

## **Dawei (David) Zhang**

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### **ACADEMIC EMPLOYMENT**

August 2021 – Present	Associate Professor with tenure College of Business, Lehigh University
August 2015 – July 2021	Assistant Professor College of Business and Economics, Lehigh University
August 2013 – July 2015	Assistant Professor Kania School of Management, University of Scranton
September 2007 – June 2013	Instructor, Research/Teaching Assistant Haskayne School of Business, University of Calgary, Canada

### **EDUCATION**

**Ph.D. Management Information Systems, 2013**

Haskayne School of Business, The University of Calgary, Canada

Thesis: “Studies in IT: Capacity Utilization and Option Market Information”

Supervisor: Dr. Barrie R. Nault

**M.S. Economics, 2006**

The Hong Kong University of Science and Technology, Hong Kong

**B.S. Computer Science, 2005**

Sun Yat-sen University, China

Minor: French

### **RESEARCH INTERESTS**

- Economics of Information Systems
- Value of IT as reflected in
  - Substitution/complementarity with other production inputs such as labor
  - Contribution to output as a production input
  - The financial markets perceived by the investors
  - Improving healthcare outcomes
  - E-commerce business models

**REFEREED JOURNAL ARTICLES**

- Wang, K., Mai. Fe., Shang. Z., Zhang. D., X. Peng (2025), “Analyzing Professional Ethics of Physicians Using Online Patient Reviews: A Machine Learning Approach,” *Production and Operations Management*, Forthcoming.
- Zhang. D., Peng. G., Yao. Y., T. R. Browning (2024), “Is a College Education Still Enough? The IT-Labor Relationship with Education Level, Task Routineness, and Artificial Intelligence,” *Information Systems Research*, 35(3): 992-1010.
- Wei. J., Wei. X., Zhang. D., J. Liu (2023), “First-party Content and Market Concentration on a B2B E-Commerce Platform: Analytical and Empirical Evidence,” *Decision Support Systems*, 170, 113958.
- Mai. F., Ko. D., Shan. Zhe., D. Zhang (2023), “The Impact of Accelerated Digitization on Patient Portal Use by Underprivileged Racial Minority Groups During COVID-19: Longitudinal Study,” *Journal of Medical Internet Research*, 25:e44981.
- Zhang, D., Lyle, M. & Nault, B.R (2023), “Trading volume and open interest from options markets as measures of the effect of IT announcements,” *Information Technology and Management*, 25, 113-123.
- Zhang, D., Nault, B. R., X. Wei (2019), “The Strategic Value of IT in Setting Productive Capacity,” *Information Systems Research*, 30(4), 1124-1144.
- Ko. D., Mai. F., Shan., Z., D. Zhang (2019), “Operational Efficiency and Patient-Centered Healthcare: A View from Online Physician Reviews,” *Journal of Operations Management*, 65(4), 353-379.
- Zhang. D., B. R. Nault (2019), "Measuring Risk from IT Initiatives Using Implied Volatility," *Journal of the Association for Information Systems*, 20(11), 1566-1588.
- Peng, G., D. Zhang (2019), “Does Information Technology Substitute for or Complement Human Labor? A Dynamic Stratified Analysis on European Countries,” *Decision Sciences*, 51(3), 720-754.
- Lin, X., Zhang, D., Y. Li (2016), “Delineating the Dimensions of Social Support on Social Networking Sites and Their Effects: A Comparative Model,” *Computers in Human Behavior*, 58, 421-430.
- Zhang, D., Cheng, Z., Mohammad, H. Q., B. R. Nault (2015), “Information Technology Substitution Revisited,” *Information Systems Research*, 26(3), 480–495.

**SELECTED WORKING PAPERS**

- “An empirical investigation of free medical consultation livestreaming by doctors: Impacts on online and offline service demand” (with S. Ma, Y. Wang, X. Peng, and F. Lai).
- “Operational Efficiency in Telemedicine: A Driver of Subsequent Patient Visits” (with X. Li, H. Zhang, and X. Peng).
- “Does Pre-Login Search Matter? Evidence from a Mobile Commerce Platform” (with Q. He, L. Zhang and O. Yao).
- “The Impact of Unions on Technology Investment” (with I. Hwang and D. Mahony).
- “To Differentiate or Not to Differentiate: The Visual Display of Product Attributes in Online Retailer Faceted Product-Search Systems” (with Q. He, J. Dearden, Y, Yao).
- “First-party Content as a Strategic Decision for Platform Growth – Evidence from a B2B Platform” (with J. Wei and X. Wei).
- “First-party Content as a Strategic Decision for Platform Product Variety – Evidence from a B2B platform” (with J. Wei and X. Wei).

- “Do Foreign IT Workers Substitute for or Complement the Natives?” (with G. Peng).
- “Interdependence of IT Investment in Supply Chains” (with Z. Cheng, B. R. Nault, and F. Gong).

#### BOOK CHAPTERS

- Lin, X., Zhang, D., Y. Li. (2015), “On the Relationship between Online Social Support and Users’ Continuance Intention – Evidence from Social Network Sites”, *Handbook of Research on Integrating Social Media into Strategic Marketing*, pp. 140 – 152, IGI Global, USA.

#### RESEARCH GRANTS

- Principal Investigator, “Do Electronic Medical Records Always Increase the Efficiency of Operating Rooms?” Internal Research Grant, University of Scranton, 2014, \$2000.

#### CONFERENCE & WORKSHOP PRESENTATIONS

- Zhang Hui’s medical conference at Bali island, July, 2025.
- “Which Products on Top? Online Retailers’ Choice of Display Prominence,” with Q. He, J. Dearden, and Y. Yao. *The 2024 Conference on Information Systems and Technology (CIST 2024)*, Seattle, WA, October 19-20, 2024.
- “The Impact of Labor Unions and AI Productivity and AI Innovation,” with I. Hwang and D. Mahony. *The 2024 Conference on Information Systems and Technology (CIST 2024)*, Seattle, WA, October 19-20, 2024.
- “Strategizing Product Display: Analyzing Depth vs. Width in Online Retail Personalization,” with Q. He, J. Dearden, and Y. Yao. *The 17<sup>th</sup> China Summer Workshop on Information Management (CSWIM 2024)*, Xiamen, China, June 29 – 30, 2024.
- “Labor Unions, IT, and Productivity - An Industry-level Analysis,” with I. Hwang, and D. Mahony. *The 2023 DSI Conference, Atlanta, GA, November 12-20, 2023*.
- “Analyzing Professional Ethics of Physicians Using Online Patient Reviews: A Machine Learning Approach,” with K. Wang, F. Mai, Z. Shan, and X. Peng. *The 2023 DSI Conference, Atlanta, GA, November 12-20, 2023*.
- “Analyzing Professional Ethics of Physicians Using Online Patient Reviews: A Machine Learning Approach,” with K. Wang, F. Mai, Z. Shan, and X. Peng. *The 33<sup>rd</sup> Annual POMS Conference, Orlando, FL, May 21-25, 2023*.
- “How Much Personalization Do You Want? An Analytical Model of Online Product Displays,” with He. Q., Dearden. J., and O. Yao. *The 2023 INFORMS Annual Meeting, Phoenix, AZ, October 15-18, 2023*.
- “Does Pre-Login Search Matter? Evidence from a Mobile Commerce Platform,” with He. Q., L. Zhang., and O. Yao. *The 2023 Hawaii International Conference on System Sciences (HICSS 2023)*, Hawaii, January 3 – 6, 2023.
- “Does Pre-Login Search Matter? Evidence from a Mobile Commerce Platform,” with He. Q., L. Zhang., and O. Yao. *The 2022 INFORMS Annual Meeting*, Indianapolis, IN, October 15-16, 2022.
- “Does Pre-Login Search Matter? Evidence from a Mobile Commerce Platform,” with He. Q., L. Zhang., and O. Yao. *The 2022 Conference on Information Systems and Technology (CIST 2022)*, Indianapolis, IN, October 15-16, 2022.

- “Is COVID-19 Widening the Racial Digital Divide in Healthcare? Evidence from Patient Portal Usage,” with F. Mai, Z. Shan, and D. Ko. *HITS-Health Information Technology Symposium*, Virtual Conference, December 15, 2020 (Best Paper Award).
- “The Monitoring Role of Online Physician Reviews on Prescription Behavior,” with F. Mai and Z. Shan. *The Conference on Health IT and Analytics (CHITA)*, Virtual Conference, October 8-10, 2020.
- “Determinants of Seller-buyer Trading Patterns on A B2B Trading Platform,” with Wei. J., Liu. J., and X. Wei. *The 2020 INFORMS Annual Meeting*, Virtual Conference. 2020.
- “Substitutive First-party Content as a Strategic Decision for Platform Growth – Evidence from a B2B Platform,” with Wei. J., Liu. J., and X. Wei. *The 2020 Americas Conference on Information Systems (AMCIS)*, Virtual Conference, August 12 – 16, 2020.
- “The Complementarity between Foreign and Native IT Workers: Evidence from an Industry-Level Analysis” with Peng. G. and D. Zhang. *The 2020 Americas Conference on Information Systems (AMCIS)*, Virtual Conference, August 12 – 16, 2020.
- “Interdependence of IT Investment in Supply Chains,” with Z Cheng, B. R. Nault and F. Gong. *The 2019 INFORMS Annual Meeting*, Seattle, WA, October 20 – 23, 2019.
- “Do Foreign IT Workers Substitute for or Complement the Natives?” with G. Peng. *The 2019 Americas Conference on Information Systems (AMCIS)*, Cancun, Mexico, August 15 – 17, 2019.
- “Artificial Intelligence or Intelligence Augmentation? Unravelling the Debate through an Industry-Level Analysis,” with G. Peng and Y. Yao. *The 2019 Pacific Asia Conference on Information Systems (PACIS)*, Xi’an, China, July 8 – 12, 2019.
- “The Impact of Union Density on Technology Investment,” with D. Mahony. *POMS 30<sup>th</sup> Annual Conference*, Washington D. C., May 2 – 6, 2019.
- “Are Information Technology and Human Labor Substitutes or Complements? A Stratified Analysis on Education Groups,” with G. Peng. *The 12<sup>th</sup> China Summer Workshop on Information Management (CSWIM 2018)*, Qingdao, China, June 23 – 24, 2018.
- “Improving Patient Satisfaction: A View from the Patients through User-Generated Online Physician Reviews,” with D. Ko, F. Mai, and Z. Shan. *The 11th China Summer Workshop on Information Management (CSWIM 2017)*, Nanjing, China, June 24 – 25, 2017.
- “Substitute or Complement? A Study on the Relationship between IT and Labor,” with G. Peng. *CBE Summer Research Retreat*, Lehigh University, 2017.
- “Do IT Investments Impact Ex-ante Firm Risk? Evidence from the Option Market,” with B. R. Nault. *The 10th China Summer Workshop on Information Management (CSWIM 2016)*, Dalian, China, June 25 – 26, 2016.
- “On the Relationship of Information Technology with Other Inputs,” with J. Cheng, H. Mohammad and B. R. Nault. *CBE Summer Research Retreat*, Lehigh University, 2016.
- “Do IT Investments Impact Ex-ante Firm Risk? Evidence from the Option Market,” with B. R. Nault. *Workshop on Information Systems and Economics (WISE)*, Dallas, TX, December 12 – 13, 2015.
- “The Relationship between Maximum Completion Time and Total Completion Time in Flowshop Production,” with W. Li and H. Dai. *The 43<sup>rd</sup> SME North American Manufacturing Research Conference (NAMRC)*, Charlotte, NC, June 8 - 12, 2015.
- “The Dimensions of Online Social Support on Social Networking Sites and Their Effects,” with X. Lin and Y. Li. *The 18th Pacific Asia Conference on Information Systems (PACIS 2014)*, Chengdu, China, June 24 - 28, 2014.
- “IT and Hospital Performance,” with B. R. Nault and V. Mitchell. *The 2014 INFORMS Annual Meeting*, San Francisco, CA, November 9-12, 2014.

- “Who Reacts to IT Investment Announcements?” with M. Lyle and B. R. Nault. *The 2012 INFORMS Conference on Information Systems and Technology (CIST 2012)*, Phoenix, AZ, October 14-17, 2012.
- “The Impact of IT on Economic Capacity,” with B. R. Nault. *The 2012 INFORMS Annual Meeting*, Phoenix, AZ, October 14-17, 2012.
- “The Impact of IT on Productive Capacity,” with X. Wei and B. R. Nault. *The 2011 INFORMS Conference on Information Systems and Technology (CIST 2011)*, Charlotte, NC, November 12-13, 2011.
- “Who Reacts to IT Investment Announcements?” with M. Lyle and B. R. Nault. *The 2011 INFORMS Annual Meeting*, Charlotte, NC, November 13-16, 2011.
- “Optimal Software Localization Design,” with J. Chen and B. R. Nault. *Doctoral Consortium, International Conference on Information Systems (ICIS)*, Saint Louis, December 12-15, 2010.
- “Optimal Software Localization Design,” with J. Chen and B. R. Nault. *The 2010 INFORMS Annual Meeting*, Austin, TX, November 7-10, 2010.
- “On the Relationship of Information Technology with Other Inputs,” with H. Mohammad, Z. Cheng, and B. R. Nault. *CORS-INFORMS International Meeting*, Toronto, June 14-17, 2009.

#### INVITED PRESENTATIONS

- “Operational Efficiency in Telemedicine: A Driver of Subsequent Patient Visits,” Renmin University, Beijing, China, December, 2024 (Presented by David Peng).
- “Analyzing Professional Ethics of Physicians Using Online Patient Reviews: A Machine Learning Approach,”
  - Lanzhou University, Lanzhou, China, February, 2024.
  - Beijing Foreign Studies University, Beijing, China, February, 2024.
  - Fudan University, Shanghai, March, 2024.
  - Sun Yat-sen University, Guangzhou, March, 2024.
- “Predicting the Effect of Industry Payments on Medicare Prescribing Patterns - A Social Media Perspective” I-DISC Fintech Workshop, Lehigh University, February 21, 2020.
- “Improving Patient Satisfaction: A View from the Patients through User-Generated Online Physician Reviews” *The 29<sup>th</sup> Production and Operations Management Annual Conference (POMS 2018)*, Houston, TX, May 4 – 7, 2018.
- “Are Information Technology and Human Labor Substitutes or Complements? A Stratified Analysis on Education Groups” *Drexel University*, April, 2018.
- “Information Technology as a Production Input – A Substitute or Complement?” *Lehigh Center for Supply Chain Research Spring Symposium*, November, 2017.
- “The Strategic Value of IT in Setting Productive Capacity” *Fudan University*, Shanghai, China, June, 2017.
- “The Impact of IT on Productive Capacity and its Utilization Rate” *University of Connecticut*, April, 2017 (Presented by Barrie Nault).
- “Implied Volatility as a Measure of Risk from IT Initiatives” *Department of Management, College of Business and Economics, Lehigh University*, April, 2017.
- “Managing Paradoxical Tensions to Improve Patient Satisfaction: A View from the Patients through User-Generated Online Physician Reviews” *Cincinnati Children’s Hospital Medical Center*, Cincinnati, OH, March 17, 2016 (Presented by Z. Shan and Dong-Gil Ko).
- “The Impact of IT on Productive Capacity and its Utilization Rate” *Dalian University of*

Technology, China, July 15, 2014.

#### TECHNICAL SKILLS

- Statistics and Econometrics: Stata, MATLAB, R, SPSS, LISREL, Minitab.
- Database: Oracle, SQL Server, MySQL, Microsoft Access.
- Programming: C++, C#, Java, Visual Basic, VB.Net, VBA.
- Business Intelligence: SAS, Weka.

#### TEACHING INTERESTS

- Systems Analysis & Design
- Business Analytics
- Statistics

#### TEACHING EXPERIENCE AND CERTIFICATES

- Managing Information (MBA core), Fall 2015 - Present, Lehigh University
- Systems Analysis and Design (BIS Undergraduate Required), Fall 2015 – Present, Lehigh University
- Statistics for Business I (Business Core), Fall 2013, 2014, University of Scranton
- Statistics for Business II (Business Core), Spring 2013, 2014, University of Scranton
- Business Database Management Systems (MBA Elective), Fall 2013, 2014, University of Scranton
- Database Management Systems for E-Business (Undergraduate Elective), Fall 2013, 2014, University of Scranton
- Business Information Management (Business Core), Fall 2013, 2014, Spring 2013, 2014 University of Scranton
- Introduction to Management Information Systems (Business Core), Fall 2011, 2012, University of Calgary
- Instructional Skills Workshop (certificate) The University of Calgary, Spring 2011.
- University Teaching Certificate The University of Calgary, Spring 2012.

#### HONORS AND AWARDS

- Carl & Ingeborg Beidleman Research Award, Lehigh University, 2021.
- Robert and Christine Staub Faculty Excellence Award, College of Business, Lehigh University, 2021.
- Selected for the Doctoral Consortium at *the International Conference on Information Systems (ICIS)*, Saint Louis, December, 2010.
- Faculty of Graduate Studies Scholarship, University of Calgary, 2010 – 2012.
- Graduate Student Conference Travel Grant, University Research Grants Committee (URGC), University of Calgary, 2010.
- Marion Janet and Ian Stormont Forbes Scholarship, University of Calgary, 2009 – 2010.
- Marion Janet and Ian Stormont Forbes Scholarship, University of Calgary, 2008 – 2009.
- Graduate Research Scholarship, University of Calgary, 2009.

- Postgraduate Scholarship, HKUST, 2005 – 2006.
- Kai Si Scholarship, Sun Yat-sen University, China, 2001.

## MEDIA COVERAGE

- “Understand the Complicated Relationship Between Labor and Technology,” *Lehigh Research Review*, May 2020.
- “New minor will open doors for business students,” *The Aquinas*, University of Scranton, February 27, 2015.

## PROFESSIONAL ACTIVITIES & SERVICES

- Associate Editor for *Information Technology and Management*, March 2020 – Present.
- Associate Editor for the *2019 International Conference on Information Systems (ICIS)*
- Associate Editor for The 24<sup>th</sup> European Conference on Information Systems (ECIS), 2016
- Associate Editor for *Business & Information Systems Engineering* Special Issue, 2014
- Session Chair for DSI 2023 – “Technology Management and Analytics”
- Chair for mini-track “Adoption and Impact of Health Information Technology”, The 27<sup>th</sup> Americas Conference on Information Systems (AMCIS 2020).
- Chair for mini-track “Impact of IT Productivity on Firm Value”, The 26<sup>th</sup> Americas Conference on Information Systems (AMCIS 2019)
- Program Committee member for CSWIM 2017, 2018, 2019, 2020, 2023, 2024
- Program Committee (PC) member for CIST 2016, 2017, 2018, 2019, 2020, 2022, 2023
- Conference Session Chair for CSWIM 2018.
- Conference Session Chair for *INFORMS 2014* Annual Meeting, 2014
- Referee for *Information Systems Research, Management Information Systems Quarterly, Production and Operations Management, Decision Support Systems, Information Systems Frontiers, Information Technology and Management, Information and Management, Business & Information Systems Engineering, Journal of Systems Science and Systems Engineering, International Conference on Information Systems, The INFORMS Conference on Information Systems and Technology, Workshop on Information Technologies and Systems, European Conference on Information Systems, The Hawaii International Conference on System Sciences, Americas Conference on Information Systems, Pacific Asia Conference on Information Systems, China Summer Workshop on Information Management, International Conference on Exploring Services Science.*
- Committee Activities
  - Lehigh University
    - MSBA program director, Spring 2022 – Present
    - College of Business Tenure and Promotion Committee, Fall 2023 – Present
    - University Committee on Discipline & Appeals Committee, Fall 2021 - 2023
    - ACIS (Advisory Council for Information Services Committee), Fall 2016 - Present

- Data Governance Executive Committee, Fall 2017 - Present
- Library & Technology Services Faculty Committee, Fall 2020 – 2023
- BIS Program director, Fall 2019 – Winter 2022
- BIS Hiring Committee, 2016, 2018, 2019 (Chair), 2020, 2021, 2022 (Chair), 2023 (Chair), 2024.
- Planning and organizing research seminars for the Management Department, Summer 2017 – 2019
- FFPOC (Faculty Financial Planning & Operations Committee), Fall 2017 – Spring 2019
- Q-review committees, 2019 (Marketing), 2021 (Economics).

#### University of Scranton

- Graduate Program Committee, Fall 2013 – Spring 2015
- Strategic Planning Committee, Fall 2013 - Spring 2015
- Passport Program Committee, May 2014 - Spring 2015