Introduction to information design – October 2024

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The course introduces students to the ideas and methods of the growing field of information design. It comprises 4 ninety-minute lectures and is tailored to graduate or advanced-undergraduate students with prior knowledge of basic probability and game theory.

Syllabus

Lecture 1: Information in decision problems, Blackwell experiments, distribution of posteriors, the Martingale Theorem and Blackwell's theorem.

Lecture 2: The information design problem and Kamenica and Gentzkow (2011)'s concavification. Modelling cost of information using measures of uncertainty (e.g., entropy). Costly persuasion in Gentzkow and Kamenica (2014) and Sims' rational inattention.

Lecture 4: The general information design problem. Signals, Correlated Equilibria and Bayesian Correlated Equilibria following Bergemann and Morris (2015, 2016).

Lecture 3: Mean-based persuasion in information design problem with a large state space. The extreme-points characterisation from Kleiner, Moldovanu and Strack (2021).

Main references

Bergemann, Dirk, and Stephen Morris. 2016. "Bayes Correlated Equilibrium and the Comparison of Information Structures in Games." Theoretical Economics 11 (2): 487–522.

Bergemann, Dirk, and Stephen Morris. 2016. "Information Design: A Unified Perspective." Journal of Economic Literature 57 (1): 44–95.

Gentzkow, Matthew and Emir Kamenica. 2015. "Costly Persuasion", American Economic Review P&P, 104(5), 457-462

Kamenica, Emir, and Matthew Gentzkow. 2011. "Bayesian Persuasion." American Economic Review 101 (6): 2590–615.

Kleiner, Andreas, Benny Moldovanu, Philipp Strack. 2021. "Extreme Points and Majorization: Economic Applications ." Econometrica 89(4):1557-1593