

Ke-Wei Huang

Academic Positions

- (i) Executive Director, Asian Institute of Digital Finance, NUS (2023-Now)
- (ii) Associate Professor, Department of Information Systems & Analytics (2016-Now)
- (iii) MSc in Digital Financial Technology Programs Director (2020-Now)

Prior Appointments

- Assistant Dean of Graduate Studies, School of Computing (2020-2023)
- Assistant Professor, Information Systems, National University of Singapore (2007-2016, Joint appointment with NUS FASS Economics from 2007 to 2009),
- IS PhD program coordinator from 2012 to 2018,
- Academic committee member of NUS Business Analytics Center from 2016 to 2019,
- FinTech PhD program coordinator from 2020 to 2022
- Visiting Scholar: HKUST in 2019 and University of Washington in 2020

Education

2002-2007	New York University, Stern School of Business, New York, USA. Ph.D. in Information, Operations, and Management Sciences. (Dissertation Advisor: Roy Radner)
2001-2002	New York University, Stern School of Business, New York, USA. M.S. in Information Systems
1995-1997	National Taiwan University, Taipei, Taiwan. M.B.A. in Finance
1991-1995	National Taiwan University, Taipei, Taiwan. B.S. in Electrical Engineering

Research and Publications

Research Interests: Machine Learning for Improving Social Science Research Methods, Data Mining in Finance, IT Entrepreneurship, IT Labor Economics, and Pricing for Digital Goods

Journal Articles:

- (1) Xuanqi Liu and Ke-Wei Huang "Controlling Homophily in Social Network Regression by Neural Networks" *INFORMS Journal on Computing*, Conditionally Accepted (2024).
- (2) Mengke Qiao and Ke-Wei Huang "Correcting Measurement Error in Regression Models with Variables Constructed from Aggregated Output of Data Mining Models." *MIS Quarterly*, Conditionally Accepted (2024).
- (3) Jiaxu Peng, Jungpil Hahn, and Ke-Wei Huang (2023) "Handling Missing Values in Information Systems Research: A Review of Methods and Assumptions," *Information Systems Research*. Vol. 34 (1), p.5-26.
- (4) Mengke Qiao and Ke-Wei Huang (2021) "Correcting Misclassification Bias in Regression Models with Variables Generated via Data Mining" *Information Systems Research*, Vol. 32 (2), p.462-480.
- (5) Chunmian Ge, Ke-Wei Huang, and Atreyi Kankanhalli, (2020) "Platform Skills and the Value of New Hires in the Software Industry" *Research Policy*, Vol. 49 (1) 103864.
- (6) Ying-Ju Chen and Ke-Wei Huang, (2016) "Pricing Data Services: Pricing by Minutes, by Gigs, or by Mega Bytes per Second?" *Information Systems Research*, Vol. 27 (3), p.596-617.
- (7) Chunmian Ge, Ke-Wei Huang, and Ivan Png, (2016) "Engineer/Scientist Careers: Patents, Online Profiles, and Misclassification Bias," *Strategic Management Journal*, Vol. 37 (1), p.232–253.
- (8) Chunmian Ge, Atreyi Kankanhalli and Ke-Wei Huang, (2015) "Investigating the Determinants of Starting Salary of IT Graduates," *DATA BASE for Advances in Information Systems*, Vol. 46 (4), p.9-25.
- (9) Xiao Zou and Ke-Wei Huang, (2015) "Leveraging Location-Based Services for Couponing and Infomediation," *Decision Support Systems*, Vol. 78 (10), p.93–103.
- (10) Ge Chunmian and Ke-Wei Huang, (2014) "Analyzing the Scale Economies of Software-as-a-Service Software Firms: A Stochastic Frontier Approach," *IEEE Transactions on Engineering Management*, Vol. 61 (4), p.610-622.
- (11) Ying-Ju Chen, Mingcherng Deng, and Ke-Wei Huang, (2014) "Hierarchical Screening for Capacity Allocation in Supply Chains: The Role of Distributors," *Production and Operations Management*, Vol. 23 (3), p.405-419.
- (12) Ke-Wei Huang and Arun Sundararajan, (2011) "Pricing Digital Goods: Discontinuous Costs and Shared Infrastructure," *Information Systems Research*, Vol. 22 (4), p.721-738.
- (13) Ke-Wei Huang and Zhuolun Li, (2011) "A Multi-Label Text Classification Algorithm for Labeling Risk Factors in SEC Form 10-K," *ACM Transactions on MIS*, Vol. 2 (3), p.18:1-18:19.

- (14) Anindya Ghose and Ke-Wei Huang, (2009) “Personalized Pricing and Quality Customization,” *Journal of Economics and Management Strategy*, Vol.18 (4), p.1095-1135.
- (15) Ke-Wei Huang, (2009) “Optimal Criteria for Selecting Price Discrimination Metrics when Buyers have Log-Normally Distributed Willingness-to-Pay,” *Quantitative Marketing and Economics*, Vol.7 (3), p.321-341.

Working Papers Under Review:

- (1) Xuanqi Liu, Qi Wang, and Ke-Wei Huang “How Does Artificial Intelligence Displace or Benefit Our Jobs? Evidence from LinkedIn,” (under 2nd review at *Information & Management*).

Conference/Workshop Papers:

- (1) “Unveiling Competition Characteristics from Annual Reports: A ChatGPT-Driven Q&A Approach for Aspect Extraction,” WITS 2023, Hyderabad, India by Joel Queh and Ke-Wei Huang
- (2) “Constructing ESG Risk Scores of U.S. Firms by Text Mining,” AAAI Symposium (Fintech) 2023, Singapore, by Ta Yu, Xuanqi Liu and Ke-Wei Huang
- (3) “Text-Based Technological Risk and Firm Innovation: An Empirical Analysis,” CSWIM 2023, Changsha, China, by Xuanqi Liu, Qi Wang, and Ke-Wei Huang
- (4) “Exploring the Effects of Technological Proximity to Venture Capitalists on the Performance of AI Start-ups,” WITS 2022, Copenhagen, Demark by Qi Wang, Ke-Wei Huang and Giri Kumar Tayi
- (5) “Correcting Estimation Bias Caused by Platform Content Moderation or User Self-Deletion,” WITS 2022, Copenhagen, Demark, by Mengke Qiao, Qinglai He, and Ke-Wei Huang
- (6) “Impression Management by Data Visualization: Evidence from Graphs in Earnings Conference Call Slides,” WISE 2021, Austin, USA by Ta Yu and Ke-Wei Huang
- (7) “Generalist Leaders, Specialized Subordinates - An Ensemble Learning Approach for Bankruptcy Prediction,” ICIS 2021, Austin, USA by Jian Hong (Joel) Quek and Ke-Wei Huang
- (8) “Correcting Measurement Error Bias in Aggregate-Level Regression Models with Individual-Level Data Mining” Decision Science Institute annual conference 2021, by Mengke Qiao and Ke-Wei Huang.
- (9) “Correcting the Unobserved Confounding Bias by Partial-DNN and Text Embedding” WITS 2021 (Best Paper Nominee) and SCECR 2021, by Mengke Qiao and Ke-Wei Huang.

- (10) “Displaced or augmented? How does Artificial Intelligence Affect Our Jobs: Evidence from LinkedIn” ICIS 2019, Munich, Germany (also in CSWIM 2019, Shenzhen, China) by Qi Wang, Xuanqi Liu, and Ke-Wei Huang
- (11) “Computer Vision and Metrics Learning for Hypothesis Testing: An Application of Q-Q Plot for Normality Test,” SCECR 2019, Hong Kong and INFORMS Data Science Workshop 2019, Seattle, USA. by Mengke Qiao, Xuanqi Liu, and Ke-Wei Huang
- (12) “Optimal Classification Performance Metric for Constructing Variables for Further Regression Analysis,” WITS 2018, San Jose, USA, by Mengke Qiao and Ke-Wei Huang
- (13) “Exploring the FinTech Jobs-Skills Fit of Financial and Information Technology Professionals: Evidence from LinkedIn,” ICIS 2018, San Francisco, USA, by Qi Wang and Ke-Wei Huang
- (14) “Hierarchical Accounting Variables Forecasting by Deep Learning Methods,” ICIS 2018, San Francisco, USA, by Mengke Qiao and Ke-Wei Huang (**Best Paper Nominee**)
- (15) “A Semiparametric Missing Value Imputation Approach for Predictive Analytics,” WITS 2017, Seoul, South Korea, by Jiayu Peng and Ke-Wei Huang
- (16) “Predicting Exercise Behavior in Fitness Applications: A Multi-Group Study,” ICIS 2017, Seoul, South Korea, by Zhou Ya, Atreyi Kankanhalli, and Ke-Wei Huang
- (17) “Does IT Help Firms to Become More Entrepreneurial?: The Role of Enterprise IT,” ICIS 2017, Seoul, South Korea, by Sangwook Ha, Atreyi Kankanhalli, and Ke-Wei Huang
- (18) “Hiring of Foreign Tech Professionals: An Absorptive Capacity Explanation,” CIST/INFORMs 2017, Houston, USA, by Sangwook Ha, Atreyi Kankanhalli, and Ke-Wei Huang
- (19) “Effects of Fitness Applications with SNS: How Do They Influence Physical Activity,” ICIS 2016, Dublin, Ireland, Ya Zhou, Atreyi Kankanhalli, and Ke-Wei Huang
- (20) “Does Social Media Marketing Really Work for Online SMEs?: An Empirical Study,” ICIS 2016, Dublin, Ireland, Sangwook Ha, Atreyi Kankanhalli, Jai Kishan, and Ke-Wei Huang
- (21) “Absorptive Capacity and Hiring of Foreign Tech Professionals: Evidence from U.S. Semiconductor Firms,” Annual Meeting of the Academy of Management (AOM 2016; TIM Division), Anaheim, USA, by Sangwook Ha, Atreyi Kankanhalli, and Ke-Wei Huang
- (22) “Gamification in Fitness Apps: How Do Leaderboards Influence Exercise?” ICIS 2015, Fort Worth, USA, by Yue Wu, Atreyi Kankanhalli, and Ke-Wei Huang
- (23) “The Monetary Value of Twitter Followers: Evidence from NBA Players,” CSWIM 2015, Hefei, China, by Zhuolun Li and Ke-Wei Huang
- (24) “The Making of Entrepreneurs from the IT Industry: Evidences from a Quasi Experiment with a Finite Mixture Model,” CSWIM 2015, Hefei, China, (**Best Paper Nominee**) by Qing Chen, Ke-Wei Huang, and Cheng Suang Heng

- (25) "IT Investment: The Unexpected Effects on Entrepreneurial Spawning," ICIS 2014, Auckland, New Zealand, by Qing Chen, Ke-Wei Huang, and Cheng Suang Heng
- (26) "The Monetary Value of Twitter Followers: Evidences from NBA Players," ICIS 2014, Auckland, New Zealand, by Zhuolun Li and Ke-Wei Huang
- (27) "Mobility of Scientists and Engineers: LinkedIn vis-à-vis patent records," Roundtable for Engineering Entrepreneurship Research (REER) 2014. Atlanta, USA, by Chunmian Ge, Ke-Wei Huang, and Ivan Png
- (28) "Optimal Pricing and Capacity Planning for Information Technology Service Provider under Service-Level Agreement," ICIS 2013, Milan, Italy, by Xiao Zou and Ke-Wei Huang
- (29) "Misclassification Bias in Patent Measures: Estimation and Applications," Asian Meeting of the Econometric Society AMES 2013, Singapore, by Chunmian Ge, Ke-Wei Huang, and Ivan Png.
- (30) "Do Economic Recession and Gender Influence the Likelihood of Entry Job in IT for IT Graduates?" ACM SIGMIS CPR 2013, Cincinnati, USA, by Chunmian Ge, Atreyi Kankanhalli, Ke-Wei Huang and Xiqing Sha
- (31) "Optimal Pricing and Capacity Planning for Information Technology Service Provider under Service-Level Agreement," Frontiers in Service Conference 2013, Taipei, Taiwan, by Xiao Zou and Ke-Wei Huang
- (32) "Mobility of Scientists and Engineers: LinkedIn vis-à-vis patent records," Research Workshop in Entrepreneurship & Innovation 2013, Singapore, by Chunmian Ge, Ke-Wei Huang, and Ivan Png
- (33) "Quantifying the Impact of Gamification on User Engagement in Online Q&A Communities," WISE 2012, Orlando, USA, by Zhuolun Li, Ke-Wei Huang, and Huseyin Cavusoglu
- (34) "Quantifying the Impact of Gamification on User Engagement in Online Q&A Communities," ICIS 2012, Orlando, USA, by Zhuolun Li, Ke-Wei Huang, and Huseyin Cavusoglu
- (35) "The Impacts of Human Capital on the Value Creation by Mergers and Acquisitions: An Event Study in Software Industry," ICIS 2012, Orlando, USA, by Chunmian Ge and Ke-Wei Huang
- (36) "A Model on Location-Based Service as Infomediary," ICEC 2012, Singapore, by Xiao Zou and Ke-Wei Huang (**Best Student Paper Nominee**)
- (37) "Exploring the Correlation between Operational and Financial Software Business Risks by Quantifying Risk Factors in Annual Reports," WISE 2011, Shanghai, by Ke-Wei Huang
- (38) "Evaluating the Impacts of Auction Bidding Restrictions on Consumer Surplus and Behaviors - An Empirical Study of Penny Auctions," ICIS 2011, Shanghai, China (**Best**

- Paper Nominee**) by Hanxiong Zheng, Khim Yong Goh, and Ke-Wei Huang
- (39) “R&D and Catch-Up Effect Among Software-as-a-Service Firms: A Stochastic Frontier Approach,” ICIS 2011, Shanghai, China, by Chunmian Ge and Ke-Wei Huang
- (40) “Firm-Level Inventory Performance and 10-K Inventory Risk Factors During the Financial Meltdown,” INFORMS 2011, Charlotte, USA, by Ying-Ju Chen and Ke-Wei Huang
- (41) “Evaluating the Impacts of Auction Bidding Restrictions on Consumer Surplus and Behaviors - An Empirical Study of Penny Auctions,” INFORMS 2011, Charlotte, USA, by Hanxiong Zheng, Khim Yong Goh, and Ke-Wei Huang
- (42) “Evaluating the Impacts of Auction Bidding Restrictions on Consumer Surplus and Behaviors - An Empirical Study of Penny Auctions,” CSWIM 2011, Harbin, China, by Hanxiong Zheng, Khim Yong Goh, and Ke-Wei Huang
- (43) “R&D and Catch-Up Effect Among Software-as-a-Service Firms: A Stochastic Frontier Approach,” PACIS 2011, Brisbane, Australia, by Chunmian Ge and Ke-Wei Huang
- (44) “Who Makes the Law? Political Economy Analysis and Evidence from Copyright Levies,” Society for the Advancement of Economic Theory, SAET 2010, Singapore, by Ke-Wei Huang and Ivan Png
- (45) “Pricing Data Services: Pricing by Minutes, by Gigs, or by Mega Bytes per Second?” WISE 2009, Phoenix USA, by Ying-Ju Chen and Ke-Wei Huang
- (46) “Firm-Level Productivity Analysis for Software-as-a-Service Companies,” ICIS 2009, Phoenix USA, by Ke-Wei Huang and Mengqi Wang
- (47) “Software Executives’ Optimal R&D Expense and Pricing Decisions in a Risky Market,” WISE 2008, Paris, France, by Ke-Wei Huang
- (48) “Pricing Digital Goods: Discontinuous and Declining Costs,” CIST/INFORMS 2006, Pittsburgh, PA, by Ke-Wei Huang and Arun Sundararajan
- (49) “Pricing Models for On-Demand Computing,” INFORMS 2006, Pittsburgh, PA, by Ke-Wei Huang and Arun Sundararajan
- (50) “Versions and Successive Generations: An Empirical Analysis of Pricing and Product Line Strategies in Software Markets,” CIST/INFORMS 2005 and Marketing Science 2006, Pittsburgh, PA, by Anindya Ghose, Ke-Wei Huang, and Arun Sundararajan
- (51) “Optimal and Equilibrium Price Discrimination Metrics for Digital Goods,” WISE 2005, Irvine, CA, by Ke-Wei Huang and Roy Radner
- (52) “A Competitive Analysis of Personalized Pricing with Quality Customization,” WISE 2005, Irvine, CA, by Ke-Wei Huang and Anindya Ghose
- (53) “Impact of CRM Technologies on Firm Profits: A Competitive Analysis of Personalized Pricing and Quality Customization,” CRM Workshop 2005, New York, NY, by Ke-Wei Huang and Anindya Ghose

Research Grants

2020 Singapore NRF Asian Institute of Digital Finance Research Grant: \$1,600,000 USD

(Title: “Extracting and Scoring the Reasoning and Prediction of Financial Experts’ Comments from Textual Information”)

2018 NUS Research Grant: \$50,000 USD

(Title: “Computer Vision for Automating Regression Diagnostic Tests”)

2017 NUS Institute of Data Science Grant: \$120,000 USD

(Title: The Singapore Smart Visual Checkpoint for Global Talents”)

2015 NUS Research Grant: \$97,000 USD

(Title: “Analyzing IT Entrepreneurs Spawning by Web Data”)

2013 NUS Research Grant: \$115,000 USD

(Title: “Human Capital Analytics based on Professional Social Networking Dataset”)

2010 NUS Research Grant: \$76,000 USD

(Title: “Examining the Impacts of Enterprise Software Innovations by Quantifying Technology News”)

2007 NUS Startup Grant: \$45,000 USD

(Title: “Optimal Pricing Metrics for Telecommunication and Network Industries”)

2006 Net Institute Summer Grant 2006 (with Arun Sundararajan) \$4,500 USD

Honors

- 2021 WITS Best Paper Nominee (with Mengke QIAO)
- 2018 ICIS Best Paper Nominee (with Mengke QIAO)
- 2016 Annual Faculty Teaching Excellence Award, NUS-Level
- 2013,14,16 Annual Faculty Teaching Excellence Award, School of Computing Level
- 2015 CSWIM 2015 Best Paper Nominee (with Qing CHEN and Cheng Suang HENG)
- 2012 ICEC 2012 Best Student Paper Nominee (by ZOU Xiao)
- 2011 ICIS 2011 Best Paper Nominee (with Hanxiong ZHENG and Khim Yong GOH)
- 2007 ACM SIGMIS (ICIS 2007) Doctoral Dissertation Award (Runner-up)
- 2006 Stern Fellowship of Excellence (1 out of 3 PhD students at Stern, NYU)
- 2006 First place of 2006 Cambridge University (UK) Entrepreneurs Business Creation Competition ([MARGO-Technologies](#)) (with Han LIN)
- 2005-2007 Elite Scholarship from National Science Council of Taiwan (USD\$20K per year)
- 1997 National Master Thesis Award in Finance,
First Prize from the Management Science Association of Taiwan.
- 1995-97 Scholarship from National Taiwan University, Finance, Ranked First.

Teaching Experiences

- “Capstone Project for FinTech” Master, Digital Financial Technology (22-24)
- “Machine Learning for Finance” Master, Digital Financial Technology (22-24)
- “Risk Analytics for Financial Services” Undergraduate, Business Analytics (20-21)
- “Hands-on with Business Analytics” Master, Business Analytics (21-22)
- “Online FinTech and Digital Business” Undergraduate, NUS SCALE (21-22)
- “Decision Making Technologies” Master, Business Analytics (17-19)
- “Machine Learning for Economic Forecasting” Master, Economics (18-19)
- “Search Engine Optimization and Analytics” Undergraduate, Business Analytic (16-18).
- “Business and Finance IT Management” Master of Technology in Leadership (17-18)
- “Customer Data Analytics” STMI Training Class (16)
- “Capstone Projects for Business Analytics,” Undergraduate, Information Systems (15).
- “Mobile and Ubiquitous Commerce,” Undergraduate, Information Systems (11 to 16).
- “Telecoms and International Networks,” Master, Information Systems (07 to 14).
- “E-Commerce and B2C Applications,” Undergraduate, Information Systems (10).
- “Financial Markets and Portfolio Management,” Master, Economics (08-09)
- “Computer Based Systems for Management Support,” Undergraduate, Stern, NYU (06)

Major Data Competition Results:

- 2020 Adobe Analytics Challenge: Ranked #6 out of 1600 teams, Mentor for Team Pegasus-NUS
- 2018 KDD Cup. Ranked #15 out of 669 Teams

Academic Services

- Ad-Hoc Associate Editor: *MIS Quarterly* Special Issue 2019, 2022
- 2023 PACIS Doctoral Consortium Chair
- 2022 ICIS Doctoral Consortium Mentor, Best Dissertation Award evaluation panel
- 2019 ICIS Junior Faculty Workshop Mentor
- Conference Track Chair: PACIS 2015, 2020 & 2021 (Economics. of IS Track), WEB 2011; ICIS 2021(IS and the Future of Works Track)
- Associate Editor: ICIS (09, 11-14, 16-20, 23)
- NUS: The main author of the proposal for the inaugural PhD in Digital Financial Technology and MSc in Digital Financial Technology.
- NUS Research Council Expert Panel, Information & Mathematics Cluster (2016-now)
- Program Committee: CIST (09-11, 15-23), ICEC (07, 09, 15, 16).

- Innovation, Connect, Economy Workshop, 2017. Moderator of Fintech panel.
- NUS, IS Department Search Committee member 2021-23.
- NUS, IS Department EXCO member 2017.
- Local Arrangement & Publicity: *Big Data & Analytics in Healthcare* 2014, PACIS 2015.
- Discussant: WISE (07, 08, 11, 14, 21), ICIS (07), CIST (06), CSWIM (11-12, 14), NET Institute (07), TEIS (15).
- Journal Reviewer: *Management Science, Information Systems Research, MIS Quarterly, Marketing Science, Manufacturing & Service Operations Management, Production and Operations Management, IEEE Transactions on Engineering Management, Decision Sciences, Decision Support Systems, Journal of Strategic Information Systems, Journal of the Association for Information Systems, Information and Management, Electronic Commerce Research and Applications, Journal of Organizational Computing and Electronic Commerce.*
- External Reviewer: Research Grants Council (RGC) of Hong Kong 2016-2022

Professional Work Experiences

2006	Co-founder of MARGO Technologies, Cambridge UK.
2000 to 2001	Software Developer at Computer Associates Ltd., Taipei, Taiwan.
1999 to 2000	Economics Department, National Taiwan University. Full-Time Research Assistant for Professor Chung-Ming Kuan.
1997 to 1999	(Required Military Service) Finance Center, Defense Ministry. Rank: Second Lieutenant. Financial Information Officer.

PhD Students Graduated and Placement after Graduation

1. Chunmian GE (2014, Assistant Professor, South China University of Technology)
2. Xiao ZOU (2015, Data Scientist, SingTel)
3. Zhuolun LI (2016, Research Fellow, Singapore Management University)
4. Qing CHEN (2016, Assistant of Chairman, China Insurance Investment Fund)
5. Sangwook HA (2019, Assistant Professor, BNU-HKBU United International College)
6. Mengke QIAO (2021, Assistant Professor, University of Science and Technology of China)
7. Qi WANG (2022, Assistant Professor, City University of HK)

Invited Talks

- Academic: National Sun Yat-Sen University 2021 November, NLP and Digital Finance workshop (2021 Feb Singapore), New York University 2020 March, University of Minnesota 2020 February, University of Washington 2020 February, National Chengchi University 2019 November, South China University of Technology 2019 October, HKUST 2019 September, Nanyang Technological University 2018 April, Chinese University of Hong Kong 2017 November, Hong Kong University 2015 May, Roundtable for Engineering Entrepreneurship Research (REER), Atlanta USA 2014 November, National Taiwan University 2014 May, INFORMS, Charlotte USA 2011 November, National University of Singapore 2007 April, Georgia Tech. 2007 February, University of Connecticut 2006 December, University of Pennsylvania 2006 February
- Non-Academic: SKKU EMBA: Generative AI in Finance (2024/02), NUS Fintech Summit 2024 Panel Discussion: Fintech Eco-System in SG (2024/1), Mizuho Bank Training Class: Generative AI in Finance (2024/01), Keynote Speaker at a Financial Inclusion Workshop organized by Shanghai National Accounting Institute: AI and Financial Inclusion (2023/12), AIDF SFF Panel Discussion: Generative AI in Finance (2023/11), SKKU EMBA: Generative AI in Finance (2023/02), UOB (2023/1), SG Smart Nation 101 GUIDE TO ANYTHING TECH! (14/12/2020, Your 101 Guide to FinTech), NUS SoC Webinar (11 Nov 2020, AI and Future of Jobs), Monetary Authority of Singapore (MAS, Central Bank of Singapore) 2016 September.