

THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Department of Information Systems, Business Statistics and Operations Management

IS SEMINAR ANNOUNCEMENT



Can Robots Replace Humans? Field Evidence from the Use of AI Humanoid Service Robots in Retail Setting

by

Prof. Jason CHAN
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DATE	10 August 2026 (Monday)
TIME	2:30 - 4:00 pm
VENUE	Room 5047, Lee Shau Kee Business Building

ABSTRACT

Despite the growing use of AI-powered service robots in retail settings, their impact on consumer behavior remains poorly understood. A key question centers on whether these robots offer similar value to human frontline employees in customer-facing retail settings. This paper examines the impact of introducing AI-powered humanoid service robots on purchase outcomes in physical retail environments. Collaborating with a major grocery retailer in Asia-Pacific, our study examines the sales impact of deploying AI-powered service robots in place of human service assistants. Our quasi-experiment showed that the treated store experienced increased customer spending and purchase variety relative to the control store. Through an online experiment simulating the grocery shopping process, we contrasted the focal service robot with human service agents with varying facial cues. We find that the rise in sales is largely driven by an increase in hedonic purchases, as consumers spend more when interacting with service robots compared to human agents with less approachable expressions. The implications of our findings are significant for managers considering the adoption of AI service robots in the retail industry. This paper represents one of the pioneering studies that provide empirical evidence for the viability of employing AI service robots in face-to-face service contexts.

BIOGRAPHY

Dr. Jason Chan is a Professor of Information & Decision Sciences at the Carlson School of Management, University of Minnesota. He holds an interest towards research that has relevant business and policy insights on emerging Internet phenomenon and social outcomes, in various areas including artificial intelligence, healthcare, crime, financial well-being, education, and labor economics. In his research, he adopts a variety of quantitative methods including econometric modeling, experiments and technical methods, to extract meaningful relationships that lies within datasets.

His work has been published in top academic journals and conferences such as Information Systems Research, Management Science, MIS Quarterly. His work is covered by prominent media outlets, including The Economist, The Washington Post, The Economic Times, NBC News, Newsweek, Forbes, and has been cited in policy discussions, including the council of economic advisor's economic report to the president. Dr Chan is a recipient and nominee of several Best Paper Awards in top journals and conferences. He has received Management Science's Best Paper Award in 2020, the AIS Best Published Paper 2014 (selected by senior editors among top MIS journals), the MISQ Best Paper Award 2014, and is awarded the Sandy Slaughter Early Career Award in 2021. Jason is the winner of the 2015 Nunamaker-Chen Dissertation Award conferred by INFORMS Information Systems Society. He is an Associate Editor at Management Science and Information Systems Research, and had won the Best Associate Editor Awards at both these journals. He also served as Track Chair and Associate Editor at the International Conference of Information Systems (ICIS), and has been awarded the two Best Associate Editor Awards (ICIS 2016, 2017). He is the two-time recipient of the Distinguished Service Award at Management Science, and has also won two Best Reviewer Awards at ISR and MISQ. He served the broader IS community as the Vice President of the Informs Information Systems Society for two terms (2019-2023). In 2018, he was named by Poets & Quants as one of the Top 40 Professors Under 40 Worldwide.