EDITORIAL

The 2021 Japanese Economic Association Nakahara Prize Professor Fuhito Kojima

Kosuke Aoki[1]

The Nakahara prize was established in 1995 and is funded by a donation from Mr. Nobuyuki Nakahara. The aim of the prize is to honor and encourage young researchers under the age of 45 to publish internationally recognized research.

It is a great pleasure to announce that the 2021 Nakahara prize has been awarded to Professor Fuhito Kojima. Born in 1979, Professor Kojima received BA in economics from the University of Tokyo, and earned Ph.D. in economics from Harvard University in 2008. He was Assistant, Associate and then Full Professor of Economics at Stanford University, and he is Professor of Economics at the University of Tokyo from September 2020.

Professor Kojima's research is focused on matching theory and market design. He has made a number of important contributions to the field. Many of his researches are motivated by various kinds of constraints imposed on matching problems in real life. His research significantly contributes to widening applicability of the theory to real matching markets.

In Kojima and Pathak (2009), they consider a theoretical problem regarding incentives of manipulation in many-to-one matching markets. It has been known that, from a theoretical point of view, stable matching mechanisms are subject to incentives to manipulate by participants. For example, participants may benefit by underreporting their quotas. However, despite those problems, many stable matching mechanisms seem to work in practice. Kojima and Pathak theoretically show market size matters. Specifically, they show that the mechanism is immune to manipulations when the market is large enough. This is an important contribution that bridges a gap between the existing theory and market design in practice.

In Budish et al. (2013), they analyze randomized assignment. In reality, randomization is commonly observed in resource allocation to break ties among participants, because it is perceived as fair. He generalizes the theory of randomized assignment to a much richer class of matching and assignment environments that allow multi-unit allocations (e.g., schools have multiple slots), and accommodate a wide variety

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✉ Kosuke Aoki
   kaoki@e.u-tokyo.ac.jp

[1]   The University of Tokyo, Tokyo, Japan

of constraints that are encountered in reality, such as group-specific quotas (controlled choice) in school choice. The paper also provides a number of applications.

Kamada and Kojima (2015) consider a design of matching markets that are subject to distributional constraints. Many matching markets in practice are subject to this kind of constraint. As an example, they consider Japanese medical residency that involves a regional cap which restricts the total number of residents matched within each prefecture. They show that existing matching mechanisms suffer from inefficiency and instability, and propose a new mechanism called "the flexible deferred acceptance mechanism". They show that this mechanism finds a stable and efficient matching.

These are papers that any student of matching theory and market design has to study in detail. In view of his significant contribution, the selection committee decided to award the 2021 Nakahara Prize to Professor Fuhito Kojima.

1 Selected publications

1. "Job Matching under Constraints" (2020), joint with Ning Sun and Ning Neil Yu, American Economic Review, 110, pp 2935–2947.
2. "Stable Matching in Large Economies" (2019), with Yeon-Koo Che and Jinwoo Kim, Econometrica, 87-1, pp 65–110.
3. "Efficient Matching Under Distributional Constraints: Theory and Applications" (2015), with Yuichiro Kamada, American Economic Review, 105, pp 67–99.
4. "Matching with Couples: Stability and Incentives in Large Matching Markets" (2013), with Parag A. Pathak and Alvin E. Roth, Quarterly Journal of Economics 128, pp 1585–1632.
5. "Designing Random Allocation Mechanisms: Theory and Applications" (2013), with Eric Budish, Yeon-Koo Che, and Paul Milgrom, American Economic Review 103, pp 585–623.
6. "Asymptotic Equivalence of Probabilistic Serial and Random Priority Mechanisms"(2010), with Yeon-Koo Che, Econometrica 78, pp 1625–1672.
7. "Axioms for Deferred Acceptance" (2010), with Mihai Manea, Econometrica 78, pp633–653.
8. "Incentives and Stability in Large Two-Sided Matching Markets" (2009), with Parag A. Pathak, American Economic Review 99, pp 608–627.

2 Selection committee

Kosuke Aoki (Chair) (University of Tokyo), Anton Braun (Federal Reserve Bank of Atlanta), Federico Echenique (California Institute of Technology), Yuichi Kitamura (Yale University), Fumio Ohtake (Osaka University), Tadashi Sekiguchi (Kyoto University), Mototsugu Shintani (University of Tokyo).

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