

# SHAN HUANG

## Personal Information

- Personal Website: <https://www.shanhhuang.com/>
- Email: shanh@hku.hk & Phone (WhatsApp): +852 62316152
- Nationality: Canadian Citizenship

## Professional Positions

- 2021 - Now: Assistant Professor  
Area of Marketing 2023 – Now  
Area of Innovation and Information Management (IIM) 2021 - 2022  
Faculty of Business and Economics, The University of Hong Kong, Hong Kong  
Performance review: 5/5 (2021), 4/5 (2023, 2024)
  - Distinguished Fellow: Mitch Daniels School of Business, Purdue University (2026)
- 2018 – 2020: Assistant Professor  
Department of Information Systems & Operations Management  
Michael G. Foster School of Business, University of Washington, Seattle, WA, USA  
Performance review on research (2020): 8.5/10
- 2020 – Now: Digital Fellow  
Digital Economy Lab  
Institute for Human-Centered AI, Stanford University, Stanford, CA, USA
- 2018 - Now: Consultant  
WeChat, Tencent Technology Company Ltd, China

## Education

- 2012 - 2018: Ph.D., Management Science,  
Sloan School of Management, Massachusetts Institute of Technology, Cambridge, MA, USA  
Committee Chair: Erik Brynjolfsson
- 2010 - 2012: M.Sc., Management Information Systems,  
Sauder School of Business, University of British Columbia, Vancouver, BC, Canada  
Committee Chair: Izak Benbasat
- 2006 - 2010: B. A. Business Administration,  
School of Economics and Management, Tsinghua University, Beijing, China  
Thesis advisor: Jinghua Huang

## Research Interests

- Technology-Enabled Marketing Strategies
- Artificial Intelligence (AI) in Marketing Decision-Making

*Intersection of Marketing and Information Technology* with Key Topics on: New social media and social networks; AI-enabled causal inference and digital experimentation methods; A/B testing and product management

## Publications

### *Journal Papers*

1. **Shan Huang**<sup>\*†</sup>, Chen Wang<sup>\*‡</sup>, Yuan Yuan<sup>\*‡</sup>, Jinglong Zhao<sup>‡\*</sup> & Jingjing Zhang (industry author) (2025) Estimating Effects of Long- Term Treatments, *Management Science*, forthcoming. (paper forwarding by EC'23)
  - The Method implemented at Tencent and ByteDance in their operations.
  - Presented at Tencent, Kuaishou, ByteDance, Meta, Lyft, and LinkedIn
2. Yifan Yu<sup>\*‡</sup>, **Shan Huang**<sup>\*†</sup>, Yuchen Liu<sup>‡</sup>, & Yong Tan (2025), Emotions in Online Content Diffusion, *Information Systems Research*.
3. **Shan Huang**<sup>†</sup> & Song Lin<sup>†‡</sup> (2024), Do More "Likes" Lead to More Clicks? Evidence from a Field Experiment on Social Advertising, *Journal of Marketing*.
4. **Shan Huang**<sup>†</sup>, Sinan Aral, Yu Hu & Erik Brynjolfsson (2020). Social Advertising Effectiveness Across Products: A Large-Scale Field Experiment, *Marketing Science*, 39(6), 1142-1165.
  - The earliest large-scale experiment involving over 37 million users on WeChat, contributing to building WeChat's first A/B testing system at Tencent.
5. Hailiang Chen<sup>†‡</sup>, Yu Hu & **Shan Huang** (2019). Monetary Incentive and Stock Opinions on Social Media. *Journal of Management Information Systems*, 36(2), 391-417.

### *Conference Proceedings*

6. **Shan Huang** and Yi Ji<sup>†</sup>, Algorithmic vs. Friend-based Recommendations in Shaping Novel Content Engagement: A Large-scale Field Experiment, in proceedings of *The Twenty-Fifth ACM Conference on Economics and Computation (EC'24)*, Yale University, USA.
7. Chen Wang<sup>†</sup>, Shichao Han<sup>\*</sup> (industry author) and **Shan Huang**, Enhancing External Validity of Experiments with Ongoing Sampling, in proceedings of *The Twenty-Fifth ACM Conference on Economics and Computation (EC'24)*, Yale University, USA.
8. **Shan Huang**, Chen Wang<sup>†</sup>, Yuan Yuan<sup>\*</sup>, Jinglong Zhao<sup>\*</sup> and Jingjing Zhang<sup>\*</sup> (industry author), Estimating Effects of Long- Term Treatments, in proceedings of *The Twenty-Fourth ACM Conference on Economics and Computation (EC'23)*, King's College London, UK.

*Note.* ACM EC is widely recognized as an **A-level** *Computer Science* conference and publication. All three of my EC papers were subsequently submitted to journals for consideration with only abstract published in conference proceedings and citations.

## Working Papers

1. Chen Wang<sup>‡</sup>, **Shan Huang**<sup>†</sup>, & Shichao Han (industry author), Enhancing External Validity of Experiments with Ongoing Sampling, *under reject & resubmit at Marketing Science*, (paper forwarding by EC'24)
  - The Method integrated into Tencent's A/B testing system and widely applied in its A/B testing practice; also adopted by ByteDance in their operations.
  - Presented at Tencent, ByteDance, and LinkedIn
2. **Shan Huang**<sup>†</sup> & Yifan Yu<sup>‡</sup>, Understanding Customer-Product Matching in Social Media Referrals: A Data-Driven Approach, *under major revision at Journal of Marketing*.
3. **Shan Huang**<sup>†</sup>, Yi Ji<sup>‡</sup>, & Leyu Lin (industry author), Algorithms vs. Peers in Shaping Novel Content Engagement, *under review at Information Systems Research*. (paper forwarding by EC'24)

## Work-in-Progress

4. **Shan Huang**<sup>†</sup>, Yuan Yuan<sup>\*‡</sup> & Yi Ji<sup>‡</sup>, The Strength of Weak Ties Differs in Private Messaging vs. Broadcasting
5. Yi Ji<sup>‡</sup> & **Shan Huang**<sup>†</sup>, LLMs in Product Evaluation for Small Businesses, *to be submitted*
6. Chen Wang<sup>‡</sup>, **Shan Huang**<sup>†</sup>, Shichao Han (industry author) & Yong Wang (industry author), LLM-Driven Causal Inference: A Multi-Agent System
7. **Shan Huang**, Tong Wang<sup>‡</sup>, & Jinyong Ma (Industry author), LLM-based Digital Twins for Market Research

## Book-in-Progress

Title: Experimentation at Scale: Methods and Practice from China's Tech Frontier

- *Authors*: Yunfei Han\* (Bytedance), **Shan Huang**\*, Jinyong Ma\* (ByteDance), Yong Wang\* (Tencent), and Kenny Xie\* (Google; formerly Alibaba and Kuaishou)
- *Publisher*: Posts & Telecommunications Press.

\* *Authorship is ordered alphabetically or by reverse seniority,*

† *Corresponding author*

‡ *Junior Coauthor (Student and Assistant Professors during which they mainly contributed to the paper.)*

## Conference Presentations

- Chen Wang, **Shan Huang**, Shichao Han (industry author) and Yong Wang (industry author), "LLMs-Driven Causal Inference: A Multi-Agent System",
  - 1) INFORMS Annual Meeting (scheduled), Atlanta, USA, 2025
- **Shan Huang** and Yi Ji, "Novel Information Mediated by Algorithms vs. Social Ties: A Large-scale Field Experiment",
  - 1) Conference on Information Systems and Technology (CIST, scheduled), Atlanta, 2025
  - 2) Marketing Science Conference, Washington DC, USA, 2025
  - 3) The Twenty-Fifth ACM Conference on Economics and Computation, New Haven, 2024
  - 4) China India Insights, Hong Kong, 2024

- 5) MIT Conference on Digital Experimentation (CODE), Boston, USA, 2022
- Chen Wang, Shichao Han, and **Shan Huang**, “Enhancing External Validity of Experiments with Ongoing Sampling”,
  - 6) Marketing Science Conference, Washington DC, USA, 2025
  - 7) The Twenty-Fifth ACM Conference on Economics and Computation, New Haven, USA, 2024
  - 8) China-India Insights, Hong Kong, 2024
  - 9) MIT Conference on Digital Experimentation (CODE), Boston, USA, 2024
- **Shan Huang**, Chen Wang, Yuan Yuan, Jinglong Zhao and Jingjing Zhang, “Estimating Effects of Long- Term Treatments”,
  - 10) Marketing Science Conference, Sydney, Australia, 2024
  - 11) Marketing Innovation Workshop, Atlanta, USA, 2023
  - 12) American Causal Inference Conference (ACIC), Austin, USA, 2023
  - 13) Revenue Management and Pricing (RMP), London, UK, 2023
  - 14) Conference on Information Systems and Technology (CIST), Phoenix, USA, 2023
  - 15) The Twenty-Fourth ACM Conference on Economics and Computation, London, 2023
  - 16) MIT Conference on Digital Experimentation (CODE), Boston, USA, 2022
- **Shan Huang** and Yifan Yu, “Customer-Product Matches in Social Referrals”,
  - 17) Conference on Information Systems and Technology (CIST), Indianapolis, USA, 2022
- Yifan Yu, **Shan Huang**, Yuchen Liu, and Yong Tan, “Emotions in Online Content Diffusion”,
  - 18) Marketing Science Conference, Online, 2020
  - 19) International Conference on Computational Social Science (IC2S2), Online, 2020
  - 20) MIT Conference on Digital Experimentation (CODE), Boston, 2019
- **Shan Huang and Song Lin**, “*Do More ‘Likes’ Lead to More Clicks? Evidence from a Field Experiment on Social Advertising*”, (early version presented as *Shan Huang, “Social Influence in Public and Private Behaviors”*).
  - 21) INFORMS Annual Meeting, Seattle, USA, 2019
  - 22) MIT Conference on Digital Experimentation (CODE), Boston, USA, 2017
  - 23) International Conference on Information Systems (ICIS), Dublin, Ireland, 2016
  - 24) Conference on Information Systems and Technology (CIST), Dublin, Ireland, 2016
- **Shan Huang**, Sinan Aral, Yu Hu, and Erik Brynjolfsson. Social Advertising Effectiveness Across Products: A Large-Scale Field Experiment
  - 25) Conference on Information Systems and Technology (CIST), Seoul, Korea, 2017
  - 26) MIT Conference on Digital Experimentation (CODE), Boston, USA, 2016
- Hailiang Chen, Yu Hu and **Shan Huang**. Does monetary incentive lead to better stock recommendations on social media?
  - 27) International Conference on Information Systems (ICIS), Seoul, Korea, 2017
- **Shan Huang**, Izak Benbasat and Andrew Burton-Jones, The role of product recommendation agents in collaborative online shopping
  - 28) Thirty-Second International Conference on Information Systems (ICIS), Shanghai, 2011

#### Invited Talks - Academia

- 1) Yale University, New Haven, CT, USA, 2025
- 2) Tsinghua, Shenzhen, 2025

- 3) Invited discussant, Session on Technology, Digital Markets, and AI, ABFER (Asian Bureau of Finance and Economic Research) Annual Conference, Singapore, 2025
- 4) Keynote speaker, HK Quant Marketing Conference, Hong Kong, 2025
- 5) The Chinese University of Hong Kong, Shenzhen, 2024
- 6) Keynote speaker, HKU-PKU Marketing Conference, Hong Kong, 2023
- 7) Peking University HSBC Business School, Shenzhen, China, 2023
- 8) Stanford University, Digital Economy Lab, HAI, Palo Alto, CA, USA, 2022.
- 9) The Hong Kong Polytechnic University, Faculty of Business, Hong Kong, 2022
- 10) Nanyang Business School, NTU, Singapore, 2021.
- 11) University of Hong Kong, Faculty of Business and Economics, 2020
- 12) Fox School of Business, Temple University, Philadelphia, PA, USA, 2019
- 13) MIT Initiative on Digital Economy Annual Conference, Cambridge, MA, USA, 2018
- 14) McGill University, Desautels Faculty of Management, Montreal, QC, USA, 2018
- 15) University of Washington, Foster School of Business, Seattle, WA, USA, 2018
- 16) University of California San Diego, Rady School of Management, La Jolla, USA, 2018
- 17) The Hong Kong University of Science and Technology, Business School, 2018
- 18) University of Pennsylvania, Wharton School of Business, Philadelphia, PA, USA, 2017
- 19) Boston College, Carroll School of Management, Chestnut Hill, MA, USA, 2017
- 20) MIT Economic Sociology Workshop, Cambridge, MA, USA, 2017
- 21) University of British Columbia, Vancouver, BC, USA, 2017

### Invited Talks - Industry

- 1) Data Applications, Bytedance, Beijing, 2025
- 2) IEG Globe, Tencent, Palo Alto, CA, 2025
- 3) Tech Talk (company-wide) @ LinkedIn, Mountain View, CA, 2025
- 4) Academic Lecture Series (company-wide), Kuaishou Technology, Beijing, China, 2023
- 5) WeChat Business Group (company-wide), Tencent, Guangzhou, 2021

\* “Company-wide talk” refers to a talk invites all employees across the organization.

### Selected Awards and Grants

- Principal investigator, WeChat (Tencent) Research Grant (Scheduled), 1,300,000 HKD, 2025 – 2028
  - A larger-scale counterpart to the Tencent Rhino-Bird Research Program, a highly competitive cross-field external research grant
- Teaching Innovation Award (30,000 HKD), HKU Business School, 2024
- Principal investigator, Innovation and Technology Support Program (Platform), Hong Kong Government, 1,160,000 HKD, 2023-2025
  - Sole ITSP project awarded to HKU Business School; One of Only 4 ITSP projects awarded university-wide in 2022/23.
- Principal investigator, Research Projects of the University of Hong Kong Faculty of Business and Economics, Shenzhen Research Institutes (SZRI), 537, 500 RMB, 2023 - 2024
- Principal investigator, WeChat (Tencent) Research Grant, 740,000 RMB, 2022-2024

- A larger-scale counterpart to the Tencent Rhino-Bird Research Program, a highly competitive cross-field external research grant
- Peterson Jr. Fellowship, MIT Sloan School of Management, 2012 - 2018
- Fellow, NBER Economics of Digitization Doctoral Consortium, 2017

## Teaching and Mentoring

- Digital Experimentation Methods (2021-2024)
  - Master of Science in Business Analytics, HKU Business School (2021-2024)
  - Founding course instructor; teaching evaluation: avg. 95, 95/100, 2024; highest-demand elective course in MSBA 2022-2024
- A/B Testing in Product Management (2025 – Now)
  - Master of Science in Marketing and Master of Science in Business Analytics, HKU Business School
  - Founding course instructor; teaching evaluation: avg. 90, 91/100, 2025
- Field Experiments (2025 – Now)
  - PhD Program, HKU Business School
  - Founding course instructor
- AI in Business Decisions (2026, scheduled)
  - MSc at Mitch Daniels School of Business, Purdue University
- Department of Information Systems & Operations Management, Michael G. Foster School of Business, UW (2018-2020)
  - IS445, Database Management (undergraduate)
  - IS460, System Analysis and Design (Product Management) undergraduate)
  - IS 581A, Applied Network Theory & Networked Experiments (PhD)
- Ph.D. Student Mentoring (Committee Chair)
  - Chen Wang, Yi Ji (HKU)

## Knowledge Exchange

1. Novel Digital Experimentation Methods Developed and Implemented at Leading Companies
  - 1) Estimating Long-term Treatment Effects in Digital Experiments
    - a. Implemented as an experiment analysis tool at Tencent and ByteDance.
    - b. Demonstrated, in real-world experiments, to reduce estimation bias across experimental periods by 59.8% on average (relative to prevailing industry approaches) without increasing mean squared error (MSE) with details shown in the paper.
    - c. Distributed as part of the Fast Causal Inference open-source package on GitHub: <https://github.com/Tencent/fast-causal-inference>.
    - d. Published in both a top management journal (*Management Science*) and a top computer science conference (*ACM EC*).
  - 2) Addressing Bias Caused by Over-time Sample Shifts in Digital Experiments
    - a. Implemented as an embedded function in Tencent's experimentation system, now serving over 90% of company operations.
    - b. Demonstrated to increase the True Positive Rate by 28–37% and reduce the False Discovery Rate by 17–29% in platform applications with details shown in the paper.

c. Published in a top computer science conference (*ACM EC*).

## 2. Business Cases with Tencent and Huawei

- 1) **Shan Huang**, Shipeng Yan\*, Zhenhui Jiang, and Minying Huang (2022), ESG at WeChat Pay to Support SMEs, *Asia Case Research Centre*
- 2) **Shan Huang**, Xiaoming Yuan, and Minying Huang (2025), Algorithm Innovation at Huawei Cloud, *Asia Case Research Centre, forthcoming*

## Professional Service

- Conference Committee Members:
  - Annual Conference on Capital Market Research in the Era of AI (AICM), 2025
  - Conference on Information Systems and Technologies (CIST by INFORMS), 2019 - 2025
- Reviewers: Management Science, Quantitative Marketing and Economics (QME), Information Systems Research, MIS Quarterly

## Media Coverage

- **HK01 In-depth Feature:** *Academia–Industry Collaboration, Part I | University Courses in the Innovation Era: From “Teaching-Centered” to “Learning-Centered”*
- **HK01 In-depth Feature:** *Industry–Academia Collaboration II / From Academia to Industry: How Innovation and Technology Faculty and Students Transform Their Roles*
- **FBE TPG Official WeChat Account:** *High-Impact MSBA Course | Teaching + Practice: Interviewers Asked About the Experiment Design from Class!*
- **MBACHina:** *WeChat Pay Empowers Small and Medium-Sized Enterprises*

[Sep 6<sup>th</sup> 2025]