

Yu Fu Wong

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Education

PhD in Economics, Columbia University	2023 (expected)
MSc in Economics, Toulouse School of Economics	2017
BSc in Physics and Mathematics, Hong Kong University of Science and Technology	2015

Dissertation Committee

Qingmin Liu (primary advisor)
Department of Economics
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Department of Economics
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Research Interests

Microeconomic theory, organizational economics, information design, experimentation

Job Market Paper

[Dynamic Monitoring Design](#)

This paper introduces flexible endogenous monitoring in dynamic moral hazard. A principal can commit to not only an employment plan but also the monitoring technology to incentivize dynamic effort from an agent. Optimal monitoring follows a Poisson process that produces rare informative signals, and the optimal employment plan features increasing entrenchment. To incentivize persistent effort, the Poisson monitoring takes the form of “bad news” that leads to immediate termination. Monitoring is non-stationary: the bad news becomes more precise and less frequent. When persistent effort is not required, the optimal incentive scheme features a trial period of non-stationary monitoring, and a combination of Poisson bad news that leads to termination and Poisson good news that leads to tenure.

Other Working Papers

[Strategic Exploration: Preemption and Prioritization](#), with Qingmin Liu

Conditionally accepted at *Review of Economic Studies*

This paper analyzes a model of strategic exploration in which competing players independently explore a set of alternatives. The model features a multiple-player multiple-armed bandit problem and captures a strategic trade-off between *preemption*—covert exploration of alternatives that the opponent will explore in the future—and *prioritization*—exploration of the most promising alternatives. Our results explain how the strategic trade-off shapes equilibrium behaviors and outcomes, e.g., in technology races between superpowers and R&D competitions between firms. We show that players compete on the same set of alternatives, leading to duplicated exploration from start to finish, and they explore alternatives that are a priori less promising before more promising ones are exhausted. The model also predicts that competition induces players to implement unreliable technologies too early, even though they should wait for the technologies to mature. Coordinated exploration is impossible even if the alternatives are equally promising, but it can emerge in equilibrium following a phase of preemptive competition if there is a short deadline. With asymmetric capacities of exploration, the weak player conducts *extensive* instead of *intensive* exploration—exploring as many alternatives as the strong player does but never fully exploring any.

[Spatial Experimentation: Optimal Costly Exploration of Correlated Alternatives](#)

R&R (second-round) at *Theoretical Economics*

I study how a forward-looking decision maker experiments on unknown alternatives of spatially correlated utilities, modeled by a Brownian motion so that similar alternatives yield similar utilities. For example, a firm experiments on its size that yields unknown, spatially correlated profitability. Experimentation trades off the opportunity cost of exploitation for the indirect inference about unknown alternatives. The optimal strategy is to explore unknown alternatives and then exploit the best known alternative when the explored becomes sufficiently worse than the best. The decision maker explores more quickly as the explored alternative worsens. My model predicts the conditional Gibrat's law and the linear relation between firm size and profitability.

Work in Progress

Dynamic matching without transfer

Fellowships and Awards

Fellow, Journal of Industrial Economics	2022
Harriss Award for Best Second-Year Paper, Columbia University	2019
Dean's Fellowship, Columbia University	2017–2023
Jean-Jacques Laffont Foundation Scholarship, Toulouse School of Economics	2016
Alexandre Yersin Excellence Scholarship, Campus France	2015–2017
Paul and May Chu Research Award, HKUST	2012
Silver Medal, International Physics Olympiad	2011

Teaching

Columbia University

Teaching Assistant: GR6211 Microeconomic Analysis I (PhD) Fall 2020, Fall 2021
Teaching Assistant: UN1105 Principles of Economics (undegraduate) Fall 2018

Conference Presentations

2022: Spring Meeting of Young Economists, Stony Brook International Conference on Game Theory, SITE Dynamic Games, Contracts, and Markets, Young Economist Symposium, NYU Student Micro Theory Lunch, CEANA Job Market Conference, Berkeley/Columbia/Duke/MIT/Northwestern IO Theory Conference

2021: Econometric Society European Winter Meeting

2020: NYU Student Micro Theory Lunch

2019: Stony Brook International Conference on Game Theory

Services

Referee for *Games and Economic Behavior*