

The Hong Kong University of Science and Technology
Dept of Information Systems, Business Statistics and Operations Management
OM Seminar Announcement



Optimal Queue Design
by
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Date : **6 October 2023 (Friday)**
Time : **10:30 – 11:45 AM**
Venue : **3/F Classroom 2 (3003)**



Abstract: We study the optimal method for rationing scarce resources through a queue system. The designer controls agents' entry into a queue and their exit, their service priority—or queueing discipline—as well as their information about queue priorities, while providing them with the incentive to join the queue and, importantly, to stay in the queue, when recommended by the designer. Under a mild condition, the optimal mechanism induces agents to enter up to a certain queue length and never removes any agents from the queue; serves them according to a first-come-first-served (FCFS) rule; and provides them with no information throughout the process beyond the recommendations they receive. FCFS is also necessary for optimality in a rich domain. We identify a novel role for queueing disciplines in regulating agents' beliefs and their dynamic incentives, and uncover a hitherto unrecognized virtue of FCFS in this regard.

Bio: Yeon-Koo Che is Kelvin J. Lancaster Professor of Economic Theory at Columbia University. His early work contributes to the theory of mechanism and auction design: scoring-rule auctions, auctions with budget constraints, collusion-proof mechanism design, research contest, the incomplete contract paradigm for organization theory, and the matching theory in the context of college and school choice. His current research projects explore the implications of data-driven economic decision making and resource allocation for welfare and distributional consequences. He is Fellow of Econometric Society (elected 2009) and Fellow of Economic Theory (elected 2014) for the Society of Advancement of Economic Theory. He is a member of Council of Game Theory Society (elected 2017) and of Asian Regional Council of Econometric Society (elected 2016). He was the inaugural recipient in 2008 of the Cho Rakkyo Prize, and the KAEA-MK Prize in 2009. He has received nine National Science Foundation grants spanning over 20 years. He received a PhD in Economics at the Stanford University. He was Professor at University of Wisconsin before joining the Columbia University as Professor of Economics in 2005.

All interested are welcome!
Enquiries: Dept of ISOM