

# Dai YAO

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Dept of Management and Marketing  
Faculty of Business  
The Hong Kong Polytechnic University  
Hung Hom, Kowloon, Hong Kong

Phone: (852) 2766 7143  
Email (Academic): [daiyao@polyu.edu.hk](mailto:daiyao@polyu.edu.hk)  
Email (Business): [DAI@yaod.ai](mailto:DAI@yaod.ai); [DAI@mle.bi](mailto:DAI@mle.bi)  
Homepage: [yaod.ai](http://yaod.ai); [yodadai.com](http://yodadai.com); [mle.bi](http://mle.bi)

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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 economies; two-sided markets; cross-border commerce; environmental, social, and governance (ESG); innovation

Social influences; externalities; instant retail; pay-what-you-want; omnichannel; pre-views; free samples; decision biases; emotion; satisfaction; nudging; learning; privacy

### *Journal Publications*    <sup>†</sup> equal authorship.    <sup>‡</sup> correspondence.    <sup>\*</sup> 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 \(# 1 of all papers in past three years\)](#)
  - 第十一届深圳市哲学社会科学优秀成果奖
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, "Fat Tails in Human Judgment: Empirical Evidence and Implications for the Aggregation of Estimates and Forecasts," under 2nd review at *Management Science*.
9. Liang, Ce\*, Lu Meng\*, Shen Duan\*, Dai Yao, and Yuwei Jiang, "Let Me Show You What Your Tips Can Do! Materially Referenced Tip Recommendation Prompts Tip-ping," major revision, preparing for 2nd review at *Journal of Consumer Research*.
10. Chen, Xingyu, Yan Lin, and Dai Yao<sup>†</sup>, "All Smiles Are Not Created Equal: More Duchenne Smiles Lead to Less Extrinsic Rewards from Viewers in Live Streaming," († authors in alphabetical order), preparing for submission.
11. Hao, Yulin\*, and Dai Yao<sup>†</sup>, "Physical Store Visits and Virtual Brand Perceptions: Market Structure Analysis with Customer Trajectories in Shopping Malls," preparing for submission.
12. Chen, Kun, Shaobo Li, Dai Yao, and Yi Zeng\*, "Fault by Child, Curse on Father? Dynamic Spillover Effects in Sequential Scandals for Multi-Brand Firms," († first three authors in alphabetical order), preparing for submission.
13. Qin, Rui\*, Yue Katherine Feng<sup>†</sup>, and Dai Yao<sup>†</sup>, "The Impact of AI-Generated Summaries on Video Consumption: Insights from a Randomized Field Experiment," († last two authors in alphabetical order), under review at *Marketing Science*.

14. Li, Xi, Yacheng Sun, and Dai Yao, "In-Store Social Crowdedness and Customer Behaviors," († authors in alphabetical order), preparing for submission.
15. Yao, Dai, and Banggang Wu, "Why Do More Free Samples Lead to Less Purchases in Digital Content Market: The Role of Information Structure," preparing for submission.
16. Koh, Kane\*, Dai Yao<sup>†</sup>, 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
17. Yao, Dai, Xing Li, and Xingyu Chen, "Ordeal by Innocence: Proactive Nudging and User Engagement in Online Communities."
18. Gao, Angela Yi\*, Baozhen Zhan\*, and Dai Yao<sup>†</sup>, "Love Me, Love My Dog? Influencer Identity and Live Commerce Performance," preparing for submission.

### *Business Cases*

1. Wang, Chuang, Minna Bai, and Dai Yao<sup>†</sup> (2023), "Leyao's Diversification: Vertical or Horizontal?" [Ivey Publishing](#), [Harvard Business Publishing](#).
2. Chen, Xingyu, Li Ji, Ling Jiang, Shijie Lu, and Dai Yao<sup>†</sup> (2020), "Mobiuspace: Venturing into Emerging Markets," [Ivey Publishing](#), [Harvard Business Publishing](#).
3. Chen, Xingyu, Ling Jiang, Li Ji, and Dai Yao<sup>†</sup> (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," [清华管理评论](#) (*Tsinghua Business Review*), 4, 6-14. [Published version](#).

## Academic Presentations \* selected presentations by coauthors.

Physical Store Visits and Virtual Brand Perceptions: . . .

- *HK Quant MKT Seminar Series* (2024); *MKSC Conf*, UNSW (2024)

Why Do More Free Samples Lead to Less Purchases in Digital Content Market: . . .

- *China India Insights Program Conference* (2024)

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: . . .

- *ACR Asia-Pacific Conference*, Indonesia (2024); *MM-SHTM Joint Symposium on "New Frontier in the Service Industry"*, PolyU (2024); *Marketing and the Creator Economy Conf*, Columbia Univ. (2023); *SUSTech* (2024); *UMelbourne* (2022); *HNU, CN* (2022); *UWarwick* (2022); *NTU* (2021)

#### Crowding-Out in Content Monetization under Pay What You Want: . . .

- *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

Emotional Value in Digital World, [Influencer Marketing Symposium](#), Asian Centre for Branding & Marketing, Hong Kong PolyU, Dec 2023.

Emotional Value in Digital World, [成都国腾集团 \(Chengdu College of University of Electronic Science and Technology of China & Global Tel\)](#), Oct 2023 ([Photo](#))

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

Roundtable Forum, [中关村论坛系列活动 \(ZGC Forum\)](#), May 2023 ([Photo 1](#), [Photo 2](#))

Sharing Economy, [信永中和 \(Shine Wing International\)](#), Dec 2021 ([Github](#), [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, [伯乐游戏 \(Bolegames\)](#), Dec 2017

Multiple project specific presentations at collaborating firms including PPzuche, Shopee (NYSE:SE), 糗事百科 (Qiushibaik), 大宇无限 (Mobiuspace), 汽车之家 (AutoHome, NYSE:ATHM), 学堂在线 (Tsinghua XuetaangX), 正保远程教育 (China Distance Education Holdings, NYSE:DL, delisted), among others.

## Teaching

### *At HK PolyU*

MM6761, Machine Learning Empowered Business Intelligence ([MLE.BI](#)), PhD, 2024- (evaluations: 4.8/5)  
 MM3851, Social Media Marketing, BBA, 2022-  
 MM5831, Social Media Marketing, Taught Masters, 2022-  
 MM5971, Practice of Marketing Management, 2024 (LU Jia; WU Yun; LIU Ling)  
 MM597, Marketing Management Dissertation, 2024 (HUANG Jiaxin)  
 MM601, Independent Studies in Business, 2024 (ZHANG Kun)

### *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*

Marketing Analytics, BBA (2.5 hours), Sungkyunkwan University, Fall 2024 (TBD)  
 Platform Economy, PhD (2 hours), University of Connecticut, Mar 2024  
 Emotional Value in Digital World, Masters (3 hours), HK CityU, Nov 2023  
 Machine Learning Empowered Business Intelligence ([MLE.BI](#)), Masters (15 hours), Xiamen Univ., Jul 2023  
 Live Streaming, Social Media Marketing, BBA (2 hours), HKU, Mar 2023  
 Live Streaming, PhD (2 hours), NTU, Apr 2022

## Students

### *At HK PolyU*

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

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

2024-, Aojie ZHANG (*Dual PhD Degree Programmes*, PolyU), chief supervisor; external co-supervisor (Prof. Xinyue ZHOU, ZJU)

2024-, Qian RUAN (*Dual PhD Degree Programmes*, PolyU), chief supervisor; external co-supervisor (Prof. Lu HUANG, SCU)

2024-, Ziqian SHAN (*PolyU Presidential PhD Fellowship*, i.e., PPPFS), chief supervisor.

2024-, Sijiong REN, chief supervisor; co-supervisor (Dr. Bicheng YANG, PolyU)

2024-, Mingyang LIU, co-supervisor; chief supervisor (Dr. Bicheng YANG, PolyU)

2023-, Rui QIN, co-supervisor; chief supervisor (Dr. Yue Katherine FENG, PolyU)

2023-, Yucheng XIE, co-supervisor; chief supervisor (Dr. Bicheng YANG, PolyU)

2023-, Baozhen ZHAN (*Collaborative PhD Training Programme*, PolyU), chief supervisor; external co-supervisor (Prof. Gengzhong FENG, Xi'an Jiaotong University)

2023-, Yujie WANG (*Dual PhD Degree Programmes*, PolyU), chief supervisor; external co-supervisor (Prof. Zili ZHANG, Harbin Institute of Technology)

2022-, Pengyao SUN (*Hong Kong Postgraduate Fellowship*, i.e., HKPFS), co-supervisor; chief supervisor (Dr. Yue Katherine FENG, PolyU)

2024-2025, Qiang XU (PhD at USTC), Fulltime RA; supervisor (Prof. Yongjun LI, USTC)

2024, Bu LI (incoming PhD at THU), Fulltime RA; supervisor (Prof. Zhijin LIN, THU)

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

*Others (students in other schools, or I'm not directly involved in supervision)*

2023-, Yulin HAO, Simon Business School, University of Rochester

2023-, Qingyu YOU, National School of Development, Peking University

2023-, Run WENG, SCUT-CN (supervisor: Prof. Chuang WANG)

2023-, Tongshu YANG, HKU (supervisor: Prof. Junhong CHU)

2022-, Kane KOH, Faculty of Business and Economics, University of Melbourne

2022, Yuqing GU, Michigan Ross

2021-, Angela Yi GAO, Hong Kong Polytechnic University

*At NUS*

2014-2019, Chuang TANG (*President's Graduate Fellowship*), chief supervisor; co-supervisor (Prof. Junhong CHU, NUS), initial placement (PKU-HSBC).

2014-2016, Yue WANG, chief supervisor; initial placement (SUSS).



## Grants ( $\approx$ HKD 9M, $\approx$ 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

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

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

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

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

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

- For supervising PhD and Postdoc

2024-2026 (Supervisor), Dual PhD Degree Programmes (**competitive**), HK PolyU,  $\approx$  HKD 450,000 (conferred on Qian Ruan, SCU)

2024-2026 (Supervisor), Dual PhD Degree Programmes (**competitive**), HK PolyU,  $\approx$  HKD 450,000 (conferred on Aojie Zhang, ZJU)

2024-2028 (Supervisor), PolyU Presidential PhD Fellowship Scheme (conferred on Ziqian SHAN), Hong Kong Polytechnic University,  $\approx$  HKD 1,100,000

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

2024-2028 (Co-Supervisor), 2+3 Integrated PhD Programme (conferred on Mingyang LIU), HK PolyU,  $\approx$  HKD 1,200,000

2023-2025 (Supervisor), Dual PhD Degree Programmes (**competitive**), HK PolyU,  $\approx$  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 720,000 (conferred on Dr. Dan BI, PhD, XJTU, 2024)

2022-2024 (Supervisor), Postdoctoral Fellow Scheme (**competitive**), FB, HK PolyU,  $\approx$  HKD 720,000 (conferred on Dr. Banggang WU, PhD, THU, 2018)

- Prior to HK PolyU

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

2014-2017 (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

- *Grants from Mainland*

2014-now (Collaborator), multiple projects funded by 国家自然科学基金 (National Natural Science Foundation of China, i.e., NSFC) and 国家社会科学基金 (National Social Science Foundation of China, i.e., NSSFC)

## 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

## Other Schools

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

## Industrial Experience

Founder: 营销智库 (SANE.ZONE); 要得智能 (YAOD.AI); 麻了智能 ([MLE.BI](#)); 跨境贸易研究中心(筹) (XBC); [YUNLyzer.com](#); [analysable.ai](#);

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:
  - i. Yehtes Ltd. (Singapore 2008, [200814214R](#), *written off*)
  - ii. 蚂蚁数据智能 (Ant Data Intelligence, Shenzhen 2019, *written off*)