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Education

PhD in Economics, New York University, 2015-2021 (expected)
Thesis title: *Essays in Matching, Theory and Applications*
MS in Economics, Bocconi University, 2012-2015, summa cum laude
BA in Economics and Finance, Bocconi University, 2008-2012

References

Professor Alfred Galichon
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Professor Erik Madsen
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Teaching and Research Fields

Applied Microeconomics, Industrial Organization, Matching Theory and Optimal Transport

Teaching Experience

Fall - 2018	Intermediate Microeconomics, BA, NYU, TA for E. Madsen
Spring - 2018	Microeconomic Theory, MA, NYU, TA for L. Geldermans
Spring - 2018	Math, Econ and Code Masterclass (MEC), NYU, TA for A. Galichon
Fall - 2018	Intermediate Microeconomics, BA, NYU, TA for M. Panov
Spring - 2017	Microeconomic Theory, MA, NYU, TA for A. Adachi

Research Experience

2018-2020 Research Assistant, NYU, for A. Galichon

Fellowships

2015-2021 McCracken Fellowship

Professional Activities – Invited Talks and Conferences

May - 2019	Kansas Workshop in Economic Theory (KWET), Kansas University
July - 2019	Society for the Advancement of Economic Theory (SAET), Ischia, Italy
August - 2019	Young Economists Symposium (YES), Columbia University
November - 2019	Southern Economics Association (SEA), Fort Lauderdale

Research Papers

Matching in Clusters: Interracial Marriages and Online Dating (Job Market Paper)

Has online dating increased social integration? The aim of this paper is to analyze the interdependent relationship between matching and the network in which the matching takes place. In a highly clustered network, the expected probability of a match between agents belonging to two different clusters is low. On the other hand, a high number of matches between agents belonging to different clusters will contribute to the integration of the clusters in the following period. I develop a model of meeting and matching that sheds light on the patterns of ethnic homophily observed in the marriage market. The model is a two-stage game: in the first stage, agents engage in a population game to strategically increase their set of acquaintances, with the objective of maximizing their expected indirect utility in the second stage. In the second stage, the actual matching occurs, with the restriction that agents can only match with individuals they are connected to in the network. The model is then used to investigate how changes in the meeting technology, such as the introduction of online dating, affects matching frequencies and couples' assortativeness. In particular, the model is used to explain three empirical patterns of romantic relationships: (i) all ethnic groups are biased toward same-ethnicity partners, (ii) couples who meet online are more likely to be in an interracial relationship than those who meet offline, (iii) minorities who meet their partner online are significantly more likely to be in a relationship with a white person, but equally likely to be in a relationship with a member of another minority group other than their own. The model is estimated and the network effect is disentangled from the effect of preferences on matching probabilities. The estimates show that online dating has increased integration of certain ethnic groups, but not others. Finally, the model estimates are used to form a prediction on the evolution of the clustering of the network over time with and without online dating.

Stability and Inequality in Matching with Aligned Preferences - with Alfred Galichon and Marc Henry

In this paper we investigate the relationship between stability, optimality, and inequality in matchings with aligned preferences. We develop a definition of inequality that allows us to draw a comparison between different feasible matchings. We define a compatible ranking of pairs as a complete order over pairs that agrees with individual preferences. We prove that when preferences are aligned, a compatible ranking of pairs exists. From such ranking, we define the max-max-lex algorithm that converges to a stable matching, and we prove the matching thus obtained coincides with the outcome of the Gale and Shapley algorithm. We show such a matching outcome causes more inequality than other Pareto-efficient matchings, and we propose an algorithm whose matching outcome minimizes inequality.

In Progress

On Substitutability

The choice correspondence properties of gross substitutability and irrelevance of rejected contracts are sufficient conditions for the existence of an equilibrium in a one-to-many matching setting. These properties are pervasive in the literature of decision theory, and have been formulated in many different ways by different authors. This work is aimed at reconciling all different formulations of substitutability and irrelevance of rejected contracts and relating these concepts to other properties of choice correspondences, such as rationalizability. The properties are investigated both at a primitive level of preferences and in the case in which preferences are representable by a function. In the latter case, I explore how both of these two conditions are present in matroid-based valuations and how the assumption of quasi-linearity in wages can be relaxed, while still satisfying gross substitutability and irrelevance of rejected contracts.

The Long-Term Effects of "Separate but Equal" on Social Networks

The aim of this paper is to quantify the long-term effects on exposure to different races and ethnicities caused by the "separate but equal" doctrine. *De jure* segregation applied to a range of public facilities, including transportation, hospitals, theaters and most importantly schools. The state of California led the way by being the first state to declare the "separate but equal" doctrine in the educational system unconstitutional, 7 years before it was declared unconstitutional at a federal level in 1954. Similarly, anti-miscegenation laws were outlawed at a federal level in 1967, but different states outlawed them at different times. In the state of California, laws banning interracial marriages were declared unconstitutional in 1948, while in the state of New York such laws were never in place. Through a comparison of historical data on married couples in the states of California and New York and exploiting the difference in legal decisions timelines in these two states, I am able to derive information on the structure of the social network in which those marriages took place. Through the analysis, I am able to estimate the probabilities of a connection existing between a white person and a minority group member in California and New York respectively. With these estimates, I am able to show how such probability has been impacted by the early abolition of "separate but equal" in California and how it has evolved over time.