/paper/RobustConditional-Predictions-in-Dynamic-Games-%3APassadore-Xandri/272ea4246dd7d4475838dd3aaa803962876f198b
26. Roesler, Anne-Katrin, and Balázs Szentes. 2017. "Buyer-Optimal Learning and Monopoly Pricing." American Economic Review 107 (7): 2072–80.
27. Syrgkanis, Vasilis, Elie Tamer, and Juba Ziani. 2017. "Inference on Auctions with Weak Assumptions on Information." https://arxiv.org/abs/1710.03830 .
28. Venkateswaran, Venky. 2013. "Heterogeneous Information and Labor Market Fluctuations." Unpublished.