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Personal Information: Citizenship: Russia

Undergraduate and Master's Studies:

B.Sc., Applied Mathematics and Statistics, Moscow State University, Diploma with distinctions, 2009

M.A., Economics, New Economic School, 2011

Doctoral Studies:

Harvard University, 2011 to present

Ph.D. Candidate in Economics

Thesis Title: "Essays on Game Theory and Market Design"

Expected Completion Date: June 2017

References:

Professor Susan Athey

Stanford GSB

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Professor Drew Fudenberg

MIT Economics Department

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Professor Tomasz Strzalecki

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Professor Chiara Farronato

Harvard Business School

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Teaching and Research Fields:

Primary fields: Microeconomic Theory, Game Theory

Secondary fields: Market Design, Industrial Organization

Teaching Experience:

Spring 2016	Introduction to Econometrics (Ec 1123), teaching fellow for Adam McCloskey
Fall 2015	Networks (Ec 1034), teaching fellow for Benjamin Golub and Yaron Singer
Fall 2015	Topics in Economic Theory (Ec 2098), teaching fellow for Matthew O. Jackson
Spring 2015	Introduction to Econometrics (Ec 1123), teaching fellow for Eric Chaney
Fall 2014	Game Theory and Economic Applications (Ec 1052), teaching fellow for Drew Fudenberg
Spring 2014	Introduction to Econometrics (Ec 1123), teaching fellow for Jeffrey Zabel
Fall 2013	Game Theory and Economic Applications (Ec 1052), teaching fellow for Drew Fudenberg

Research Experience and Other Employment:

Summer 2015	Stanford GSB, Research assistant for Susan Athey
Summer 2012	Harvard University, Research assistant for Susan Athey
2010-2011	New Economic School, Research assistant for Ruben Enikolopov and Maria Petrova
2008	Yandex, Developer in Online Advertising Department

Professional Activities

Presenter at the 11th World Congress of the Econometric Society in Montreal (2015)
 Referee for *Review of Economic Studies* and *American Economic Journal: Microeconomics*

Honors, Scholarships, and Fellowships:

2013	Simon Kuznets Travel & Research Grant (Harvard University)
2011-2016	Tuition Grant (Harvard University)

Research Papers

“Ignorance is Strength: Improving Performance of Matching Markets by Limiting Information”
 (Job Market Paper)

This paper develops a model for studying the problem of information disclosure faced by a platform matching buyers and sellers. Buyers search for sellers and are time-sensitive, while sellers have limited capacity for serving buyers and derive heterogeneous payoffs from being matched with different buyers. The platform controls the information the sellers observe about the buyers before forming a match. I show that full information disclosure is inefficient because of excessive rejections by the sellers. When the platform observes the sellers’ payoff function, it can restore the full efficiency using a coarse disclosure policy, which recommends to each seller an action. When seller preferences are unknown to the platform, I characterize the disclosure policy that maximizes the total welfare. Tighter capacity constraints or higher buyer-to-seller ratio require coarser disclosure. In a linear payoff environment with uniform distribution of seller attributes, the efficient disclosure is upper-coarsening. For general distribution of seller attributes, I develop an approach to solving the disclosure problem with heterogeneous and forward-looking sellers.

“Active Learning with a Misspecified Prior” with D. Fudenberg and P. Strack (Accepted to *Theoretical Economics*)

We study learning and information acquisition by a Bayesian agent whose prior belief is misspecified in the sense that it assigns probability zero to the true state of the world. At each instant, the agent takes an action and observes the corresponding payoff, which is the sum of a

fixed but unknown function of the action and an additive error term. We provide a complete characterization of asymptotic actions and beliefs when the agent's subjective state space is a doubleton. An example with three actions shows that in a misspecified environment a myopic agent's beliefs converge while a sufficiently patient agent's beliefs do not. The findings illustrate a novel interaction between prior misspecification and an agent's subjective discount rate.

“A Price Theoretic Model of Search Intermediation by Online Platforms” with G. Lewis and A. Wang

We analyze the incentives of online search intermediaries in environments where buyers must compete for limited supply (e.g. airlines, hotels). In our model, the intermediary manipulates the demand in two downstream product markets by choosing which product is the search default, and the cost of finding the alternative. In the absence of market power, the decentralized search decisions mimic those of a social planner with the same search technology, and thus a welfare-maximizing intermediary would set zero search costs. By contrast, an intermediary who maximizes seller revenue will optimally maintain positive search costs so that the default can be used to steer non-searchers to the market where they generate the most revenue. There may be no “right” default product: randomization may be used for both welfare and revenue maximization.

“Position auctions with endogenous supply” with S. Izmalkov and D. Khakimova

We consider a multi-object private values setting with quantity externalities. A value to a bidder from an object may depend on the total number of objects sold. For example, the likelihood a customer will respond to an advertisement is higher the fewer other advertisements are shown; a spectrum license is more valuable the fewer licenses are being allocated. In this setting we find the revenue-maximizing auction and the efficient auction. We show that both revenue-maximizing and efficient auctions have the property that the quantity of objects sold depends non-trivially on the whole profile of players’ valuations. That is, the quantity to sell is determined endogenously, within the auction. We demonstrate that auctions currently used for allocating advertising positions are suboptimal and offer simple designs that can implement (or approximate) optimal and efficient auctions under quantity externalities.