# WENJI XU

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# Office Contact Information:

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Placement Co-Directors: Professor Ufuk Akcigit, uakcigit@uchicago.edu, (773) 702-0433 Professor Alessandra Voena, avoena@uchicago.edu, (773) 702-9127 Graduate Student Coordinator: Robert Herbst, fherbst@uchicago.edu, (773) 834-1972

### **Education:**

The University of Chicago, 2014 to present Ph.D. Candidate in Economics Thesis Title: *'Essays on Learning and Information''* Expected Completion Date: June 2020

B.S. in Applied Mathematics, National University of Singapore, 1st Class Honors, 2014

References: Professor Philip Reny (Chair) University of Chicago (773) 702-8192 preny@uchicago.edu	Professor Roger Myerson University of Chicago (773) 834-9071 rmyerson@uchicago.edu
Professor Emir Kamenica	Professor Benjamin Brooks
Univ. of Chicago Booth School of Business	University of Chicago
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#### **Teaching and Research Fields:**

Primary Fields: Microeconomic Theory, Information Economics Secondary Fields: Organizational Economics, Financial Economics

# **Teaching Experience:**

The University of Chicago	
2018	MBA Money and Banking, TA for Randall Kroszner
2017, 18	MBA Personnel Economics, TA for Canice Prendergast
2017, 18	PhD Price Theory III, TA for Roger Myerson, Philip Reny, and Balazs Szentes
2017, 18	PhD Price Theory II, TA for Roger Myerson and Philip Reny

2017	Undergraduate Introduction to Finance, Lecturer
2016	MBA Game Theory, TA for Emir Kamenica
2016	MBA Accelerated Microeconomics, TA for Robert Topel
2016	Undergraduate Intermediate Microeconomics, TA for Richard van Weelden
2015	Undergraduate Game Theory, TA for Roger Myerson

Singapore University of Technology and Design

2013 Undergraduate Mathematical Optimization, TA for Giacomo Nannicini

#### **Research Experience and Other Employment:**

2018-	Research Assistant for Philip Reny, University of Chicago
2017-18	Research Assistant for William Cong, UChicago Booth School of Business
2013-14	Research Assistant for Chung-Piaw Teo, NUS Business School
2013	Research Assistant, Ecole Polytechnique (Center of Applied Mathematics)
2012	Summer Financial Analyst, China Development Bank

#### Honors and Awards:

2019-20	James L. Laughlin Fellowship, University of Chicago
2017	Outstanding Paper in Third Year Research Seminar, University of Chicago
2016-18	Gerhart Fellowship, University of Chicago
2016-17, 19-20	C.V. Starr Fellowship, University of Chicago
2016, 17	Travel Grant, Jerusalem School of Economic Theory
2014-19	Social Sciences Fellowship, University of Chicago
2012	Ben Fusaro Award, The Mathematical Contest in Modeling
2010-14	Singaporean Ministry of Education Scholarship

### **Professional Activities:**

Invited Workshops:	
2017	MIT-FARFE Capital Markets Research Workshop
	NBER Asset Pricing Institute
2015	University of Michigan MITRE Symposium

### Conference Presentations:

2019	Young Economists Symposium, Columbia
	International Conference on Game Theory, Stony Brook
	Midwest Economic Theory Conference, Indiana
2017	International Conference on Game Theory, Stony Brook
	East Asia Game Theory Conference, NUS
2016	Jerusalem School of Economic Theory (Poster Session)

#### **Research Papers:**

#### "Social Learning in General Information Environments" (Job Market Paper)

I study a social learning model in which agents make decisions sequentially and learn about an unknown payoff-relevant state through two sources -- a signal about the state itself (a state-signal) and a signal about the actions taken by previous agents (an action-signal). Our objective is to

provide general conditions on the action-signals that lead the agents to eventually behave as if they know the state, i.e., that lead to information aggregation. When the agents' action-signals are what I call weakly separating, it is shown that information aggregation occurs when the agents' state-signals are unboundedly informative in the sense of Smith and Sorensen (2000). This result provides a unifying criterion to evaluate when information aggregation occurs. I also provide sufficient conditions for information aggregation when the state-signals are boundedly informative, and necessary conditions for information aggregation. The theory is illustrated with applications to privacy protection on digital platforms, regulation of third-party information provision in social learning environments, and the design of social learning environments when agents have limited memory.

### "Platform Design for Costly Learning"

This paper studies the optimal design of a platform to incentivize its users to collectively acquire costly information about the quality of a product (or a service). A constant flow of users arrive in sequential order. Each user observes information disclosed by the platform and may acquire a costly private signal about the product quality before making his purchase decision. The platform receives users' feedback about the product quality. It is shown that if the platform learns about the product quality through negative feedback, it is optimal for the platform to release no information early on to induce user exploration, and publish a list of potentially good products at a later point in time, once and for all. On the other hand, if the platform learns about the product quality through positive feedback, it is optimal for the platform learns about the product sto be good for an extended period of time right after the product is released. Welfare comparison with several different benchmarks are discussed.

### "Monopoly Pricing with Endogenous Information Response"

Rapid developments in digital technology have given consumers access to new information sources that allow them to learn about a product prior to making purchase decisions. These media sources are typically controlled by third parties (e.g., IMDb in the movie industry). This paper studies how such endogenous informational responses of third parties affect consumer and producer surpluses in a monopoly pricing setting, adopting a mechanism design/information design approach. We consider a seller who designs a mechanism to sell a product to a consumer. A third party observes the seller's choice of selling mechanism and then designs the information structure of a signal about the product quality. The consumer observes the signal realization as well as the information structure, and then chooses an action in the selling mechanism. It is shown that the seller cannot benefit from designing a mechanism that punishes the third party through its signal choices. Equilibrium selling mechanisms and signal structures are characterized.

# "Social Learning under Information Control"

This paper studies the extent to which information aggregation in social learning environments is affected by a principal who controls the dissemination of information. We consider a population of agents who arrive sequentially and obtain information about the state of the world both from their private signals and by learning about other agents' actions either exogenously or through messages from the principal. Contrary to the naive intuition, information aggregation can be very resilient, rather than fragile, to information control, provided that the agents have access to private signals with unbounded informativeness and exogenous observations of others' actions that are "expanding". The principal's presence hinders information aggregation only if private signals are "adversely-bounded" in informativeness. When information aggregation fails, the principal can fully extract surplus from the agents if the agents are sufficient "informationally autarkic".

Work in Progress:

"Voter Affiliation, Turnout, and Policy Divergence" (with Gustavo Moreira De Souza) "The Cost of Transparency in Social Learning"