

PhD Studentships 2025/26

Centre name: Durham Research in Economic Analysis and Mechanisms (DREAM)

Topic 1

<u>Title of proposed research topic:</u>

Bargaining Theory (both cooperative and noncooperative) and Game Theory

Potential supervisors:

Nejat Anbarci

Nejat's research interests and expertise are in cooperative (axiomatic) bargaining theory — which is also known as Nash Bargaining theory — and non-cooperative (strategic) bargaining theory. However, he also enjoys working on other game theoretical models as well. His most recent papers, for instance, are on various game-theoretic topics such as:

- Designing Practical and Fair Sequential Team Contests
- Resolving Child Custody Disputes Efficiently
- Arbiter Assignment
- Public Space Congestion
- The Impact of Uncertain Tenure Rules

Topic 2

<u>Title of proposed research topic:</u>

Prediction Markets and Information Aggregation

Potential supervisors:

Spyros Galanis

The aim of the project is to understand under which conditions the prediction markets (and financial markets more generally) are an effective tool in aggregating information. The mechanism is that fluctuating prices aggregate the information that is dispersed among all participants and make it public. Information aggregation is one of the basic functions of markets, discussed at least since Hayek (1945), hence it is very important to understand whether it works. Building on the work of Ostrovsky (2012) and Hanson (2003, 2007), the research topic can be theoretical, for example to examine the impact of various behavioural biases, or experimental, to test different designs for prediction markets.

Hanson, Robin. "Combinatorial Information Market Design." Information Systems Frontiers 5, 1: (2003) 107–19.

Hanson, Robin. "Logarithmic Market Scoring Rules for Modular Combinatorial Information Aggregation." Journal of Prediction Markets 1, 1: (2007) 3–15.



Hayek, Friedrich August. "The Use of Knowledge in Society." The American Economic Review 519–30.

Ostrovsky, Michael. "Information Aggregation in Dynamic Markets with Strategic Traders." Econometrica 80, 6: (2012) 2595–647.

Spyros Galanis, Christos A Ioannou, Stelios Kotronis, Information Aggregation Under Ambiguity: Theory and Experimental Evidence, *The Review of Economic Studies*, 2024

Topic 3

Title of proposed research topic:

Welfare in the Digital Economy

Potential supervisors:

Cole Williams

Cole's research centers on the **digital economy**, encompassing three broad themes: (1) industrial organization and competition policy; (2) information technology and social cohesion; and (3) the design and fairness of algorithms. The questions addressed in his work include: What welfare effects come from people allocating an increasing share of attention to the digital sphere, relying on it as their source of information, and using it for commerce? How should competition and antitrust policy respond to structural changes within the economy, such as the emergence of powerful online marketplace platforms and the capacity for tacit collusion by price-setting software algorithms? Also, how do practices such as online censorship and the top-down amplification of desired messages have on social cohesion?

Topic 4

<u>Title of proposed research topic:</u> Causes and consequences of group segregation

<u>Potential supervisors</u>: <u>Eren Arbatli</u> and <u>Diego Marino Fages</u>

Description of possible research topic:

We would like to supervise a student interested in applied work with large datasets related to segregation/mobility in the United States and how they are shaped by other factors or how they affect other outcomes of interest.