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## HARVARD UNIVERSITY

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### **Contact Information**

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### **Undergraduate Studies**

M.Sc., Economics, Bocconi University, *summa cum laude*, 2014  
B.Sc., Economics, Bocconi University, *summa cum laude*, 2012

### **Graduate Studies**

Harvard University, 2015 to present  
Ph.D. Candidate in Economics  
Thesis Title: “*Essays in Industrial Organization*”  
Expected Completion Date: May 2021

### **References:**

Professor Myrto Kalouptsi Harvard University <a href="mailto:myrto@fas.harvard.edu">myrto@fas.harvard.edu</a> 617-496-0832	Professor Robin Lee Harvard University <a href="mailto:robinlee@fas.harvard.edu">robinlee@fas.harvard.edu</a> 617-495-2997	Professor Ariel Pakes Harvard University <a href="mailto:apakes@fas.harvard.edu">apakes@fas.harvard.edu</a> 617-495-5320
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### **Teaching and Research Fields**

Primary fields: Industrial Organization  
Secondary fields: Microeconomic Theory

### **Teaching Experience**

Economics 1080: Great Theorems of Microeconomic Theory	2017 – 2019 (Fall)
Teaching fellow for Professor Jerry Green	
Economics 2611: Industrial Organization II	2018, 2020 (Spring)
Teaching fellow for Professor Myrto Kalouptsi	

### **Research Experience**

Research Assistant for Professor Myrto Kalouptsi	2017
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### **Professional Activities**

Referee for *The RAND Journal of Economics*

### **Fellowships and Awards**

Harvard University Doctoral Fellowship	2015-present
Harvard Distinction in Teaching Award	2017

## **Research Papers**

### **Competing Platforms and Transport Equilibrium: Evidence from New York City (Job Market Paper)**

*Abstract. This paper studies platform competition in the app-based transportation industry. I present a model of competing platforms in transport equilibrium, characterizing analytically the profit-maximizing allocations and prices, and estimate it using high-frequency data on the operations of the two main platforms in New York City. One main issue associated with the growth of these platforms is their impact on traffic volumes. I argue that this is exacerbated by missed economies of density from platform competition. I use the model to simulate the impact of a merger, finding that it would reduce the average number of idle vehicles in the Central Business District by 30%, improving efficiency and reducing vehicle traffic by 12%. I also use the model to study common policies aimed at reducing traffic volumes, such as congestion pricing and entry restrictions.*

### **Search Frictions and Efficiency in Decentralized Transport Markets**

Joint with Giulia Brancaccio, Myrto Kalouptsi and Theodore Papageorgiou

*Abstract. We explore efficiency and optimal policy in decentralized transportation markets that suffer from search frictions, such as taxicabs, trucks and bulk shipping. We illustrate the impact of two externalities: the well-known thin/thick market externalities and what we call pooling externalities. We characterize analytically the conditions for efficiency, show how they translate into efficient pricing rules, as well as derive the optimal taxes for the case where the planner is not able to set prices. We use our theoretical results to explore welfare loss and optimal policy in dry bulk shipping. We find that the constrained efficient allocation achieves 6% welfare gains, while the first-best allocation corresponding to the frictionless world, achieves 14% welfare gains. This suggests that policy can achieve substantial gains, even if it does not alleviate search frictions, e.g. through a centralizing platform. Finally, we demonstrate that simple policies designed to mimic the optimal taxes perform well.*

### **The Patient Harold Zurcher and His Dual: Estimating Undiscounted Markov Decision Processes**

*Abstract. Undiscounted Markov decision process are a common tool in operations research, with concrete applications in many industries. However, the problem of estimating these models has never been studied, while the common practice in empirical industrial organization is to impose a (sometimes arbitrary) calibrated discount factor. This paper studies the estimation of undiscounted Markov decision processes satisfying the conditional independence assumption of Rust (1987). I show that these models are related to a class of a regularized linear programs in terms of convex duality, and exploit this to characterize the identified set. I also show that, on the one hand, standard estimation routines for discounted models can be easily adapted to the undiscounted case. On the other hand, undiscounted models present a series of advantages. In particular, I exploit the duality to develop a methodology to estimate mixtures of these models (which arise when persistent heterogeneity in agents' payoffs is present).*