Dai YAO

Last updated: March, 2023

Dept of Management and Marketing Faculty of Business The Hong Kong Polytechnic University Hung Hom, Kowloon, Hong Kong Phone: (852) 2766 7143 Email (Professional): daiyao@polyu.edu.hk Email (Personal): DAI@yaod.ai, @yodadai.com

Homepage: www.yaod.ai, www.yodadai.com

## 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-rooted, and Intelligence-guided (DAI) approach
- † Digital economies; omnichannel; social influences; previews; free samples; pay-what-you-want; decision biases; emotion; satisfaction; spillover; nudge; learning; privacy

Publications † equal authorship. ‡ correspondence. \* student when the project started.

- 1. 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.
  - Github Repo, SSRN, Some relevant slides (in Chinese)
- 2. 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.
- 3. 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, and among JMR Most Read Articles
- 4. 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.
- 5. 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
- 6. 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.

### Selected working papers

- 7. Yao, Dai, Xingyu Chen, and Shijie Lu, "Crowding-Out in Content Monetization under Pay-What-You-Want: Evidence from Live Streaming," preparing for 3rd review at *Production and Operations Management*.
- 8. Lobo, Miguel Sousa, and Dai Yao, "Human Judgment is Fat-Tailed: Empirical Evidence and Implications for the Aggregation of Estimates and Forecasts," under review at *Management Science*.
- 9. Li, Xi, Yacheng Sun, and Dai Yao, "In-Store Social Crowdedness and Customer Purchases," († authors in alphabetical order), under review at *Marketing Science*, following reject and resubmit.
- 10. Chen, Xingyu, Yan Lin, and Dai Yao<sup>‡</sup>, "All Smiles Are Not Created Equal: Duchenne Smiles Reduce Extrinsic Rewards from Viewers in Live Streaming," († authors in alphabetical order), prep for submission at *Marketing Science* after rejection at Frontiers.
- 11. 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," under review at *Journal of Marketing Research*.
- 12. Yao, Dai, Xing Li, and Xingyu Chen, "Ordeal by Innocence: Proactive Nudging and User Engagement in Online Communities."

#### Cases

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

# Academic Presentations \* selected presentations by coauthors.

#### In-Store Social Crowdedness and Customer Purchases

o HK Quant MKT Conference, HKU (2023); UMacau (2023, scheduled); Marketing Science Conference, UMiami (2023, scheduled)

Roses Are also Fragrant in Others' Hands: · · ·

• HK Quant MKT Seminar Series (2023); Marketing Science Conference, UMiami (2023, scheduled)

All Smiles Are Not Created Equal: · · ·

o UMelbourne (2022); HNU, CN (2022); UWarwick (2022); NTU (IS, 2021)

Social Impact of Viewer Engagement in Live Streaming

• Theory+Practice in Marketing Conf, Columbia Univ. (2019)

Ordeal by Innocence: · · ·

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

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

o Boston College (2021); UHouston (2018)

Happiness Begets Money: Emotion and Engagement in Live Streaming

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

Do Larger Audiences Generate Greater Revenues · · ·

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

Prospect of Financial Rewards Induces Strategic Provision of Voluntary Content

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

## Content Monetization and Preview Design

o Marketing Analytics Symposium at Sydney, UNSW (2020); Marketing Science Conference, Univ. of Roma Tre & NYU, Italy (2019); Marketing Dynamics Conference, UMaryland (2019); CMU-Temple Conference 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

o China India Insights Conference, Yale & INSEAD (2018)\*; INFORMS International Conference, Taipei (2018); JMS China Marketing Conference, Jinan Univ. (2017)\*; Marketing Science Conference, Fudan (2016)\*

Online Retail in Developing Economies: Drivers of Product Returns

∘ OSU (2019); SZU-SABS, CN (2019); MSOM Conference, Dallas (2018)\*; POMS Conference, 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 Marketing Conf, JNU, CN (2017)\*; China Marketing International Conf, UIBE, CN (2017)\*

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

• HK PolyU (2017); Marketing Dynamics Conf, THU (2015); Marketing Science Conf, JHU (2015)

Multi-Feature Product Usage with Learning

o INSEAD Brownbag Seminars (2013); Greater-China Conference on Mobile Big Data Marketing, CUHK (2016); Marketing Science Conference, Istanbul (2013)

Why Customers Upgrade Their Reserved Options: · · ·

o Wharton (2014)\*; *Marketing Dynamics Conference*, 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 conference*, UT Dallas, 2020

# Invited Presentations in Corporates

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 XuetangX, China Distance Education Holdings (NYSE:DL, delisted), among others.

# **Teaching**

## At HK PolyU

MKT3851, Social Media Marketing, BBA, 2022-MKT5831, Social Media Marketing, Taught Masters, 2022-

### At NUS

MKT3761E, Marketing in Social Networks, BBA, 2021 BMS5504, Marketing Analysis and Decision Making, Masters, 2018,2019,2020 MKT3421/MKT3811, Marketing Analysis and Decision Making, BBA, 2015-2020 DBA3702, Descriptive Analytics with R, BBA, 2019,2020

### **Others**

Invited Seminar on Live Streaming, PhD, NTU, 2022 Invited Guest Talk on Live Streaming, Social Media Marketing, BBA, HKU, 2023

## **Students**

## At HK PolyU

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

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

2023-, Baozhen ZHAN (*Collaborative PhD Training Programme* at PolyU), co-supervisor (Gengzhong Feng, Xi'an Jiaotong University)

2023-, Yujie WANG (*Joint PhD Programme Leading to Dual Awards* at PolyU), co-supervisor (Zili Zhang, Harbin Institute of Technology)

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

#### At NUS

2014-2019, Chuang TANG (*President's Graduate Fellowship*), co-supervisor (Junhong Chu, NUS), initial placement at PKU HSBC Business School.

2014-2016, Yue WANG, initial placement at Singapore University of Social Science (SUSS).

## Grants

2023-2026 (PI), Collaborative Research with World-Leading Research Groups, HK PolyU, HKD 1,167,200 (with Yacheng Sun at THU, Xi Li at SZU, and Aibee.cn); only 6 projects

awarded in total.

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

2022-2025 (PI), General Research Fund (GRF), Hong Kong Research Grant Council (RGC), HKD 634,500

2022-2024 (PI), Postdoctoral Fellow Scheme (competitive), Faculty of Business, HK PolyU, ≈ HKD 650,000 (conferred on Banggang Wu, PhD, THU, 2018)

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

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 of multiple projects funded by NSFC

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

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

2012, Data Grant from Wharton Consumer Analytics Initiative

### Services

## Community

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

#### At NUS

Quant seminar coordinator for the department: 2016.08-2018.07.

PhD committee member for the department: 2019.12-2021.06.

# Industrial Experience

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:

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