# SHOTA ICHIHASHI

shotaichihashi@gmail.com
shota2.github.io

Bank of Canada,
234 Wellington St.
Ottawa, ON K1A 0H9
(613) 716-6686

## EMPLOYMENT

2018-present     Bank of Canada, Senior Economist

## EDUCATION

Ph.D.    Economics, Stanford University, 2018
M.A.     Economics, University of Tokyo, 2013
B.A.     Economics, Keio University, 2011

## SCHOLARSHIPS AND AWARDS

2015-2018      Koret Fellow, Stanford Graduate Fellowship, Stanford University
2013-2015      Yoshida Scholarship, Yoshida Scholarship Foundation
2013           Stanford Economics Graduate Research Fellowship, Stanford University

## RESEARCH INTERESTS

Microeconomic Theory, Economics of the Internet

## WORKING PAPERS

*Online Privacy and Information Disclosure by Consumers*

I study the question of what information consumers should disclose to firms. A consumer discloses information to a multi-product firm, which learns about his preferences, sets prices, and makes product recommendations. While the consumer benefits from disclosure as it enables the firm to make accurate recommendations, the firm may use the information to price discriminate. I show three main results. First, the firm prefers to commit not to price discriminate, which encourages the consumer to provide information that is useful for product recommendations. This potentially explains why price discrimination by online sellers seems to be uncommon, which, empirically, has been puzzling. Second, nondiscriminatory pricing hurts the consumer, who would be better off by precommitting to withhold some information. This provides a rationale for privacy regulations that limit the amount of personal data that firms can possess. Third, equilibrium is often inefficient even if the consumer can disclose any information about his preferences.

*When to Hold an Auction?* (Joint work with Isaías N. Chaves)

We study the optimal timing of an auction in a setting where bidders arrive and depart stochastically over time. First, we compare the revenue-maximizing timing and welfare-maximizing timing. We show that sellers hold auctions too late or too early whenever (censored at 0) virtual values are more or less right-skewed than values. We connect the relative right-skewness of virtual values to the "price elasticity of demand" of the bidder's valuation distribution. In particular, we show that sellers typically hold auctions inefficiently late. Second, we prove that the use of simple timing rules (i.e., a fixed deadline chosen in advance) can lose an arbitrarily large fraction of the revenue from the optimal stopping rule. This underscores the importance of taking timing seriously for good auction market design.

*Limiting Sender's Information in Bayesian Persuasion*

I study how to restrict the information available to a sender to maximize the payoff of a receiver in Bayesian persuasion games. Assuming that the receiver has a binary action, I characterize the "optimal information restriction," which maximizes the equilibrium payoff of the receiver among all the information structures from which the sender learns about the state of the world. I show that the optimal information restriction coincides with an equilibrium of the "flipped" Bayesian persuasion game in which the receiver discloses information and delegates the sender to choose an action. Applications include the design of privacy regulation on the Internet advertising as well as the delegation of persuasion.

## RELEVANT POSITION

2014    Research Assistant for Prof. Paul Milgrom, Stanford University

## TEACHING EXPERIENCE

2015    Teaching Assistant for Prof. Paul Milgrom, Stanford University, Graduate Microeconomics
2012    Lecturer, University of Tokyo, Mathematics Review Course (Graduate)
2012    Teaching Assistant for Prof. Daisuke Oyama, University of Tokyo, Undergraduate Game Theory
2012    Teaching Assistant for Prof. Michihiro Kandori, University of Tokyo, Graduate Microeconomics

## SEMINARS, CONFERENCES, AND INVITED TALKS

2018    University of Southern California, University of Pennsylvania, The 16th Annual IIOC (Indiana), Bank of Canada, Yokohama National University, Keio University, FTC 11th Microeconomics Conference (DC, Scheduled), INFORMS (Arizona, scheduled), WITS 2018 Conference (Santa Clara, Scheduled)
2017    The 15th IIOC (Rising Star Session, Boston)
2016    Summer School of the Econometric Society, Kyoto

## PROFESSIONAL SERVICE
Reviewer for: *Econometrica, Journal of Political Economy, International Economic Review*

## LANGUAGES

English (fluent), Japanese (native), Chinese (intermediate)

## REFERENCES

Prof. Paul Milgrom (Primary)
Economics Department, Stanford University
(650) 723-3397
pmilgrom@stanford.edu

Prof. Matthew Gentzkow
Economics Department, Stanford University
(650) 721-8375
gentzkow@stanford.edu

Prof. Gabriel Carroll
Economics Department, Stanford University
(650) 725-8703
gdc@stanford.edu

Prof. Ilya Segal
Economics Department, Stanford University
(650) 724-4905
ilya.segal@stanford.edu