Changwoo Park

Department of Economics	Phone: +1 (585) 434 9698
University of Rochester	E-mail: cpark47@ur.rochester.edu
Harkness Hall	Website: changwoo-park.github.io
Rochester, NY 14627, USA	Citizenship: South Korea

Education

Ph.D. in Economics, University of Rochester, USA, 2025 (expected)

M.A. in Economics, University of Rochester, USA, 2022

M.A. in Economics, Sogang University, South Korea, 2018

B.A. in Economics and B.S. in Mathematics, Sogang University, South Korea, 2016

Research Interests

Microeconomic theory, Market design, Game theory

Working Papers

1. "Stable matchings under two-sided asymmetric incomplete information", **Job market paper**

2. "The local-global equivalence on general networks", with Wonki Jo Cho,
   * **Revise and Resubmit at *Journal of Economic Theory***

3. "Group incentive-compatible allocation of discrete resources when ownership is partitioned", with Wataru Ishida. * **Revise and Resubmit at *Games and Economic Behavior***

4. "Obviously strategy-proof implementation for mixed-ownership object-allocation problems"

Published Paper

- "Fractional Group Identification", with Wonki Jo Cho, 2018, *Journal of Mathematical Economics*, 77, 66-75.

Work in Progress

- "When are stable correspondences Nash-implementable under distributional constraints?", with Wataru Ishida and Ryoken Nagashima.

- "Ordinal and ex-ante efficiency notions for probabilistic assignments in two-sided matching problems"

Teaching Experience

Lecturer, University of Rochester

Math Camp (G): Summer 2021, Summer 2022

Teaching assistant, University of Rochester

Industrial Organization (UG): Spring 2024 (Yu Awaya)

Game Theory (UG): Fall 2023 (Paulo Barelli)

Modern Value Theory II (G): Spring 2022, Spring 2023 (Paulo Barelli and William Thomson)

Modern Value Theory I (G): Fall 2021, Fall 2022 (Asen Kochov and Yu Awaya)

Teaching assistant, Korea University

Intermediate Microeconomics (UG): Spring 2019 (Kiho Yoon)

Economics of Strategy and Information (UG): Spring 2018 (Wonki Jo Cho), Fall 2018 (Kiho Yoon)

Conference and Seminar Presentations

Midwest International Trade and Theory Conference, Rochester, New York, USA, 2024

European Meeting on Game Theory (SING19), Besançon, France, 2024

Meeting of the Society for Social Choice and Welfare, Paris, France, 2024

Korean Economic Review International Conference, Pyeongchang, South Korea, 2024

Ottawa Microeconomic Theory Workshop, Ottawa, Canada, 2023

Asian Meeting of the Econometric Society, Singapore, 2023

Conference on Economic Design, Girona, Spain, 2023

Meeting of the Society for Social Choice and Welfare, Mexico City, Mexico, 2022

International Conference on Social Choice and Voting Theory, Virtual Event, 2021

W. Allen Wallis Institute Seminar, Rochester, New York, USA, 2021

Research Assistantships

Research assistant for Prof. William Thomson, University of Rochester, 2020-2021

Research assistant for Prof. Wonki Jo Cho, Sogang University, 2017-2018

Research assistant at the Center for Distributive Justice, Seoul National University, 2017

Professional Service

Referee for: Games and Economic Behavior, Social Choice and Welfare, Mathematical Social Sciences

Fellowships, Scholarships, and Honor

Summer Dissertation Fellowship, University of Rochester, 2024

Winston W. Chang Graduate Economics Fellowship, University of Rochester, 2023

W. Allen Wallis Fellow, University of Rochester, 2021-2022

Korean Rochester Economics Alumni Fellowship, University of Rochester, 2020-2021

Summer research grant, University of Rochester, 2020-2021

Graduate fellowship and tuition scholarship, University of Rochester, 2019-present

Brain Korea 21 Plus Scholarship, Korea University, 2018-2019

Best Graduate Student Paper Award, Korea University, 2018

Summa Cum Laude, Sogang University, 2016

Language Skills

English (Fluent), Korean (Native)

References

William Thomson (Advisor)
Professor
Department of Economics
University of Rochester
Rochester, NY 14627, USA
william.thomson@rochester.edu

Paulo Barelli
Professor
Department of Economics
University of Rochester
Rochester, NY 14627, USA
paulo.barelli@rochester.edu

Yu Awaya
Associate Professor
Department of Economics
University of Rochester
Rochester, NY 14627, USA
YuAwaya@gmail.com

Stable Matchings
under Two-sided Asymmetric Incomplete Information
(Job Market Paper)

We introduce and study worker-firm matching where incomplete information is present on both sides but is "asymmetric": workers are partially informed of the characteristics of each firm, while firms have no information about the characteristics of each particular worker. We propose a notion of stability and explore its welfare and structural properties. We ask whether and when the stable outcomes are assortative and, thus, are "ex-post efficient". Unfortunately, even with just one worker who is uncertain of two adjacent firm types, some stable outcomes may not be assortative. This disappointing result prompts us to ask to what extent the stable outcomes are assortative and how varying levels of information available to workers affect the extent of their partial assortativity. We introduce two notions of partial assortativity, "non-wastefulness" and a "parametrized variant of assortativity", and for each, we identify a condition on information structures under which the stable outcomes satisfy the respective notion. The intuition gained from this analysis also helps identify conditions that ensure the full assortativity of, and hence, the ex-post efficiency of stable outcomes. Next, we turn to the question of how stable outcomes arise. We show that starting from an arbitrary outcome, the process of randomly selecting blocking pairs and matching them converges to a stable outcome with probability one.

The Local-global Equivalence on General Networks
(with Wonki Jo Cho)
Revise and Resubmit at *Journal of Economic Theory*

Strategy-proofness is an incentive property requiring that no (preference) type gain by reporting any other type in a prespecified domain of admissible types. The "local-global equivalence (LGE)" refers to the equivalence of strategy-proofness and "local" strategy-proofness, which requires immunity to misrepresentation assuming that an agent is constrained to report "local" types relative to his true type. Generalizing an existing framework, we allow the notion of localness to be arbitrary and directed and hence manipulation opportunities to be asymmetric across types. We provide two conditions, each of which characterizes the networks satisfying LGE: (i) strong connectedness, a refined notion of connectedness; and (ii) Property DL, a directed-network adaptation of Property L by Kumar et al. (2021). This characterization also helps reveal conditions for the random version of LGE (the equivalence of strategy-proofness and local strategy-proofness for random rules). We discover a necessary condition called hyper-connectedness and a sufficient condition called Property ULLO for random LGE. Our conditions are more general than earlier ones in the literature. They are satisfied by several well-known preference domains.

Group Incentive-compatible Allocation of
Discrete Resources When Ownership Is Partitioned
(with Wataru Ishida)
Revise and Resubmit at *Games and Economic Behavior*

We introduce and study the problem of allocating objects when the ownership structure is of the following form: Society is partitioned into groups of agents, each collectively owning a number of objects equal to its size. We consider two core notions, the "standard core" and the "exclusion core" (Balbuzanov and Kotowski, 2019). We show that they are independent notions, contrarily to what is the case for "traditional" ownership structures—e.g., collective, private, and mixed ownership— and that they always have a non-empty intersection. Next, we turn to the issue of group incentive-compatibility. We look for rules satisfying efficiency, the "within-group endowments lower bounds", group strategy-proofness, and "group-wise neutrality". We identify and characterize a family of rules on the basis of these axioms. We also show that they recommend allocations in the intersection of the standard core and the exclusion core, reconciling the two core notions.

Obviously Strategy-proof Implementation
for Mixed-ownership Object-allocation Problems

We study the problem of allocating indivisible commodities, or "objects", when some of them are privately owned and some are collectively owned. We search for well-behaved rules that are implementable in "obviously dominant equilibrium", namely, obviously strategy-proof rules (Li, 2017). We start from the *you request my house–I get your turn* rules (Abdulkadiroğlu and Sönmez, 1999), the "AS rules". We ask whether and when they are obviously strategy-proof. When preferences are strict but otherwise unrestricted, and with at least three agents, the AS rules are obviously strategy-proof if and only if there is at most one owner. This disappointing result raises the question whether things would work out better on some restricted preference domains. On the single-peaked domain, we propose a new family of rules and show that not only are these "priority-augmented crawlers" obviously strategy-proof, but also that they satisfy efficiency, the individual endowments lower bounds, group strategy-proofness, weak neutrality, and separability. We further establish that on the single-dipped domain, contrarily to what is the case on the singe-peaked domain, the AS rules are obviously strategy-proof.