

Jin Miao

CONTACT INFORMATION

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Naveen Jindal School of Management
Richardson, TX 75080, USA

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EDUCATION

University of Texas at Dallas, Richardson, TX **Aug 2020 - May 2026**
Ph.D. Quantitative Marketing

Columbia University, New York City, NY **Aug 2017 - May 2018**
M.S. Marketing Science

Tsinghua University, Beijing, China **Aug 2013 - July 2017**
B.A. Economics & B.S. Psychology

Mannheim University, Mannheim, Germany **Aug 2015 - Dec 2015**
Exchange Student

RESEARCH INTERESTS

Substantive: Generative AI, Subscription Economy, Probabilistic Goods, Service Marketing

Methodology: Generative Pre-trained Transformer (GPT), Game-theoretic Model, Deep Learning, Natural Language Processing

PUBLICATION

Designing Loot Boxes: Implications for Profits and Welfare
Jin Miao, Sanjay Jain
Marketing Science (2024) vol. 43, no. 6, pp. 1242–1259.

Abstract: A loot box is a probabilistic allocation of virtual products, the exact outcome of which is known to consumers only after purchase. Consumers sometimes purchase these goods multiple times until their preferred products are obtained. As loot boxes have been gaining enormous popularity in recent years, they are often criticized as exploitative and socially wasteful. In this study, we develop a stylized model to study the optimal design of loot boxes and its impact on profits and social welfare. We find that firms may assign asymmetric probabilities to *ex ante* symmetric products. Firms could use loot boxes to offer products at low prices to users who would not buy these products under the traditional pricing strategy. Loot boxes enable firms to earn higher profits due to better price discrimination and market expansion. Contrary to the widespread criticism of loot boxes as socially harmful, our analysis reveals that the loot box strategy can improve social welfare. Some platforms promise that consumers can obtain their preferred products with no more than a certain number of purchases. Contrary to conventional wisdom, our analysis reveals that such a strategy can increase firm's profits while reducing consumer welfare.

WORKING PAPER

Pricing of Services: An Analysis of the Impact of Availability Bias
with Sanjay Jain

WORK IN PROGRESS

ProductGPT: A Generative Model of Consumer Decision Dynamics in Limited-Time Product Offerings
with Fanglin Chen, Ying Xie

Design Rollover Policy in Subscription Economy
with Haokun Du, Sanjay Jain

HONORS AWARDS SCHOLARSHIPS	ISMS Doctoral Consortium Fellow	Summer 2025
	JSOM Ph.D. Student of the Year, Finalist	Spring 2025
	ISMS Doctoral Dissertation Early-Stage Grant, Finalist	Spring 2025
	JSOM Outstanding Teaching Award	Fall 2024
	AMA-Sheth Foundation Doctoral Consortium Fellow	Summer 2023
	Betty and Gifford Johnson Travel Awards	Summer 2023
	Center for Teaching and Learning (CTL) Fellow	Spring 2023
	Doctoral Scholarship	Fall 2021 - Spring 2026
	University Fellowship for Remote Studies	Fall 2020 - Summer 2021
	Academic Excellence Scholarship, Tsinghua University	Fall 2016
	Baden-Württemberg-Stipendium, Mannheim University	Fall 2015
TEACHING INTERESTS	Large Language Models in Marketing, AI-Driven Content Creation, Marketing Analytics Digital Marketing, Pricing Analytics and Strategy, New Product Development	
INSTRUCTOR	Principles of Marketing (BBA-Marketing) <i>solo instructor</i> (Class Size: 56, Teaching Evaluation: 5.0/5.0) <i>JSOM Outstanding Teaching Award</i>	Fall 2024
	Principles of Marketing (BBA-Marketing) <i>solo instructor</i> (Class Size: 48, Teaching Evaluation: 4.8/5.0)	Fall 2023
TEACHING ASSISTANTSHIP	Principles of Marketing (BBA-Marketing) Digital Sales Strategy (MS-Marketing) Predictive Analytics for Data Science (MS-Marketing) Social Media Marketing (BBA-Marketing) Category Buying (BBA-Marketing) E-Retailing (BBA-Marketing) Marketing Management (MS-Marketing)	Fall 2021, Spring 2022, Spring 2025 Spring 2025 Spring 2024 Fall 2021, Spring 2022 Spring 2022 Spring 2022 Fall 2021
CONFERENCE PRESENTATION	INFORMS Marketing Science Annual Conference BizAI Annual Conference INFORMS Marketing Science Annual Conference Production and Operations Management Conference	Washington DC, June 2025 Richardson TX, March 2025 Miami FL, June 2023 Orlando FL, May 2023
SELECTED DOCTORAL COURSEWORK	Marketing / Business Analytical Models in Marketing Empirical Models in Marketing Digital Marketing Dynamic Models in Economics and Marketing Behavioral Industrial Organization and Marketing Strategy Empirical Industrial Organization in Economics and Marketing Empirical Models in Marketing Mathematical Models in Marketing Bridging Behavioral Decision-Making with Marketing Science	Dmitri Kuksov Ying Xie Ram Rao Shervin Tehrani Sanjay Jain Joonhwi Joo Oded Netzer (<i>Columbia</i>) Rajeev Kohli (<i>Columbia</i>) Ran Kivetz (<i>Columbia</i>)

Statistics, Optimization, & Machine Learning

Advanced Probability and Statistics

Khai Chiong

Optimization

Milind Dawande

Bayesian Data Analysis

Qiwei Li

Causal Inference

Yunan Wu

Deep Learning

Pankaj Choudhary

Nonparametric Statistics

Sam Efromovich

Numerical Analysis

Saikat Biswas, Yunan Wu

Applied Multivariate Statistics

Kamel Jedidi (*Columbia*)

Machine Learning

Georgios Lentzas (*Columbia*)**Economics**

Advanced Managerial Economics

Kyle Hyndman

Game Theory

Gary Bolton

Advanced Game Theory

Dmitri Kuksov

Industrial Organization Theory

Jianqing Chen

Econometrics I, II, III

Donggyu Sul, Dong Li

Advanced Microeconomics

Geoffrey Heal (*Columbia*)*Last Update: May 2025*