PEIRAN XIAO
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EDUCATION

Ph.D., Economics, Boston University, Boston, MA, May 2025 (expected)
Dissertation Title: *Essays on Information Economics*
Dissertation Committee: Barton Lipman, Juan Ortner, and Krishna Dasaratha

M.A., Economics, Duke University, Durham, NC, 2019

B.A., Economics & B.S., Mathematics, Wuhan University, Wuhan, China, 2017

FIELDS OF INTEREST

Microeconomic Theory, Mechanism Design, Information Economics

WORKING PAPERS

"Incentivizing Agents through Ratings," November 2024. Job Market Paper.
"Allocating Positional Goods: A Mechanism Design Approach," October 2024.
"Tournaments with Managerial Discretion," (with Hashim Zaman), April 2024, submitted.

WORK IN PROGRESS

"Endogenous Segregation across Social Media Platforms."

SHORT NOTES

"A Pontryagin Approach to Delegation Problems," November 2023.

PRESENTATIONS

Stony Brook International Conference on Game Theory, Stony Brook, NY, 2024
ACM Conference on Economics and Computation (Poster Sessions), New Haven, CT, 2024
BC-BU-Brown Theory Workshop, Providence, RI, 2024
Management Accounting Section Midyear Meeting, Austin, TX, 2025 (scheduled, by coauthor)

FELLOWSHIPS AND AWARDS

Dean's Fellowship, Boston University, 2019–2024
Summer Research Grant, Boston University Center for Innovation in Social Science, 2024
M.A. Merit Scholar, Duke University, Spring 2018, Fall 2018

WORK EXPERIENCE

Research Assistant for Krishna Dasaratha, Boston University, Summer 2024
Research Assistant for Chiara Margaria, Boston University, Spring 2022
Research Assistant for Matthew Masten, Duke University, October 2018–May 2019
Research Assistant for Ofer Eldar, Duke University, January 2018-May 2019

TEACHING EXPERIENCE

Teaching Assistant, Algorithmic Mechanism Design (Ph.D.), Faculty of Computing & Data Sciences, Boston University, Fall 2022, Fall 2023
Teaching Assistant, Department of Economics, Boston University
Game Theory (M.A.), Spring 2021, Fall 2021
Economics of Information, Spring 2021
Market Structure and Economic Performance, Fall 2020
Teaching Assistant, Competitive Strategy and Industrial Organization (M.A.), Department of Economics, Duke University, Spring 2019

DEPARTMENTAL SERVICES

Co-organizer of BC-BU-Brown Theory Workshop, Fall 2023–Fall 2024.
Co-organizer of Micro Theory Reading Group, Boston University, Fall 2021–Spring 2023.

LANGUAGES

English (fluent), Mandarin Chinese (native)

COMPUTER SKILLS: Mathematica, MATLAB, STATA, R, Python, LaTeX

CITIZENSHIP/VISA STATUS: China/F1

REFERENCES

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PEIRAN XIAO

Incentivizing Agents through Ratings (Job Market Paper)

I study the optimal design of ratings to motivate agent investment in quality when transfers are unavailable. The principal designs a rating scheme that maps the agent's quality to a (possibly stochastic) score. The agent has private information about his ability, which determines his cost of investment, and chooses the quality level. The market observes the score and offers a wage equal to the agent's expected quality. For example, a school incentivizes learning through a grading policy that discloses the student's quality to the job market. I reduce the principal's problem to the design of an interim wage as a function of quality. When restricted to deterministic ratings, I provide necessary and sufficient conditions for the optimality of simple pass/fail tests and lower censorship. In particular, when the principal's objective is expected quality, pass/fail tests are optimal if the agent's ability distribution is concentrated towards the top, while lower censorship is optimal if the ability distribution is concentrated towards the mode. The results generalize existing results in optimal delegation with voluntary participation, as pass/fail tests (lower censorship) correspond to take-it-or-leave-it offers (threshold delegation). Additionally, I provide sufficient conditions for deterministic ratings to remain optimal when stochastic ratings are allowed.

Allocating Positional Goods: A Mechanism Design Approach

I study the optimal allocation of positional goods with externalities and one-sided transfers. Because consumers care about their relative positions in consumption, allocating an item to one buyer has externalities on others. Using a mechanism design approach, I characterize the externalities by a feasibility condition. I find the revenue-maximizing mechanism excludes some low types and fully separates the rest if and only if the buyer's type distribution satisfies Myerson's regularity. The seller can guarantee at least half the maximal revenue by offering one level of positional goods, and the approximation can be arbitrarily close if the buyer's type distribution is sufficiently concave. Moreover, if the distribution has an increasing (decreasing) failure rate, total pooling (full separation) without exclusion maximizes the consumer surplus, and the consumer surplus is decreasing (increasing) in the number of positional good levels. Applications include education, priority services, luxury goods, and organizational design.

Endogenous Segregation across Social Media Platforms

Can echo chambers across social media platforms emerge endogenously? I study a model where rational agents segregate into different platforms because of uncertainty about others' information accuracy. Agents with different accuracy (high or low) receive binary private signals about a binary state of the world and want to learn the true state. Upon receiving private signals, they choose one of the two platforms to post their signals and observe other users' signals. Agents remain on the platforms in future periods and continue to observe others' signals. I show a separating equilibrium exists where agents are segregated by their initial private signal because they believe agents who receive the same signals are more likely to have high accuracy. Compared to pooling on the same platform, segregation can decrease social welfare because agents know other users' signals will confirm their beliefs and therefore can learn little from these signals.

November 2024