

Hiroto Sato

CONTACT INFORMATION

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EDUCATION

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| APRIL 2021- | Ph.D. in Economics, The University of Tokyo, <i>Supervisor: Prof. Michihiro Kandori</i> (expected completion in March, 2024) |
| MARCH 2021 | M.A. in Economics, The University of Tokyo |
| MARCH 2019 | B.A. in Economics Nagoya University |

RESEARCH INTERESTS

Microeconomic Theory, Industrial Organization, Information Design, Platform

PUBLICATION

"Robust Implementation in Sequential Information Design under Supermodular Payoffs and Objective", published in *Review of Economic Design*, 2022 and won the Review of Economic Design Nedim Okan Prize 2023

This paper studies sequential information design (Doval and Ely 2020) in which a designer can construct the extensive form along with the information structure. In this framework, I investigate robust implementations against adversarial equilibrium selection, when players and the designer have a supermodular payoff function with dominant states and an outside option. The main results show that the optimal partially implementable outcome is fully implementable in sequential information design, which essentially coincides with the optimal partially implementable outcome in static information design. For economic applications such as global game of regime change, this paper proposes a way to robustly achieve the desired outcome in static information design by providing the extensive form and the information structure.

WORKING PAPER

"Information Structures in College Admissions" (coauthored with Ryo Shirakawa)

Priority uncertainty is prevalent in practical matching markets. This study investigates the role of priority information structures in a simple decentralized college admissions model. The first main theorem characterizes equilibrium distributions of students across schools, which are implementable with a class of simple disclosure rules, cutoff signals. The cutoff signal induces an ex-ante fair allocation that is also the closest to being ex-post

fair among the allocations achieving the same distribution. As an application, we consider an information design problem. The second main theorem shows that each equilibrium distribution is implementable as a unique equilibrium.

"Information Design for Sponsored Advertising" (coauthored with Ryo Shirakawa)

How much sponsored products' information do e-commerce platforms disclose? This study explores the platform's information design problem of maximizing sponsored advertising revenue, wherein a consumer sequentially searches for products' information with a deliberate order. In a general ordered search model, the main theorem demonstrates that an optimal signal is binary. The revenue-maximizing search order is characterized by per-click advertising revenue over search cost. Furthermore, the platform's optimal signal minimizes consumer welfare.

WORK IN PROGRESS

"Migration and Human Capital Investment for the Poor" (coauthored with Yuma Noritomo)

"Information Provision for Multiproduct Search"

"Optimal Search Rule in Multiproduct Search" (coauthored with Ryo Shirakawa)

AWARDS & GRANTS

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| 2023 | Review of Economic Design Nedim Okan Prize |
| 2022-2024 | JSPS Research Fellowship for Young Scientists (DC2), Japan Society for the Promotion of Science |
| 2021-2024 | Grant-in-Aid for JSPS Fellows, JSPS |
| 2020-2024 | World-leading Innovative Graduate Study of Advanced Economics, the University of Tokyo |

TEACHING EXPERIENCE

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| 2020 | Math Camp Day 4 (Dynamic Optimization), Graduate School of Economics <i>Instructor</i> |
| 2020 | Mathematics for Economics, Graduate School of Economics <i>Teaching assistant</i> for Prof. Akihiko Matsui (The University of Tokyo) |

PRESENTATIONS

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| 2023 | Microeconomics Seminar, Nagoya university (scheduled) |
| 2021 | Microeconomics Seminar, The University of Tokyo |

BIOGRAPHY

Birthday: January 27, 1997

Citizenship: Japanese