

Dai YAO

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Dept of Management and Marketing
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Education

PhD in Management (Marketing), INSEAD, 2009-2014
MSc in Operations Management, Singapore Management University, 2007-2009
B.Eng in Computer Science and Technology, Tsinghua University, 2002-2006

Professional Experience

Associate Professor of Marketing, The Hong Kong Polytechnic University, 2021.09-
Assistant Professor of Marketing, National University of Singapore, 2014.07-2021.06

Research

Interests/expertise and topics

Development, Application, and Incubation (DAI) of Statistics, Artificial intelligence, Neuroscience, and Economics based (SANE) solutions for business problems, using a Data-driven, Analytics-empowered, and Intelligence-guided (DAI) approach

Digital economies; platform economics; two-sided markets; social influences; externalities; spillovers; pay-what-you-want; omnichannel; previews; free samples; decision biases; emotion; satisfaction; nudging; learning; privacy

Journal Publications [†] equal authorship. [‡] correspondence. * student when the project started.

1. Yao, Dai, Shijie Lu, and Xingyu Chen (2024), "Crowding-Out in Content Monetization under Pay What You Want: Evidence from Live Streaming," *Production and Operations Management*, forthcoming. [[SSRN](#)]
2. Yao, Dai, Chuang Tang*, and Junhong Chu (2023), "A Dynamic Model of Owner Acceptance in Peer-to-Peer Sharing Markets," *Marketing Science*, 42(1), 166-188. [[SSRN](#)]
- [Github Repo](#), [Some relevant slides \(in Chinese\)](#)

3. Duong, Hai Long*, Junhong Chu, and Dai Yao (2023), "Taxi Drivers' Response to Cancellations and No-shows: New Evidence for Reference-dependent Preferences," *Management Science*, 69(1), 179-199. [SSRN]
4. Lin, Yan, Dai Yao, and Xingyu Chen (2021), "Happiness Begets Money: Emotion and Engagement in Live Streaming," *Journal of Marketing Research*, 58(3), 417-438. († first two authors in alphabetical order)
 - [Lead Article](#), [JMR 2022 Top Cited Articles \(# 2\)](#), [JMR Most Read Articles](#), [JMR Most Cited Articles \(# 1 of all papers in past three years\)](#)
5. Lu, Shijie, Dai Yao, Xingyu Chen, and Rajdeep Grewal (2021), "Do Larger Audiences Generate Greater Revenues under Pay What You Want? Evidence from a Live Streaming Platform," *Marketing Science*, 40(5), 964-984.
6. Chen, Xingyu, Xing Li, Dai Yao, and Zhimin Zhou (2019), "Seeking the Support of the Silent Majority: Are Lurking Customers Valuable to UGC Platforms?" *Journal of the Academy of Marketing Science*, 47(6), 986-1004. († authors in alphabetical order)
 - [Lead Article](#)
7. Chae, Inyoung, Andrew Stephen, Yakov Bart, and Dai Yao (2017), "Spillover Effects in Seeded Word-of-Mouth Marketing Campaigns," *Marketing Science*, 36(1), 89-104.
 - [MSI Research Grant](#) #4-1967, 2015, USD 7,200

Selected working papers

8. Lobo, Miguel Sousa, and Dai Yao, "Human Judgment is Fat-Tailed: Empirical Evidence and Implications for the Aggregation of Estimates and Forecasts," major revision (between minor and major), preparing for 2nd review at *Management Science*.
9. Liang, Ce, Lu Meng, Shen Duan, Dai Yao, and Yuwei Jiang, a paper on tipping behaviors, major revision, preparing for 2nd review at *Journal of Consumer Research*.
10. Chen, Xingyu, Yan Lin, and Dai Yao[†], "All Smiles Are Not Created Equal: Duchenne Smiles Reduce Extrinsic Rewards from Viewers in Live Streaming," († authors in alphabetical order), preparing for submission at *Marketing Science* after rejection at *Frontiers*.
11. Li, Xi, Yacheng Sun, and Dai Yao, "In-Store Social Crowdedness and Customer Behaviors," († authors in alphabetical order).
12. Koh, Kane*, Dai Yao[†], Fang-Chi Lu, Jing Lei, and Liliana Bove, "Roses are Also Fragrant in Others' Hands: Consumer-to-Consumer Gifted Subscriptions in Live Streaming."
 - [MSI Research Grant](#) # 4001866, 2023, USD 5,000
13. Yao, Dai, Xing Li, and Xingyu Chen, "Ordeal by Innocence: Proactive Nudging and User Engagement in Online Communities."

Business Cases

1. Wang, Chuang, Minna Bai, and Dai Yao[‡] (2023), "Leyaoyao's Diversification: Vertical or Horizontal?" [Ivey Publishing](#), [Harvard Business Publishing](#).
2. Chen, Xingyu, Li Ji, Ling Jiang, Shijie Lu, and Dai Yao[‡] (2020), "Mobiuspace: Venturing into Emerging Markets," [Ivey Publishing](#), [Harvard Business Publishing](#).
3. Chen, Xingyu, Ling Jiang, Li Ji, and Dai Yao[‡] (2020), "Youliaodao in the Era of Paid Knowledge: Go Big or Go Home?" [Ivey Publishing](#), [Harvard Business Publishing](#).

Practice-Oriented

1. Sun, Yacheng, Dai Yao, and Yijun (Adrien) Zou (2023), "Towards a Utopian Smart Retail Industry," *Tsinghua Business Review*, 4. [Link](#).

Academic Presentations * selected presentations by coauthors.

In-Store Social Crowdedness and Customer Behaviors

- *HK Quant MKT Conf*, HKU (2023); UMacau (2023); *MKSC Conf*, UMiami (2023)

Roses are Also Fragrant in Others' Hands: . . .

- *HK Quant MKT Seminar Series* (2023); *MKSC Conf*, UMiami (2023); *TPM Conf*, HEC Lausanne (2023)

All Smiles Are Not Created Equal: . . .

- *Marketing and the Creator Economy Conf*, Columbia (2023, *scheduled*); UMelbourne (2022); HNU, CN (2022); UWarwick (2022); NTU (2021)

Social Impact of Viewer Engagement in Live Streaming

- *TPM Conf*, Columbia Univ. (2019); *MKSC Conf*, UMiami (2023)

Ordeal by Innocence: . . .

- HNU, CN (2019); PKU-PHBS (2019); *Interactive Marketing Research Conf*, ULondon (2020, *cancelled*)

A Dynamic Model of Owner Acceptance in Peer-to-Peer Sharing Market

- Boston College (2021); UHouston (2018)

Happiness Begets Money: Emotion and Engagement in Live Streaming

- HK PolyU (2021); THU (2020); PKU-Guanghua (2020); HK CityU (2020); *MKSC Virtual Conf*, Duke (2020); *The 18th Pre-ICIS Workshop on e-Business*, Munich, DE (2019)*; *Conf on AI & ML, and Business Analytics*, Temple (2019)

Do Larger Audiences Generate Greater Revenues . . .

- XMU, CN (2018); Fudan (2017); PKU-Guanghua (2017); *China India Insights Conf*, Yale & INSEAD (2018); *NUS-Tsinghua Workshop on Digital Economy*, THU (2018); *The 12th Annual Bass FORMS*, UTD (2018)*; *Conf on Digital, Mobile Marketing, and Social Media Analytics*, NYU (2017)*; *Marketing Dynamics Conf*, HKUST (2017); *MKSC Conf*, USC (2017)

Prospect of Financial Rewards Induces Strategic Provision of Voluntary Content

- HEC Paris (2019)*; *NUS-Tsinghua Workshop on Digital Economy*, NUS (2019)

Content Monetization and Preview Design

- *Marketing Analytics Symposium at Sydney (MASS)*, UNSW (2020); *MKSC Conf*, Univ. of Roma Tre & NYU, Italy (2019); *Marketing Dynamics Conf*, UMD (2019); *CMU-Temple Conf on Digital Marketing and Machine Learning*, CMU (2018); *NSFC-RGC Young Scholars Forum*, Harbin, China (2018)*; *NUS-USTC Workshop on Data Driven Prescriptive Analytics*, NUS (2018)

Multi-Step Matching in Peer-to-Peer Sharing Markets

- *China India Insights Conf*, Yale & INSEAD (2018)*; *INFORMS International Conf*, Taipei (2018); *JMS China MKT Conf*, Jinan Univ. (2017)*; *MKSC Conf*, Fudan (2016)*

Online Retail in Developing Economies: Drivers of Product Returns

- OSU (2019); SZU-SABS, CN (2019); *MSOM Conf*, Dallas (2018)*; *POMS Conf*, Houston (2018)*

Taxi Drivers' Response to Cancellations and No-shows: . . .

- *Quantitative Marketing and Economics Conference*, UChicago (2018)*

The Impact of Response Time in Matching Markets

- WHU, CN (2017); RUC, CN (2016); SZU, CN (2016); *JMS China MKT Conf*, JNU, CN (2017)*; *China MKT International Conf*, UIBE, CN (2017)*

Demand Estimation with Non-Constant Stochastic Variances: . . .

- HK PolyU (2017); *Marketing Dynamics Conf*, THU (2015); *MKSC Conf*, JHU (2015)

Multi-Feature Product Usage with Learning

- *INSEAD Brownbag Seminars* (2013); *Greater-China Conf on Mobile Big Data Marketing*, CUHK (2016); *MKSC Conf*, Istanbul (2013)

Why Customers Upgrade Their Reserved Options: . . .

- Wharton (2014)*; *Marketing Dynamics Conf*, Stanford (2014)

Human Judgment is Heavy-Tailed: . . .

- *Multidisciplinary Decision Science Symposium*, Singapore (2010); *INFORMS Annual Meeting*, UT Austin (2010)

Discussant

Deep Network Representation Learning for Market Structure Discovery. Yi Yang, Kunpeng Zhang, and P.K. Kannan. *The 14th Bass FORMS*, UT Dallas, 2020

Invited Speakings in Public and Presentations in Corporates

[Digital Renaissance—Greater Bay Area Cultural Innovation Forum](#), HKU Business School Shenzhen Center, Sep 2023.

Roundtable Forum, [ZGC Forum-Regular Activities](#), May 2023 ([Photo 1](#), [Photo 2](#))

Sharing Economy, [Shine Wing International](#), Dec 2021 ([Github Repo](#), [Slides](#))

Asia Pricing & Revenue Management Summit, Aug 2019 ([link](#))

Mining Consumer Financing Data, [Visa Inc.](#), Feb 2019

Online Business and Digital Marketing, [6estates](#), Aug 2018

Mobile Games and Customer Lifetime Value, [Bolegames](#), Dec 2017

Multiple project specific presentations at collaborating firms including [PPzuche](#), [Shopee](#) (NYSE:SE), [Qiushibaike](#), [Mobiuspace](#), [AutoHome](#) (NYSE:ATHM), [Tsinghua XuetaoX](#), [China Distance Education Holdings](#) (NYSE:DL, delisted), among others.

Teaching

At HK PolyU

MM6761, Machine Learning Empowered Business Intelligence ([MLE.BI](#)), PhD, 2024-

MM3851, Social Media Marketing, BBA, 2022-

MM5831, Social Media Marketing, Taught Masters, 2022-

At NUS

MKT3761E, Marketing in Social Networks, BBA, 2021

BMS5504, Marketing Analysis and Decision Making, Masters, 2018-2020

MKT3421/MKT3811, Marketing Analysis and Decision Making, BBA, 2015-2020

DBA3702, Descriptive Analytics with R, BBA, 2019,2020

Others

Invited Seminar on Live Streaming, Social Media Marketing, Masters (3 hours), HK CityU, 2023

Invited Summer Course on Machine Learning Empowered Business Intelligence ([MLE.BI](#)), Masters (15 hours), Xiamen Univ. 2023

Invited Seminar on Live Streaming, Social Media Marketing, BBA (2 hours), HKU, 2023

Invited Seminar on Live Streaming, PhD (2 hours), NTU, 2022

Students

At HK PolyU

2024-, Dr. Dan BI (PhD from XJTU), Postdoctoral Fellow

2024-, Sijiong REN, co-supervisor (Bicheng YANG, PolyU)

2024-, Mingyang LIU, co-supervisor (Bicheng YANG, PolyU)

2023-, Rui QIN, co-supervisor (Yue Katherine FENG, PolyU)

2023-, Yucheng XIE, co-supervisor (Bicheng YANG, PolyU)

2023-, Dr. Banggang WU (PhD from THU), Postdoctoral Fellow

2023-, Baozhen ZHAN ([Collaborative PhD Training Programme](#), PolyU), co-supervisor (Gengzhong FENG, Xi'an Jiaotong University)

2023-, Yujie WANG ([Dual PhD Degree Programmes](#), PolyU), co-supervisor (Zili ZHANG, Harbin Institute of Technology)

2023-2024, Yuguang PAN ([Undergraduate Research and Innovation Scheme](#), i.e., URIS)

2022-, Pengyao SUN ([Hong Kong Postgraduate Fellowship](#), i.e., HKPFS), co-supervisor (Yue Katherine FENG, PolyU)

At NUS

2014-2019, Chuang TANG ([President's Graduate Fellowship](#)), co-supervisor (Junhong CHU, NUS), initial placement ([PKU-HSBC](#)).

2014-2016, Yue WANG, initial placement ([SUSS](#)).

Grants (\approx HKD 6M, \approx SGD 200K, and others including CNY, EURO, and USD)

2023 (Co-PI), Research Grant, [Marketing Science Institute \(MSI\)](#), USD 5,000.

2023-2026 (PI), GRF, #15505023, HK RGC, HKD 669,895

2023-2025 (PI), Incentive Scheme for UTD Journal Publications, FB, HK PolyU, HKD 180,000.

2024-2027 (PI), Collaborative Research with World-Leading Research Groups, HK PolyU, HKD 1,167,200; **only 6 projects awarded in total**

2023-2025 (PI), HK Scholars Program (conferred on XXX), HK PolyU, HKD 461,160

2022-2024 (PI), Incentive Scheme for UTD Journal Publications, FB, HK PolyU, HKD 180,000

2022-2025 (PI), General Research Fund (GRF), #15509522, RGC, HKD 634,500

2021-2024 (PI), Start-up Grant, HK PolyU, HKD 500,000

2024-2028 (Supervisor), 2+3 Integrated PhD Programme (conferred on Sijiong REN), FB, HK PolyU, \approx HKD 1,200,000

2023-2025 (Supervisor), Dual PhD Degree Programmes (**competitive**), FB, HK PolyU, HKD 450,000 (conferred on Yujie WANG, Harbin Institute of Technology)

2023-2024 (Supervisor), Undergraduate Research and Innovation Scheme (URIS, **a prestigious program**), HK PolyU, HKD 40,000 (conferred on Yuguang PAN, Dept. of EIE)

2023-2024 (Supervisor), Collaborative PhD Training Programmes (**competitive**), FB, HK PolyU, HKD 196,600 (conferred on Baozhen ZHAN, Xi'an Jiaotong University)

2023-2027 (Co-Supervisor), Direct-Entry PhD Programme (conferred on Rui QIN), FB, HK PolyU, \approx HKD 1,000,000

2022-2025 (Co-Supervisor), Hong Kong PhD Fellowship Scheme (conferred on Pengyao SUN), Hong Kong Research Grant Council (RGC), \approx HKD 1,100,000

2022-2024 (Supervisor), Postdoctoral Fellow Scheme (**competitive**), FB, HK PolyU, \approx HKD 650,000 (conferred on Dr. Banggang WU, PhD, THU, 2018)

2018-2020 (PI), Academic Research Fund (AcRF) Tier 1, MOE, Singapore, SGD 40,000

2017-2018 (Co-PI), Ng Teng Fong Charitable Foundation Research Fund, SGD 33,560

2015-2017 (PI), Humanities and Social Sciences Seed Fund, NUS, SGD 35,000

2014-now (Collaborator), multiple projects funded by NSFC

2014-2017 (PI), Start-up Grant, NUS, SGD 90,000

2013-2014 (Co-PI), INSEAD Research Fund, € 1,800

2012-2012 (PI), Data Grant from Wharton Consumer Analytics Initiative

Awards

2023, Outstanding Young Researcher, Faculty Prizes, FB, HK PolyU

Services

Community

Ad-hoc reviewer: *Marketing Science, Management Science, Journal of Marketing Research, Journal of Marketing, Production and Operations Management, Journal of Business Research, Journal of Service Research, Journal of Interactive Marketing, Journal of Retailing, Journal of Marketing Management, MSI Alden G. Clayton Proposal Competition*

At HK PolyU

Departmental staffing committee member, 2023.09.01-now.

Boarder member of School of Design (representing Faculty of Business), 2022.09.01-now.

Supervisor and/or examiner in almost all programs across the faculty including BBA, Taught Postgraduate Program, Research Postgraduate Program (PhD), DBA, and Doctor in Management (DMgt), 2022.08-now.

At NUS

Quant seminar coordinator for the Marketing department: 2016.08-2018.07.

PhD committee member for the Marketing department: 2019.12-2021.06.

Supervisor or examiner in various programs including BBA, MBA, Chinese EMBA, and PhD, 2015.07-2021.06

Others

Thesis Examiner of [DBA](#) (Zhongwei WANG), HK CityU, 2023

Industrial Experience

Founder: [analysable.ai](#), [yunlyzer.com](#), [mle.bi](#)

Fulltime employee at Youdao.com ([NYSE:DAO](#), affiliated with Netease, [NASDAQ:NTES](#), 2007.03-07).

Fulltime intern/trainee at Microsoft Research Asia ([NASDAQ:MSTF](#), 2006.07-2007.03), International Data Corporation (IDC, affiliated with IDG Capital, 2006.03-06), Infosys ([NYSE:INFY](#), 2005.09-2006.03, in [India](#)), Sohu.com ([NASDAQ:SOHU](#), 2005.07-09), among others.

Juvenile explorations:

- (a) Trader, JPMorgan SG, Proprietary Trading (2008, *cancelled due to global financial crisis*).
- (b) Co-Founder, Yehtes Ltd. (2008, [200814214R](#), *struck off*).