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Education

PhD, University of Rochester, United States of America, 2006

Master of Science, University of Rochester, United States of America, 2003

Bachelor in Computer Science, Zhejiang University, China, 1996

Academic Appointments

Associate Professor of Information Systems, School of Computing and Information Systems, SMU, Jul 2015 - Present

Assistant Professor of Information Systems, School of Computing and Information Systems, SMU, Jul 2006 - Jun 2015

Academic Administrative Positions

Course Manager, Spreadsheet Modeling & Analytics, School of Computing and Information Systems, SMU, Jul 2018 - Jun 2022

RESEARCH

Research Interests

The cloud computing services market
Innovations in financial information systems
Mobile payment systems
Fast payments and settlement systems
IT-based pricing and competition strategies

Publications

Journal Articles [Refereed]

Catching the fast payments trend: Optimal designs and leadership strategies of retail payment and settlement systems, by GUO, Zhiling; MA, Dan. (2023). *MIS Quarterly*, 47 (2), 669-704.
<https://doi.org/10.25300/MISQ/2022/16776> (Published)

A model of competition between perpetual software and software as a service, by GUO, Zhiling; MA, Dan. (2018). *MIS Quarterly*, 42 (1), 101-120. <https://doi.org/10.25300/MISQ/2018/13640> (Published)

A metrics suite of cloud computing adoption readiness, by KAUFFMAN, Robert J.; MA, Dan; YU, Martin. (2018). *Electronic Markets: The International Journal on Networked Business*, 28 (1), 11-37. <https://doi.org/10.1007/s12525-015-0213-y> (Published)

Pricing strategy for cloud computing: A damaged services perspective, by HUANG, Jianhui; KAUFFMAN, Robert J.; MA, Dan. (2015). *Decision Support Systems*, 78 80-92. <http://dx.doi.org/10.1016/j.dss.2014.11.001> (Published)

Innovations in financial IS and technology ecosystems: High-frequency trading in the equity market, by KAUFFMAN, Robert J.; LIU, Jun; MA, Dan. (2015). *Technological Forecasting and Social Change*, 99 339-354. <https://doi.org/10.1016/j.techfore.2014.12.001> (Published)

Innovations in financial IS and technology ecosystems: High-frequency trading in the equity market, by KAUFFMAN Robert J.; LIU, Jun; MA, Dan. (2015). *Technological Forecasting and Social Change*, 99 339-354. <http://doi.org/10.1016/j.techfore.2014.12.001> (Published)

Special issue: Contemporary research on payments and cards in the global fintech revolution, by KAUFFMAN, Robert J.; MA, Dan. (2015). *Electronic Commerce Research and Applications*, 14 (5), 261-264. <http://doi.org/10.1016/j.elerap.2015.09.005> (Published)

Competition, cooperation, and regulation: Understanding the evolution of the mobile payments technology ecosystem, by LIU, Jun; KAUFFMAN, Robert J.; MA, Dan. (2015). *Electronic Commerce Research and Applications*, 14 (5), 372-391. <https://doi.org/10.1016/j.elerap.2015.03.003> (Published)

Will high-frequency trading practices transform the financial markets in the Asia Pacific region?, by KAUFFMAN, Robert J.; HU, Yuzhou; MA, Dan. (2015). *Financial Innovation*, 1 (1), 1-27. <https://doi.org/10.1186/s40854-015-0003-8> (Published)

Analyzing Software as a Service with Per-Transaction Charges, by MA, Dan; SEIDMANN, Abraham. (2015). *Information Systems Research*, 26 (2), 360-378. <https://doi.org/10.1287/isre.2015.0571> (Published)

Technology investment decision-making under uncertainty, by KAUFFMAN, Robert J.; LIU, Jun; MA, Dan. (2015). *Information Technology and Management*, 16 (2), 153-172. <https://doi.org/10.1007/s10799-014-0212-2> (Published)

On the financification of cloud computing: An agenda for pricing and service delivery mechanism design research, by KAUFFMAN, Robert J.; MA, Dan; Shang, Richard; Huang, Jianhui; Yang, Yinpeng. (2015). *International Journal of Cloud Computing*, 2 (1), 1-14. (Published)

Push or Pull? A Website's Strategic Choice of Content Delivery Mechanism, by MA, Dan. (2015). *Journal of Management Information Systems*, 32 (1), 291-321. <https://doi.org/10.1080/07421222.2015.1029400> (Published)

Competition Between Software-as-a-Service Vendors, by MA, Dan; KAUFFMAN, Robert John. (2014). *IEEE Transactions on Engineering Management*, 61 (4), 717-729. (Published)

Use of RSS feeds to push online content to users, by MA, Dan. (2012). *Decision Support Systems*, 54 (1), 740-749. <http://doi.org/10.1016/j.dss.2012.09.002> (Published)

Information Technology Diffusion with Influentials, Imitators, and Opponents, by Cavusoglu, Hasan; HU, Nan; LI, Yingjiu; MA, Dan. (2010). *Journal of Management Information Systems*, 27 (2), 305-334. <https://doi.org/10.2753/MIS0742-1222270210> (Published)

Wake up or fall asleep-value implication of trusted computing, by HU, Nan; HUANG, Jianhui; LIU, Ling; LI, Yingjiu; MA, Dan. (2009). *Information Technology and Management*, 10 (4), 177-192. <https://doi.org/10.1007/s10799-009-0060-7> (Published)

Editorials

An ECRA 15th anniversary virtual special issue on 'Payments, cards and services in the Fintech revolution', by KAUFFMAN, Robert J.; MA, Dan; YOO, Byungjoon. (2008). *Electronic Commerce Research and Applications*, 1-1. (Published)

Guest editorial: Market transformation to an IT-enabled services-oriented economy, by KAUFFMAN, Robert J.; MA, Dan; YOO, Byungjoon. (2015). *Decision Support Systems*, 78 65-66. <https://doi.org/10.1016/j.dss.2015.05.012> (Published)

Conference Proceedings

Reward strategies on competing content platforms, by HU, Roumeng; MA, Dan; FENG, Nan. (2025.0). *Proceedings of the 29th Pacific Asia Conference on Information Systems (PACIS2025)*, Kuala Lumpur, Malaysia, July 5-9, Kuala Lumpur, Malaysia: https://aisel.aisnet.org/pacis2025/dig_plat/di/4/ (Published)

An economic analysis of third-party software reliability improvement using the Bug Bounty Program, by ZHOU, Tianlu; MA, Dan; FENG, Nan. (2023.0). *ICIS 2023: Hyderabad, December 10-13: Proceedings*, Hyderabad INDIA: AIS. https://aisel.aisnet.org/icis2023/cyber_security/cyber_security/8/ (Published)

The use of bug bounty programs for software reliability improvement, by ZHOU, Tianlu; MA, Dan; FENG, Nan. (2023.0). *Pacific Asia Conference on Information Systems PACIS 2023: Nanchang, July 8-12: Proceedings*, Nanchang: AIS. <https://aisel.aisnet.org/pacis2023/99/> (Published)

Enhancing third-party software reliability through bug bounty programs, by ZHOU, Tianlu; MA, Dan; FENG, Nan. (2023.0). *Proceedings of the 16th China Summer Workshop on Information Management, Changsha, China, 2023 June 24-25*, (pp. 169-174) Changsha, CHINA: (Published)

Optimal design and ownership structures of innovative retail payment systems, by GUO, Zhiling; MA, Dan. (2019.0). *ICIS 2019 Proceedings: 40th International Conference on Information Systems, Munich, December 15-18*, Illinois: AIS. (Published)

A metrics suite of cloud computing adoption readiness, by KAUFFMAN, Robert J.; MA, Dan; YU, Martin. (2014.0). *Economics of Grids, Clouds, Systems and Services: 11th International Conference, GECON 2014, Cardiff, UK, September 16-18, 2014. Revised Selected Papers*, (pp. 19-35) Cham: Springer Verlag. http://doi.org/10.1007/978-3-319-14609-6_2 (Published)

Mechanism design for near real-time retail payment and settlement systems, by GUO, Zhiling; KAUFFMAN, Robert J.; LIN, Mei; MA, Dan. (2015.0). *48th Hawaii International Conference on System Sciences HICSS 2015: 5-8 January, Kauai: Proceedings*, (pp. 4824-4833) Los Alamitos, CA: IEEE Computer Society. <https://doi.ieeecomputersociety.org/10.1109/HICSS.2015.573> (Published)

Paths of Influence for Innovations in Financial IS and Technology Ecosystems, by Liu, Jun; KAUFFMAN, Robert John; MA, Dan. (2014.0). *PACIS (Pacific Asia Conference on Information Systems) 2014 Proceedings: 24-28 June 2014, Chengdu, Atlanta, GA: Association for Information Systems*. <http://aisel.aisnet.org/pacis2014/210/> (Published)

Technology investment decision-making under uncertainty, by KAUFFMAN, Robert J.; LIU, Jun; MA, Dan. (2015.0). *Proceedings of the Second AIS-Journals Joint Author Workshop in PACIS 2014, Chengdu, China, 26 June 2014*, (pp. 1-6) Atlanta, GA: AIS. (Published)

Cost Efficiency Strategy in the Software-as-a-Service Market: Modeling Results and Related Implementation Issues, by Kauffman, Robert J.; MA, Dan. (2013.0). *Economics of Grids, Clouds, Systems, and Services: 10th International Conference, GECON 2013, Zaragoza, Spain, September 18-20, 2013. Proceedings*, (pp. 16-26) Zaragoza, Spain: Springer Verlag International Publishing. http://dx.doi.org/10.1007/978-3-319-02414-1_2 (Published)

Technology investment decision-making under uncertainty: The case of mobile payment systems, by KAUFFMAN, Robert J.; LIU, Jun; MA, Dan. (2013.0). *HICSS '13: Proceedings of the 46th Annual Hawaii International Conference on System Sciences, January 7-10*, (pp. 4166-4175) Los Alamitos, CA: IEEE Computer Society. <https://doi.ieeecomputersociety.org/10.1109/HICSS.2013.624> (Published)

Cost Efficiency Strategy in the Software-as-a-Service Market: Modeling Results and Related Implementation Issues, by Kauffman, Robert J.; MA, Dan. (2013.0). *Economics of Grids, Clouds, Systems, and Services: 10th International Conference, GECON 2013, Zaragoza, Spain, September 18-20. Proceedings*, (pp. 16-28) Zaragoza, Spain: Springer Verlag. http://dx.doi.org/10.1007/978-3-319-02414-1_2 (Published)

Competition Between Software-as-a-Service Vendors, by Kauffman, Robert J.; MA, Dan. (2014.0). *46th Hawaii International Conference on Systems Science (HICSS)*, (pp. 717-729) Hawaii, USA: IEEE. <http://dx.doi.org/10.1109/TEM.2014.2332633> (Published)

- The pricing model of cloud computing services, by HUANG, Jianhui; MA, Dan. (2012.0). *ICEC '12: Proceedings of the 14th Annual International Conference on Electronic Commerce, Singapore, 7-8 August*, (pp. 263-269) New York: ACM. <https://doi.org/10.1145/2346536.2346586> (Published)
- Investment timing for mobile payment systems, by KAUFFMAN, Robert J.; LIU, Jun; MA, Dan. (2012.0). *ICEC '12: 14th Annual International Conference on Electronic Commerce, Singapore, 7-8 August 2012: Proceedings*, (pp. 169-170) New York: ACM. <http://dx.doi.org/10.1145/2346536.2346569> (Published)
- Customer heterogeneity and tariff biases in Cloud computing, by Koehler, Philip; MA, Dan; Anandasivam, Arun; Weinhardt, Christof. (2010.0). *Proceedings of the International Conference on Information Systems (ICIS)*, Saint Louis, USA: http://aisel.aisnet.org/icis2010_submissions/106/ (Published)
- Cloud services from a consumer perspective, by KOEHLER, Philip; ANANDASIVAM, Arun; MA, Dan. (2010.0). *Proceedings of the 16th Americas Conference on Information Systems (AMCIS 2010)*, Lima, Peru, August 12-15, Atlanta, GA: AIS. <http://aisel.aisnet.org/amcis2010/329/> (Published)
- Offering RSS feeds: Does it help to gain competitive advantage?, by MA, Dan. (2009.0). *Proceedings of the 42nd Hawaii International Conference on System Sciences: HICSS '09 ; Waikoloa, Big Island, Hawaii, 5-8 January*, (pp. 1-10) Los Alamitos, CA: IEEE Computer Society. <http://doi.ieeecomputersociety.org/10.1109/HICSS.2009.842> (Published)
- The pricing strategy analysis for the Software-as-a-Service business model, by MA, Dan; SEIDMANN, Abraham. (2008.0). *Grid Economics and Business Models: 5th International Workshop, GECON 2008, Las Palmas de Gran Canaria, Spain, August 26, Proceedings*, (pp. 103-112) Berlin: Springer Verlag. https://doi.org/10.1007/978-3-540-85485-2_8 (Published)
- The business model of "Software-as-a-Service", by MA, Dan. (2007.0). *IEEE International Conference on Services Computing SCC 2007: Proceedings: Salt Lake City, UT, 9-13 July 2007*, (pp. 701-702) Los Alamitos, CA: IEEE Computer Society. <http://doi.ieeecomputersociety.org/10.1109/SCC.2007.118> (Published)
- Designing an Experimental Gaming Platform for Trading Grid Resources, by OH, Danny; CHENG, Shih-Fen; MA, Dan; BAPNA, Ravi. (2007.0). *GCA 2007: Proceedings of the 3rd International Workshop on Grid Computing and Applications, Biopolis, Singapore, 5-8 June, 2007*, (pp. 202-207) Singapore: World Scientific. http://dx.doi.org/10.1142/9789812708823_0018 (Published)
- ASPs versus MOTS software solutions, by MA, Dan; Seidmann, Abraham. (2005.0). *Proceedings of 10th INFORMS Conference on Information Systems and Technology (CIST) 2005*, San Francisco, USA: (Published)

Conference Papers

- Channel power: How live streaming transforms competition in e-commerce, by LI, Guangyu; MA, Dan; NAN, Guofang. (2025.0). *The 35th Annual Workshop on Information Technologies and Systems (WITS2025)*, Nashville, December 17-19, Nashville, Tennessee, USA. (Accepted)
- Reward or restrain? Creator incentives on competing platforms, by HU, Ruomeng; MA, Dan; FENG, Nan. (2025.0). *The 36th Workshop on Information Systems and Economics (WISE2025)*, Nashville, December 17-19, Nashville, Tennessee, USA. (Accepted)
- Streaming into competition: How live channels reshape power in online retail duopolies, by LI, Guangyu; MA, Dan; NAN, Guofang. (2025.0). *2025 Workshop on e-Business (WeB)*, Nashville, December 13, Nashville, Tennessee, USA. (Accepted)
- Platform competition and incentives for content creators, by HU, Ruomeng; MA, Dan; FENG, Nan. (2025.0). *2025 INFORMS Annual Meeting, Atlanta, Georgia, October 26-29*, Atlanta, Georgia, USA. (Presented)
- Bug bounty programs for third-party software: Adoption strategy and effectiveness analysis, by ZHOU, Tianlu; MA, Dan; FENG, Nan. (2024.0). *Annual Workshop on Information Technologies and Systems (WITS)*, Bangkok, Thailand, 2024 December 18-20, Thailand. (Presented)
- Platform competition: The effect of expanded monetary rewards, by HU, Ruomeng; MA, Dan; FENG, Nan. (2024.0). *Workshop on e-Business (WeB)*, Bangkok, Thailand, 2024 December 14, Thailand. (Presented)
- Duopoly channel strategy for retailers in live streaming commerce, by LI, Guangyu; MA, Dan; NAN,

Guofang. (2024.0). *Workshop on e-Business (WeB), Bangkok, Thailand, 2024 December 14, Thailand.* (Presented)

A study of platform' s security strategy: Adoption of bug bounty programs for third-party software, by ZHOU, Tianlu; MA, Dan; FENG, Nan. (2023.0). *Conference in Information Systems and Technology (CIST), Phoenix, Arizona, 2023 October 14-15, Phoenix, Arizona, USA.* (Presented)

SPACS: A gamble without future?, by FU, Fangjian; GENG, Xueqing; MA, Dan. (2023.0). *7th Entrepreneurial Finance Association (ENTFIN) Conference, Antwerp, Belgium.* (Presented)

A gamble without future? , by FU, Fangjian; GENG, Xueqing; MA, Dan. (2023.0). *The inaugural Singapore Rising Scholar Conference, Singapore, 2023 May 5, Singapore.* (Presented)

Assessing the opportunities and challenges with big data in the mobile payments ecosystem, by LIU, Jun; KAUFFMAN, Robert J.; MA, Dan. (2015.0). *Workshop on Internet and Big Data Finance 2015, June 11-12, Beijing, China.* (Presented)

Damaged Services: Why Interruptible Spot-Priced Cloud Computing Services are Worthwhile to Offer with Uninterruptible Reserved Services, by HUANG, Jianhui; KAUFFMAN, Robert J.; MA, Dan. (2013.0). *Annual Workshop on Information Technologies and Systems 23rd WITS 2013, December 14-15, Milan, Italy.* (Accepted)

Innovations in Financial Information Systems and Technology Ecosystems, by Kauffman, Robert J.; LIU, Jun; MA, Dan. (2013.0). *Innovation for Financial Services 2013 Singapore, 24 -25 October 2013, Singapore.* (Published)

A Study of the Software-as-a-Service Business Model, by MA, Dan; Seidmann, Abraham. (2013.0). *Workshop on Analytics for Business, Consumer and Social Insights BCSI 2013, August 3-4, Singapore.* (Accepted)

Technology investment decision-making under uncertainty in mobile payment systems, by KAUFFMAN, Robert J.; LIU, Jun; MA, Dan. (2013.0). *China Summer Workshop on Information Management 7th CSWIM 2013, June 29-30, Tianjin, China.* (Presented)

Uncertainty, switching cost, and competition in the Software-as-a-Service market, by KAUFFMAN, Robert J.; MA, Dan. (2012.0). *Workshop on Information Technologies and Systems 22nd WITS 2012, December 15-16, Orlando, FL.* (Presented)

Pricing on-Demand Software Competitively in a Dynamic Market, by MA, Dan. (2008.0). *Workshop on Information Systems and Economics WISE 2008, December, Paris.* (Accepted)

Offering RSS feeds: Will it increase website profitability?, by MA, Dan. (2008.0). *INFORMS Conference on Information Systems and Technology CIST 2008, October 12-15, Washington, DC.* (Presented)

New Security Technology Diffusion with Promoters, Imitators, and Privacy Advocates, by HU, Nan; LI, Yingjiu; MA, Dan. (2007.0). *INFORMS Marketing Science Conference 2007, June 28-30, Singapore.* (Published)

Personalized information aggregator and filter: An application of RSS in the Web, by MA, Dan. (2007.0). *INFORMS Marketing Science Conference 2007, June 28-30, Singapore.* (Presented)

Grid pricing and capacity models, by MA, Dan. (2007.0). *GridAsia 2007, June 5-8, Singapore, Singapore.* (Presented)

New Security Technology Diffusion with Promoters, Imitators, and Privacy Advocates, by MA, Dan; HU, Nan; LI, Yingjiu. (2007.0). *INFORMS Marketing Science, Singapore.* (Published)

Personalized information aggregator and filter: An application of RSS technology in the Internet, by MA, Dan; ZHAO, Yanjie. (2006.0). *INFORMS International Meeting 2006, June, Hong Kong.* (Presented)

Manage Customer Lock-in in the ASP Market, by MA, Dan; SEIDMANN, Abraham. (2005.0). *Workshop on Information Systems and Economics (WISE) 2005, Irvine, USA.* (Published)

Manage Customer Lock-in in the ASP Market, by MA, Dan; SEIDMANN, Abraham. (2005.0). *INFORMS 2005 Annual Meeting, San Francisco, USA.* (Published)

ASPs versus MOTS Software Solutions, by MA, Dan; Seidmann, Abraham. (2004.0). *Workshop on*

Information Systems and Economics WISE 2004, December, Washington, DC. (Accepted)

The optimal contracting structure for Application Service Providers, by MA, Dan; SEIDMANN, Abraham. (2002.0). *Workshop on Information Systems and Economics WISE 2002, December, Barcelona, Spain. (Presented)*

Papers Submitted for Review

Working Papers

Bug bounty programs for third-party software: Adoption strategy and effectiveness analysis, by ZHOU, Tianlu; MA, Dan; FENG, Nan. (2025). *Journal of Information Systems Management. (Revised & Resubmitted)*

Research Grants

Singapore Management University

Near Real-Time Retail Payment and Settlement Systems Mechanism Design, The SWIFT Institute (SWIFT: Society for Worldwide Interbank Financial Telecommunication) , PI (Project Level): Zhiling GUO , Co-PI (Project Level): Robert J. KAUFFMAN, LIN Mei, Dan MA, 2014, S\$25,098

The Analysis of On-demand Software: Understanding the Competition of Software-As-A-Service Co-author: Professor Abraham Seidmann, Ph. D., Xerox Professor of Computers & Information Systems, Electronic Commerce, and Operations Management, W. E. Simon Graduate School of Business Administration, University of Rochester, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): Dan MA, 2008, S\$7,487

TEACHING

Courses Taught

Singapore Management University

Undergraduate Programmes :

Algorithms and Programming

Computational Thinking

Information Systems and Innovation

Spreadsheet Modeling and Analytics

Postgraduate Research Programmes :

Dissertation

Empirical Research Project 2

Empirical Research Project 4

Introductory Research Project

THESES AND DISSERTATIONS

Theses and Dissertations Supervised

Singapore Management University

Supervisor, "Decision Modeling and Empirical Analysis of Mobile Financial Services", Dissertation by LIU JUN, PhD in Information Systems, Singapore Management University, 2016

Supervisor, "Pricing Strategy for Cloud Computing Services", Dissertation by HUANG JIANHUI, PhD in Information Systems, Singapore Management University, 2014

EXTERNAL SERVICE – PROFESSIONAL

Editor Associate Editor, Information and Management, 2020 - Present

Editor Associate Editor, International Conference on Information Systems (ICIS), 2018 - Present

Editor Associate Editor, Information Technology and Management, 2018 - Present

Committee Member, Pacific Asia Conference on Information Systems (PACIS), 2017 - Present

Committee Member, China Summer Workshop on Information Management (CSWIM 2014), 2014 - Present