

THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Department of Information Systems, Business Statistics and Operations Management

IS SEMINAR ANNOUNCEMENT



Agentic AI as a Lens on Human Decision Making: Field Experimental Evidence from Dynamic Pricing

by

Prof. Pei-yu (Sharon) CHEN
Arizona State University

DATE	3 July 2026 (Friday)
TIME	3:00 - 4:30 pm
VENUE	Room 5620, Academic Building (Lift 31/32)

ABSTRACT

While prior studies have emphasized the importance of dynamic pricing in revenue management, empirical evidence on how agentic artificial intelligence (AI) transforms pricing is scarce. To address this gap, we analyze a large-scale field experiment conducted by a major Chinese airline in China, in which the airline granted an AI pricing agent full authority over a subset of routes and thereby enabled a comparison with experienced human price setters. Our results show that the AI does not merely refine human strategies but discovers a sharply different intertemporal pricing policy: whereas human price setters adhere to a canonical “ramp-up” fare ladder, the AI implements a downward-sloping trajectory. We propose that the traditional ramp-up strategy may partly reflect human reliance on convention and a “fear of empty seats,” which can induce conservative early pricing. Consistent with this interpretation, the AI adopts a different intertemporal pricing path and generates a 5.8% revenue uplift. Furthermore, we find that this performance gap widens under conditions of demand, strategic, and operational uncertainty, consistent with risk aversion playing a central role in human underperformance. However, the AI’s advantage attenuates in markets characterized by implicit knowledge (e.g., latent competition or local events) where human contextual awareness remains indispensable.

BIOGRAPHY

Dr. Pei-yu Chen is the Chair of the Department of Information Systems, Red Avenue Foundation Professor and the Co-Director of the AI and Data Analytics Initiative for Business and Society at W. P. Carey School of Business, Arizona State University. Dr. Chen’s work has been published in leading business journals such as Management Science, Information Systems Research, MIS Quarterly, Operations Research, and Production and Operations Management. Professionally, Dr. Chen currently serves as Senior Editor for Information Systems Research. She was previously Associate Editor for Management Science from 2009-2025.