

Guodong (Gordon) Gao

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POSITIONS HELD

Johns Hopkins University

2022- Professor, Carey Business School, Johns Hopkins University
Co-Director, Center for Digital Health and Artificial Intelligence (CDHAI)

University of Maryland, College Park

2022 Dean's Professor of AI in Healthcare, University of Maryland, College Park

2019-2021 Professor, R. H. Smith School of Business, University of Maryland, College Park
Co-Director, Center for Health Information and Decision Systems (CHIDS)
Director, Health Insights AI Lab

2013-2019 Associate Professor (with Tenure), R. H. Smith School of Business, University of Maryland

2005-2013 Assistant Professor, R. H. Smith School of Business, University of Maryland

EDUCATION

Ph.D. The Wharton School, University of Pennsylvania, 2005

M.B.A. Tsinghua-MIT Sloan Joint MBA Program, 2000

B.Econ. Economics, Tsinghua University, China, 1998

B.Eng. Electrical Engineering, Tsinghua University, China, 1998

RESEARCH INTERESTS

- AI in healthcare, AI Equity and Fairness
- Patient empowerment, mHealth, and behavioral change
- Quality transparency: online ratings, quality certification, and disclosure

RESEARCH PAPERS (SELECTED)

Total citations: 6,571. H-index: 29, i10-index: 38 (Mar 2024, from Google Scholar)

- Wang, W., **Gao, G.**, and Agarwal, R. (2023) "Friend or Foe? Teaming between AI and Workers with Variation in Experience." Forthcoming, **Management Science**, 2023
- Liu, C., Wang, W., **Gao, G.**, and Agarwal, R. (2023) "The Value of Virtual Engagement: Evidence from a Running Platform." Forthcoming, **Management Science**, 2023
- Agarwal, R., Bjarnadottir, M., Rhue, L., Dugas, M., Crowley, K., Clark, J., and **Gao, G.** (2023) "Addressing Algorithmic Bias and the Perpetuation of Health Inequities: An AI Bias Aware Framework." **Health Policy and Technology**, March 2023.
- Wang W, Foutz NZ, **Gao, G.** (2022) "Huddling with families after disaster: Human resilience and social disparity". **PLoS ONE**. 2022;17(9):e0273307.
- Wang, W., Luo, J., Dugas, M., **Gao, G.**, Agarwal, R., and Werner, R. (2022) "Recency in Online Physician Ratings," **JAMA Internal Medicine**, 2022;182(8):881-883.

- Shi, J., Gao, X., Kinsman, W., Ha, C., **Gao, G.**, and Chen, Y. (2022) “DI++: A deep learning system for patient condition identification in clinical notes,” *Artificial Intelligence in Medicine*, 2022(123), 1–13.
- Su, J., Dugas, M., **Gao, G.**, and Guo, X. (2022) “Building social identity-based groups to enhance online peer support for patients with chronic disease: A pilot study using mixed-methods evaluation,” *Translational Behavioral Medicine*, 2022, 12(5):702-712
- Liu, C.-W., **Gao, G.**, and Agarwal, R. (2022). “Reciprocity or Self-Interest? Leveraging Digital Social Connections for Healthy Behavior,” *MIS Quarterly*, 46(1), 261–298
- Agarwal, R., Dugas, M., Ramaprasad, J., Luo, J., Li, G., and **Gao, G.** (2021) “Socioeconomic Privilege and Political Ideology Are Associated with Racial Disparity in COVID-19 Vaccination.” *Proceedings of the National Academy of Sciences*, 118(33) (August 17, 2021): e2107873118.
- Shukla, A., **Gao, G.**, and Agarwal, R. (2021) “How Digital Word-of-Mouth Affects Consumer Decision Making: Evidence from a Natural Experiment,” *Management Science*, 67(3), 1546–1568.
- Su, J., Dugas, M., Guo, X., and **Gao, G.** (2020) “The Influence of Personality on mHealth Adoption Preference and Active Utilization Among Patients with Diabetes: A Prospective Pilot Study,” *JMIR mHealth and uHealth*, 8(8), <https://mhealth.jmir.org/2020/8/e17709>.
- Dugas, M., Wang, W., Crowley, K., Iyer, A., Peebles, M., Shomali, M., and **Gao, G.** (2020) “Engagement and Outcomes Associated with Contextual Annotation Features of a Digital Health Solution,” *Journal of Diabetes Science and Technology*, 1–8, <https://journals.sagepub.com/doi/full/10.1177/1932296820976409>.
- Dugas, M., **Gao, G.**, and Agarwal, R. (2020) “Unpacking mHealth interventions: A systematic review of behavior change techniques used in randomized controlled trials assessing mHealth effectiveness,” *Digital Health*, 6, 1–16
- Agarwal, R., Dugas, M., **Gao, G.**, and Kannan, P. K. (2020). “Emerging technologies and analytics for a new era of value-centered marketing in healthcare,” *Journal of the Academy of Marketing Science*, 48(1), 9–23.
- Liu, C.-W., **Gao, G.**, and Agarwal, R. (2019). “Unraveling the ‘Social’ in Social Norms: The Conditioning Effect of User Connectivity,” *Information Systems Research*, 30(4), 1272–1295.
(**Best Conference Paper Award runner-up** at ICIS 2016)
- Sun, T., **Gao, G.**, and Jin, G. (2019) “Mobile Messaging for Offline Social Interactions: a Large Field Experiment,” *Management Science*, 65(6), 2717–2736.
(**Best Conference Paper Award** at Informs/CIST 2015)
- Dugas, M., Crowley, K., **Gao, G.**, Xu, T. Agarwal, R., Krgulanski, A., and Steinle, N. (2018) “Individual Differences in Regulatory Mode Moderate the Effectiveness of a Pilot mHealth Intervention for Diabetes Management among Older Veterans,” *PLOS ONE*, 13(3), <https://doi.org/10.1371/journal.pone.0192807>.
- Hao, H., Zhang, K., Wang, W., and **Gao, G.** (2017) “A tale of Two Countries: International Comparison of Online Doctor Reviews Between China and the United States,” *International Journal of Medical Informatics*, 99, 37–44.
- Goh, J. M., **Gao, G.**, and Agarwal, R. (2016) “The Creation of Social Value: Can an Online Health Community Reduce Rural-Urban Health Disparities?” *MIS Quarterly*, 40(1), 247–263.
- **Gao, G.**, Greenwood, B., Agarwal, R., and McCullough, J. (2015) “Vocal Minority and Silent Majority: How Do Online Ratings Reflect Population Perceptions of Quality?” *MIS Quarterly*, 39(3), 565–589.
(**MIS Quarterly Paper of the Year Award**)
- Gray, B., Vandergrift, J., **Gao, G.**, McCullough, J., and Lipner, R. (2015) “Website Ratings of Physicians and Their Quality of Care,” *JAMA Internal Medicine*, 175(2), 291.
(Impact factor: 15.04, ranked #2 among internal medicine journals. *JAMA* is widely regarded as one of the top three medical journals, together with the *New England Journal of Medicine* and *Lancet*.)

- Anderson, D., **Gao, G.**, and Golden, B. (2014) “Life is All about Timing: An Examination of Differences in Treatment Quality for Trauma Patients Based on Hospital Arrival Time,” *Production and Operations Management*, 23(12), 2178–2190.
- Ye, S., **Gao, G.**, and Viswanathan, S. (2014) “Strategic Behavior in Online Reputation Systems: Evidence from eBay,” *MIS Quarterly*, 38(4), 1033–1056.
- Angst, C., Agarwal, R., **Gao, G.**, Khuntia, J., and McCullough, J. (2014) “Information Technology and Voluntary Quality Disclosure by Hospitals,” *Decision Support Systems*, 57(1), 367–375.
- Özpolat, K., **Gao, G.**, Jank, W., and Viswanathan, S. (2013) “The Value of Third-Party Assurance Seals in Online Retailing: An Empirical Investigation,” *Information Systems Research*, 24(4), 1100–1111.
- **Gao, G.** and Hitt, L. (2012) “Information Technology and Trademarks: Implications to Product Variety,” *Management Science*, 58(6), 1211–1226.
- **Gao, G.**, McCullough, J. S., Agarwal, R., and Jha, A. K. (2012) “A Changing Landscape of Physician Quality Reporting: Analysis of Patients’ Online Ratings of Their Physicians Over a 5-year Period,” *Journal of Medical Internet Research*, 14(1), e38.
(Impact factor: 4.7, ranked #1 in Medical Informatics and #2 in Health Sciences/Health Services Research)
- Goh, J. M., **Gao, G.**, and Agarwal, R. (2011) “Evolving Work Routines: Adaptive Routinization of Information Technology in Healthcare,” *Information Systems Research*, 22(3), 565–585.
- **Gao, G.**, Gopal, A., and Agarwal, R. (2010) “The Contingent Effects of Quality Signaling,” *Management Science*, 56(6), 1012–1029.
- Dellarocas, C., **Gao, G.**, and Narayan, R. (2010) “Are Consumers More Likely to Contribute Online Reviews for Hit Products or Niche products?” *Journal of Management Information Systems*, 27(2), 127–158.
- Agarwal, R., **Gao, G.**, DesRoches, C., and Jha, A. (2010) “The Digital Transformation of Healthcare: Current Status and the Road Ahead,” *Information Systems Research*, 21(4), 796–809.
- Gopal, A. and **Gao, G.** (2009) “Certification in the Indian offshore IT services industry,” *Manufacturing & Service Operations Management*, 11(3), 471–492.
- Carmel, E., **Gao, G.**, and Zhang, N. (2008) “The Maturing Chinese Offshore IT Services Industry: It Takes 10 Years to Sharpen a Sword,” *MIS Quarterly Executive*, 7(4), 157–170.
- Clemons, E. and **Gao, G.** (2008) “Consumer Informedness and Diverse Consumer Purchasing Behaviors: Traditional Mass-Market, Trading Down, and Trading Out into the Long Tail,” *Electronic Commerce Research and Applications*, 7(1), 3–17.
- Clemons, E., **Gao, G.**, and Hitt, L. (2006) “When Online Review Meets Hyperdifferentiation: a Study of Craft Beer Industry,” *Journal of Management Information Systems*, 23(2), 149–171.

PATENT

- Systems and methods for analyzing, interpreting, and acting on continuous glucose monitoring data, US Patent number: 20210290113; International: WO2021188942A1, 2021

HONORS and AWARDS

- *Management Science* Meritorious Service Award for Associate Editor, 2021
- Distinguished Teaching Award, University of Maryland, 2020
- University of Maryland Research Excellence Honoree, 2019
- NSF CAREER Award, 2013-2018
- *Management Science* Meritorious Service Award for Associate Editor, 2017
- Best Conference Paper first runner-up, ICIS, 2016

- *MIS Quarterly* Best Paper of the Year Award, 2016
- Best Conference Paper Award, Informs/CIST, 2015
- Cloudera Academic Partnership, 2014
- Amazon Web Services Teaching Grant, 2014
- *Management Science* Meritorious Service Award, 2013, 2014
- College of Healthcare Operations Management (CHOM) Best Paper Award Finalist, 2012
- Diana Forsythe Award Finalist at the American Medical Informatics Association (AMIA) conference, 2012
- Best Working Paper Award (first place), Dingman Center, 2011
- Best Conference Paper first runner-up, ICIS, 2004
- ICIS Doctoral Consortium, 2004
- Wharton Doctoral Fellowship, University of Pennsylvania, 2000-2004
- Honored Graduate, Tsinghua University, 1998
- Winner of the first Business Plan Competition in China, team leader, 1998
- Ranked Top 10 among over 400,000 students in the National College Entrance Examination in Shandong province, China, 1993

Grants

Awarded:

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| • NIH R01 Grant on Voice AI (\$2,988,698) My role: Site PI | 2023-2028 |
| • Research collaboration with DrFirst (\$50,000) My role: PI | 2023- |
| • Research collaboration with WellDoc (\$50,000) My role: PI | 2022- |
| • NIH AIM-AHEAD Grants for Conference (\$50,000) My role: PI | 2022, 2023 |
| • NIH AIM-AHEAD Grant My role: MPI | 2021-2024 |
| • AHRQ grant for “Conference on Health IT and Analytics” (\$150,000) My role: Co-I | 2021-2023 |
| • Department of Justice on AI for Physician Fraud Prediction (\$842,768) My role: Co-PI | 2020-2022 |
| • University Teaching Innovation Grant, (\$10,000) My role: Co-PI | 2020 |
| • Inovalon-CHIDS Collaboration on AI (\$300,000) My role: PI | 2019-2021 |
| • NSF CAREER Award IIS-1254021 (\$417,108) My role: PI | 2013-2018 |
| • AHRQ grant for Conference on Health IT and Analytics (\$150,000) My role: co-I | 2018-2020 |
| • Inovalon-CHIDS Collaboration on AI (\$300,000) My role: PI | 2017-2019 |
| • Leir Charitable Foundations (\$98,000) My role: site PI | 2017-2018 |
| • MIPS grant (\$99,999) My role: PI | 2016 |
| • MIPS grant (\$10,000) My role: PI | 2015 |
| • Leidos research seed grant (\$50,000) My role: co-I | 2015 |
| • AHRQ conference support for WHITE (\$35,000) | 2014-2016 |
| • Lockheed Martin research grant on Intensive Care Unit (ICU) productivity (\$300,000) | 2011-2012 |
| • AHRQ Grant Program for Large Conference Support (\$56,850) | 2011-2013 |
| • UMD Summer research grant (\$5,143) | 2010 |
| • Research grant (\$5,000), Amazon.com | 2008 |
| • Business and International Education (BIE) grant (\$4,000), University of Maryland | 2006 |
| • UMD General Research Board (GRB) Summer Research Award (\$8,700) | 2006 |

RECENT INVITED TALKS

- 2024: Arizona State University (Panelist at the Research Workshop)
- 2023: Virginia Tech, UIUC, University of Connecticut
- 2022: Universität Mannheim, University of Delaware
- 2021: University of Arizona (Business school), University of Iowa (Business school), University of Maryland Baltimore (Medical school), keynote at Guizhou Sustainable Development Conference, Keynote at Huazhong Science and Technology University
- 2020: Temple University (Business school), keynote at International Conference on Digital Health and Medical Analytics (DHA 2020)
- 2019: University of Minnesota (Business school), Penn State (College of Health and Human Development), University of Pittsburgh (Business school), keynote at International Conference on Smart Health (ICSH 2019)
- 2018: Temple University (Marketing), Penn State (Business school), University of Utah (Business school), University of Georgia (College of public health)
- 2017: University of Washington (Business school)
- 2016: Michigan State University (Business school), George Mason University (College of health and human services)
- 2015: University of Rochester (Business school), University of Texas at Dallas (Business school)
- 2013: Johns Hopkins University (School of medicine), American Board of Internal Medicine
- 2012: University of Minnesota (Business school), Rochester (Medical center), George Mason Medical Center, Lehigh University (Health Systems Engineering symposium).

TEACHING

- **(New program development)** Certificate Program of AI for Business, 2023-
- Big Data Machine Learning: 2022, 2023
- **(New program development)** AIM-AHEAD Collaboration with AIHEC (American Indian Higher Education Consortium, 2023-
- **(New program development)** AIM-AHEAD Program for AI Readiness (PAIR), 2023-
- **(New program development)** AIM-AHEAD Professional Development Fellow program, 2021-
- **(New program development)** AI Leadership in Healthcare Exec Ed program, 2020-
- **(New program development)** AI for Business Leaders Exec Ed program, 2021-
- **(New course development)** BMGT408E: Big Data and Artificial Intelligence for Business, 2017 fall
- **(New course development)** BMGT758C: Big Data and AI for P-MBA, 2016
- **(New course development)** BMGT758B: Big Data and AI for MSIS, 2015
- BUSI622: Managing Digital Businesses and Markets (MBA Core/Selective), 2009, 2011-2015
- BMGT808: PhD Seminar on Current Research in Information Systems, 2008, 2010, 2013, 2014, 2017
- **(New course development)** BMGT301: Introduction to Information Systems (undergraduate core course), 2006-2014

SERVICE AND ASSOCIATIONS

Leadership

- Co-director, Center for Digital Health and Artificial Intelligence (CDHAI), 2022-present
- Co-director, Center for Health Information and Decision Systems (CHIDS), 2011-2022
- Founding Director, Health Insights AI Lab, 2017-2022

- Co-Chair, Conference on Health IT and Analytics (CHITA), 2010-present
- Academic Director, AI Leadership in Healthcare Exec Ed program, 2020-present
- Academic Co-Director, AI for Business Leaders Exec Ed program, 2021-present
- President, Chinese Economists Society, 2021-2022
- Initiator and Co-founder of “Big Data in Action” meetup in DC (with over 1,000 members), 2016-2021
- Smith School organizer for the MBA Mashup at Healthdatapalooza with AcademyHealth, 2017

Editorial

- Associate Editor, *Management Science*, 2015-2022 (Information Systems department and Healthcare Management department)
- Associate Editor for *ISR* special issue on “Unleashing the Power of Information Technology for Strategic Management of Disasters,” 2021
- Senior Editor for special issue at *Production and Operations Management* on “Diversity, Equity, and Inclusion in Operations and Supply Chain Management,” 2022
- Associate Editor for *MIS Quarterly* special issue on “Digital Resilience,” 2020
- Co-Director of the Smith School IS undergraduate program, 2013-2018
- Associate Editor, *MIS Quarterly*, 2014.1-2015.12
- Guest co-editor, Special Issue on Big Data and Analytics in Healthcare, *IS Frontiers*, 2015
- Guest co-editor, Focus Theme on Big Data and Analytics in Healthcare, *Methods of Information in Medicine*, 2015
- Co-editor for special issue on Health IT and Economics at *Health Systems*, 2012
- Co-editor for special issue on eHealth at the *Journal of Policy and Internet*, 2011
- Editorial board of the new journal *Health Systems*, 2011
- Senior Editor for special issue at *Production and Operations Management (POMS)*, 2010

Conferences

- Co-Chair, annual Conference on Health IT and Analytics (CHITA), 2010-present
- Track co-chair, ICIS 2019
- PACIS doctoral consortium faculty member, PACIS 2019
- Paper-a-thon committee member at ICIS, 2018
- Associate Editor for ICIS 2009-2017
- Program Co-Chair, BDAH 2014 - 2nd International Conference on Big Data and Analytics in Healthcare
- Track chair of Health IT for AMCIS 2011, 2012
- Track co-chair of Health IT for PACIS 2012
- CIST program committee, 2008-2016
- Invited Session Chair in INFORMS Annual Meeting 2004, 2008, 2011

Committees and review panels

- Chair, DOIT IS Teaching Faculty recruiting committee, 2019
- Co-Chair, DOIT Faculty recruiting committee, 2015-2016
- Smith School Undergraduate Grade Dispute Committee, 2014-2015
- UMD Banneker Key scholarship review and interview committee, 2013
- National Science Foundation (NSF) review panel, 2013, 2014
- Smith School Faculty Council, 2012-2013
- Smith School Research Computing Committee, 2012

- External Reviewer for Hong Kong Research Grants Council, Romanian Science Foundation, Romanian National Council for Research and Development, National University of Singapore, and the United States-Israel Binational Science Foundation

Referee

JAMA, Health Affairs, Management Science, Information Systems Research (ISR), Journal of Management Information Systems (JMIS), Manufacturing & Service Operations Management (MSOM), MIS Quarterly (MISQ), Decision Support Systems (DSS), Information and Management, Journal of Operations Management, Journal of Consumer Behavior, European Journal of Information Systems, International Conference on Information Systems (ICIS), Hawaii International Conference on System Sciences (HICSS), Conference on Information Systems and Technology (CIST)

Membership

AMIA, AcademyHealth and iHEA
American Society of Health Economists (ASHEcon)
Association for Information Systems (AIS)
Institute for Operations Research and the Management Sciences (INFORMS)
American Economic Association (AEA)

PhD STUDENT SUPERVISION

- Chair/co-chairs: Vicki Wolcott, Aishwarya Shukla, Weiguang Wang, Shiping Liu, Junjie Luo
- Committee member: Dongwon Lee, Tianshu Sun, Shun Ye, Chewei Liu, JM Goh, Jiban Khuntia, Brad Greenwood, Koray Ozpolat, Sherae Daniel, Abrar Al-Hasan, Dobin Yim, Gustavo Saraiva (Economics), Han-Chin Shing (Computer Science), Maya Mudambi, Yifei Wang, Yiming Chen (Public Health), Nianyang Wang (Public Health), Sen Ray Lin (Public Health)

MEDIA COVERAGE

- *The Wall Street Journal, The Washington Post, NPR News, US News and World Report, XM Satellite Radio, Science Daily, Reuters, Science of Better* podcast (INFORMS news release), *Medical News Today, iHealthBeat, Yahoo Health, The Philadelphia Inquirer, NY Newsday, WebMD, Health magazine, MedicineNet*

INDUSTRY COLLABORATION

Amazon.com, American Board of Internal Medicine, CareFirst BlueCross BlueShield, FDA, Inovalon, Kaiser Permanente, MedStar, NIH, Shock Trauma Center of University of Maryland Medical Center, WellDoc, UMMC/Veterans Affairs in Baltimore