

Thomas Yupoo Lee

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cum to date: April 2019

Education

Massachusetts Institute of Technology, Cambridge, MA

PhD Technology, Management and Policy, Engineering Systems Division (2002)

SM Technology Policy Program, Engineering Systems Division (1994)

Stanford University, Stanford, CA

BS Symbolic Systems (1992)

BA Political Science (1992)

Academic positions

Haas School, University of California at Berkeley

Adjunct Associate/Visiting Asst Professor, Operations and Information Technology Management (2010 – present)

Research Scientist, Institute for Business Innovation (2009 – present)

The Wharton School, University of Pennsylvania

Adjunct Associate Professor, Operations and Information Management Department (2012 – 2015)

Adjunct Assistant Professor, Operations and Information Management Department (2009 – 2012)

Assistant Professor, Operations and Information Management Department (2002 – 2009)

Lecturer, Operations and Information Management Department (2000 – 2002)

School of Management, Boston University

Lecturer, Information Systems Department (Spring 2000)

Teaching experience

Operations and Information Technology Management, Haas School, University of California at Berkeley

MBA247 Product Design (2019 – present)

MBA247 Design and Development of Web-based Products and Services (2011 – 2017)

MBA247 Applied Data Analytics Project (w/ David Rochlin 2015)

UGBA104 Introduction to Business Analytics (2018 – present)

UGBA104 Analytic Decision Modeling Using Spreadsheets (w/ Terrence Hendershott 2010 – 2017)

Operations and Information Management Department, The Wharton School, University of Pennsylvania

OPIM659 Semester in San Francisco Regional Seminar (2012 – present)

OPIM652/654 Design and Development of Web-Based Products and Services (w/ K. Ulrich 2009 – 2010; joint online with MIT 6.S077 w/ T. Eng 2012; 2012 – present)

OPIM651 Innovation, Problem Solving, and Design (w/ C. Terwiesch) (2009)

OPIM416X Design and Development of Web-Based Products and Services – online (2011 – 2012)

OPIM101 Introduction to the Computer as an Analysis Tool (2004 – 2009)

OPIM664/315 Database Management Systems, MBA, undergrad elective (2001- 2007)

OPIM898/698 Value Networks: IT integration for Operations Management (w/ M. Cohen 2002 – 2003)

OPIM950 PhD seminar on logic foundations and heuristic techniques in IS research (2001 – 2002)

Wharton Executive Education, special programs on data integration

Publications

Refereed journals

- [1] Thomas Y. Lee and Eric T. Bradlow, "Automated Marketing Research Using Online Customer Reviews," *Journal of Marketing Research*. 48(5) (2011)
Finalist, Paul E. Green Award for best article in Journal of Marketing Research.
- [2] Thomas Y. Lee, "Ontology Induction from On-line Customer Reviews," *Group Decision and Negotiation*, 16(3) (2007)
- [3] Thomas Y. Lee and Yingwei Yang, "Constraint-based wrapper specification and verification for cooperative information systems," *Information Systems*, 29(7) (2004) 617-36.
- [4] Petros Kavassalis, Joseph P. Bailey and Thomas Y. Lee, "Open-layered networks: the growing importance of market coordination," *Decision Support Systems*. 28(1-2) (2000) 137-153

Working papers and current projects

- [5] Thomas Y. Lee and Kristine Yoshihara, "Discovering Why: Mining Purchase Histories to Learn Projects and Recommend Products," (Wharton Customer Analytics Initiative project).
- [6] Lijie Song, Esther Chen, Nicole DeHoratius, Thomas Y. Lee, and Tava Olsen, "Point of Care Testing: Reducing Emergency Department Service Time and Waiting Time through Process Redesign," (R&R at M&SOM).
- [7] Thomas Y. Lee, Sarah Rice, Steve Rock, Mike Willenborg, "Using Computational Linguistics to Analyze the Relationship Between Prospectus Risk Disclosure and the Underpricing of Internet IPOs."
- [8] Thomas Y. Lee, "Needs-based Searching and Ranking Based on Customer Reviews."
- [9] Thomas Y. Lee, "Automatic Analysis of Voluntary Disclosures in Regulatory Filings."
- [10] Gary Chen, Steven Kimbrough and Thomas Y. Lee, "Automated support for product application discovery," OPIM Technical Report 04-10-01, Wharton School, University of Pennsylvania, 2004.
- [11] Kinshuk Jerath and Thomas Y. Lee "Mining for approximate constraints in semistructured data," First Year Summer Paper, OPIM Department, Wharton School, University of Pennsylvania, 2004.

Refereed conference publications

- [12] Micha Kahlen, Wolfgang Ketter, Thomas Lee, and Alok Gupta, "Optimal Prepositioning and Fleet Sizing to Maximize Profits for One-Way Transportation Companies," International Conference on Information Systems, December 2017.
- [13] Thomas Y. Lee, Kristine Yoshihara, "Getting to Why: Semi-supervised Topic Modeling of Customer Purchase Histories," Workshop on Information Technology and Systems, December 2015.
- [14] Esther Chen and Thomas Y. Lee, "Mining Patient Orders to Rank Point of Care Tests in Emergency Department Operations," Workshop on Information Technology and Systems, December 2012.
- [15] Steven O. Kimbrough, Thomas Y. Lee, and Ulku Oktem, "On Deriving Indicators From Text," Lecture Notes in Business Information Processing: The Application of Quantitative Modeling to Service Science 2012, originally presented at IFIP WG 7.6 Workshop on Modeling and Decision Support for Network-Based Services, September 2008.
- [16] Christine Chou, Steven Kimbrough, and Thomas Y. Lee, "Ideation for the Problem of Component Placing," IEEE International Conference on Industrial Engineering and Engineering Management, December 2010.
- [17] Thomas Y. Lee, "Adaptive Text Extraction for New Product Development," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, 2009.
- [18] Thomas Y. Lee, "Automatically Learning User Needs from Online Reviews for New Product Design," America Conference on Information Systems, 2009.

- [19] Thomas Y. Lee, Simon Li, and Ran Wei, "Needs-based Searching and Ranking Based on Customer Reviews," IEEE Conference on Electronic Commerce 2008.
- [20] Joshua Carroll and Thomas Y. Lee, "A Genetic Algorithm for Segmentation and Information Retrieval of Regulatory Filings," Conference on Digital Government (dgo), 2008.
- [21] Thomas Y. Lee, "Using Regulatory Instructions for Information Extraction," AAAI Information Integration on the Web, 2007.
- [22] Thomas Y. Lee, "Use-centric mining of customer reviews," Workshop on Information Technology and Systems, December 2004.
- [23] Gary T. Chen, Steven Kimbrough and Thomas Y. Lee, "A note on automated support for product application discovery," Workshop on Information Technology and Systems, December 2004.
- [24] Dan Hunter, Thomas Y. Lee, Deborah Ong and Patrick Yang, "Wrapper Verification Using Constraints for Semistructured Data," Workshop on Information Technology and Systems, December 2002.
- [25] S. O. Kimbrough, T. Y. Lee, B. Padmanabhan and Y. Yang, "On Original Generation of Structure in Legal Documents," International Conference on Artificial Intelligence and Law, 2003.
- [26] Steven O. Kimbrough, Thomas Y. Lee, Balaji Padmanabhan and Yinghui Yang, "Generating Original Structure in Regulatory Documents," NSF National Conference on Digital Government Research, 2003.
- [27] Thomas Y. Lee, "Constraint Driven Hierarchical Information Extraction," IJCAI Workshop on Information Integration on the Web, 2003.
- [28] Thomas Y. Lee and Patrick Yang, "Combining Information Extraction and Verification Using Semistructured Constraints," Workshop on Data Quality in Cooperative Information Systems, International Conference on Database Theory, 2003.
- [29] Thomas Y. Lee, Melanie Chams, Robert Nado, Stuart Madnick and Michael Siegel, "Information integration with attribution support for corporate profiles," ACM Conference on Information and Knowledge Management, 1999.
- [30] Thomas Y. Lee, Stephane Bressan and Stuart E. Madnick, "Source Attribution for Querying Against Semi-structured Documents," Workshop on Web Information and Data Management, ACM Conference on Information and Knowledge Management, 1998.
- [31] Thomas Y. Lee and Stephane Bressan, "Multimodal Integration of Disparate Information Sources with Attribution," Entity Relationship Workshop on Information Retrieval and Conceptual Modeling, 1997.
- [32] Stephane Bressan, Cheng Hian Goh, Thomas Y. Lee, Stuart Madnick and Michael Siegel, "A Procedure for the Context Mediation of Queries to Disparate Sources", International Logic Programming Symposium, 1997.
- [33] Stephane Bressan, Cheng Hian Goh, Kofi Fynn, Marta Jessica Jakobisiak, Karim Hussein, Henry B. Kon, Thomas Y. Lee, Stuart E. Madnick, Tito Pena, Jessica Qu, Annie W. Shum, Michael Siegel, "Context Interchange Mediator Prototype," ACM SIGMOD, 1997.

Other conference publications

- [34] Micha Kahlen, Stephanie Visser, Wolfgang Ketter, Thomas Y. Lee, and Alok Gupta, "Geospatial Analytics: Predicting Cost-effective Charging Infrastructure Locations and Service Levels," University of Utah, Winter Conference on Business Analytics, March 2017.
- [35] Thomas Y. Lee, "Context Sensitive Topic Modeling of Customer Purchase Histories with General Domain Knowledge," University of Utah, Winter Conference on Business Intelligence, March 2016.
- [36] Thomas Y. Lee, Kristine Yoshihara, "Discovering Why: Mining Purchase Histories to Learn Projects," University of Utah, Winter Information Systems Conference, March 2015.
- [37] Esther Chen, Nicole DeHoratius, and Thomas Y. Lee, "Point of Care Test Selection to Reduce Emergency Department Length of Stay," University of Utah, Winter Information Systems Conference, 1 – 3 March 2012.
- [38] Esther Chen, Nicole DeHoratius, Thomas Y. Lee, Tava Olsen, and Lijie Song, "Reducing Length of Stay in Hospital Emergency Departments through Process Redesign," University of Utah, Winter Operations Conference, 9 – 11 February 2012.

- [39] Thomas Y. Lee and Eric Bradlow, "Automated Marketing Research Using Online Customer Reviews," University of Utah, Winter Information Systems Conference, 10 – 12 March 2011.
- [40] Thomas Y. Lee, Sarah Rice, Steve Rock, Mike Willenborg, "Underpricing and IPO Prospectus Risk Factor Disclosures," Statistical Challenges in Electronic Commerce Research, June 2010.
- [41] Thomas Y. Lee, Sarah Rice, Steve Rock, Mike Willenborg, "IPO Underpricing and Risk Factors Disclosure in the IPO Prospectus," University of Utah, Winter Information Systems Conference, March 2010.
- [42] "Adaptive Text Extraction from Online Product Reviews for Marketing Intelligence," University of Utah, Winter Information Systems Conference, February 2009.
- [43] "Learning Industry-Specific Voluntary Disclosures from SEC 10-K Filings," University of Utah, Winter Information Systems Conference, 21 – 23 March 2008.
- [44] "Learning Extraction Patterns from Regulatory Instructions," University of Utah, Winter Information Systems Winter, 22 – 24 April 2007.
- [45] Thomas Y. Lee, "Needs-based Analysis of Online Customer Reviews," International Conference on Electronic Commerce, 2007.
- [46] Thomas Y. Lee, Dan Hunter, and Daniel Orr, "Policymaking and Adjudication in a Digital Context," Telecommunications Policy Research Conference, 2003.
- [47] D. Hunter, T. Lee, D. Ong and P. Yang, "Simultaneous Data Extraction and Verification Using Semistructured Constraints," FastAbstract - IEEE International Symposium on Software Systems Reliability, 2002.
- [48] Thomas Y. Lee and Lee McKnight, "Internet Data Management: Policy Barriers to an Intermediated Electronic Market in Data," 27th Annual Telecommunications Policy Research Conference, 1999.
- [49] P. Kavassalis, T. Lee and J. Bailey, "Sustaining a Vertically Disintegrated Network Through a Bearer Service Market," Telecommunications Transformation: Technology, Strategy and Policy. (ed. Bohlin E. and Levin, S.) IOS Press, 1998. Originally presented at the Joint Conference (ITS-ICCC) Global Networking'97, 1997.
- [50] Stephane Bressan, and Thomas Y. Lee, "Information Brokering on the World Wide Web," WebNet World Conference, 1997.
- [51] Petros Kavassalis, Thomas Y. Lee and Joseph Bailey, "Separate Service Offerings and Infrastructure: Charting the 'Bearer Services' Debate," Conference on Bridging Technologies and Regulatory Paradigms, 1997.

Invited presentations and other publications

- [52] "Data Analytics and Design," Silicon Valley AI Day, Gore Silicon Valley Innovation Center, 2 August 2018.
- [53] "Data Analytics, AI and Design," Orange S.A., 19 July 2018.
- [54] "Data and Design," DuPont Silicon Valley Innovation Center, 20 June 2018.
- [55] "Implementing Data Analytics and Big Data in Your MBA Curriculum," AACSB Redesigning the MBA Curriculum Conference, 11 May 2018.
- [56] "Conversational Agents, invited panel" TiE Inflect Conference, 4 May 2018.
- [57] "AI and Innovation," Berkeley Innovation Forum, 11 April 2018.
- [58] "AI and Design," VOICE CIO – Artificial Intelligence, 27 November 2017.
- [59] "Design, Data and Innovation," Berkeley Roundtable on Applied Innovation, 8 June 2017.
- [60] "Introduction to Machine Learning," UC Berkeley Haas Faculty Seminar, 18 April 2017.
- [61] "Data Semantics, Data Integration and Innovation," Siemens Technology to Business Center, 4 April 2017.
- [62] "Data Analytics and Design," Cooper Design, 20 January 2017.
- [63] w/ Kristine Yoshihara, "Getting to Why: Semi-Supervised Topic Modeling of Customer Purchase Histories," Marketing Science eJournal, Vol 9, No. 38: 22 Dec 2016.
- [64] "Data Analytics and Design," frog Design, 20 July 2016
- [65] "Electric Vehicle Charging Patterns for Competitive Benchmarking Simulations," Siebel Energy Institute Meeting with RWE, 12 November 2015.

- [66] "Getting to Why: Semi-supervised Topic Modeling of Customer Purchase Histories," Moody's Analytics, 7 August 2015.
- [67] w/ Kristine Yoshihara, "Discovering Why: Mining Purchase Histories to Learn Projects," Wharton Customer Analytics Initiative, University of Pennsylvania, Wharton School, May 2015.
- [68] w/ Lijie Song, Esther Chen, Nicole DeHoratius, and Tava Olsen, "Reducing Length of Stay in Hospital Emergency Rooms through Process Redesign," INFORMS, 14-17 October 2012.
- [69] "Opportunity Identification," Global Youth Development Organization, University of California, Berkeley, 2 February 2012.
- [70] "Opportunity Identification," Wharton Entrepreneurs Workshop, 26 January 2012.
- [71] w/ Lijie Song and Nicole DeHoratius, "Reducing Length of Stay in Hospital Emergency Rooms through Process Redesign," INFORMS Healthcare, 20-22 June 2011.
- [72] "Adaptive Text Extraction for New Product Marketing and Development," Information Systems Department, School of Management, Boston University, 6 February 2009.
- [73] "Needs-based analysis of online reviews," Decision and Information Technologies Department, Smith School of Business, University of Maryland, 21 November, 2008.
- [74] "Finding Patients Like Me on the Internet," Center for Language and Speech Processing, Johns Hopkins University, 7 November 2008.
- [75] "Needs-based analysis of online reviews," Ford Motor Company Center for Global Citizenship, Kellogg School of Management, Northwestern University, 30 September 2008.
- [76] "Web 2.0 and Beyond: Challenging IS Research Issues," Invited panel presentation, WITS 2007.
- [77] Constraint Based Ontology Induction, Faculty Seminar, School of Information Sciences and Technology, Penn State University, 24 April 2006
- [78] Constraint Based Ontology Induction, Decision and Information Sciences Workshop, University of Florida, 9-11 February 2006
- [79] w/ Eric Klein, Alan Abrahams, and Balaji Padmanabhan, "Effectiveness of mentoring in undergraduate information and operation management," South African Computer Lecturer's Association Conference 2006 (SACLA 2006). Somerset West, Western Cape, South Africa, June 26-27 2006.
- [80] w/ Eric T. Bradlow, "Automatic Induction of Conjoint Attributes Using Customer Reviews," INFORMS, 2005.
- [81] "Mining experiential knowledge from online customer reviews," University of Utah, Winter Information Systems Conference, 11-12 March 2005.
- [82] "Introduction to Collaborative Filtering," David W. Hauck Lecture, Parent's Weekend, University of Pennsylvania, 2005.
- [83] "Information extraction for automated regulatory compliance," Telcordia (18 September 2003)
- [84] Data integration for collaboration throughout the value-chain," Summer Institute for International Business Studies, University of Pennsylvania (1 July 2003)
- [85] "What is XML" Wharton Technology Club, University of Pennsylvania (24 February 2003)
- [86] "Defining and maintaining metadata for attribution," MITRE Department G20 (Summer 1999)
- [87] "Whose data is it? Property rights in the market for data re-use on the Internet," INFORMS, 1999.
- [88] ENTS 631 Telecommunications and Technology Policy, Professor Joseph Bailey, Robert H. Smith School of Business, University of Maryland (Fall 1998)
- [89] "Where is it from? the technology and policy of attribution," Department of Computer Science, School of Computing, National University of Singapore (Summer 1998)
- [90] "InfoWeb and COIN, Searching Networked, Heterogeneous Data Sources," Cambridge Roundtable, MIT Center for Technology, Policy, and Industrial Development (Spring 1997)
- [91] w/ R.B. Atchison. "In the Matter of Inquiry on Privacy Issues Relating to Private Sector Use of Telecommunications-Related Personal Information," Before the Department of Commerce, National Telecommunications and Information Administration (NTIA), 25 May 1995.
- [92] w/ Neil, S. "Report of the Workshop on Technological Strategies for Protecting Intellectual Property in the Networked Multimedia Environment," August 1993.

- [93] w/ McKnight, L. and Imad Mouline. Digital Information Infrastructure Guide (DIIG) Progress Report on Information Presentation, June 1993.
- [94] w/ McKnight, L. "Executive Summary and Acknowledgments," Workshop on Technological Strategies for the Protection of Intellectual Property in the Networked Multimedia Environment, April 1993.
- [95] w/ Gaba, D. "Measuring the Mental Workload of the Anesthesiologist," Annual Meeting of the American Society of Anesthesiologists, 1990.

Academic Service

Professional Activities

Editorial Board: Journal of Database Management (2002 – present)

Program Committee: Workshop on Information Technology and Systems (WITS) 2003 – 12; Information Integration and Web-based Applications & Services (IIWAS) 2001 - 06; Asia Pacific Web conference (APWeb) 2004 – 06; Information Quality (IQ) 2003 – 04; Database and Expert Systems Applications (DEXA) 2006

Reviewer: Journal of Marketing Research; Journal of Management Information Systems; Management Science; Marketing Science; Information Systems Research; Management Information Systems Quarterly; IEEE Transactions on Knowledge and Data Engineering; Production and Operations Management Journal; INFORMS Journal on Computing; Decision Support Systems; Journal of Electronic Commerce; Electronic Commerce Research Journal; Hawaii International Conference on Systems Science (HICSS); International Conference on Information Systems (ICIS)

School Activities

Education and Training Working Group, Berkeley Institute for Data Science, UC Berkeley (2015 – present)

Member, Berkeley Institute for Data Science, UC Berkeley (2015 – present)

Dean's Committee, Data Science and Strategy, UC Berkeley, Haas (2014 – present)

Wharton OPIM101 undergraduate core course coordinator and curriculum redesign (2003-2009)

Coordinator, Faculty and PhD Research Seminar in Information and Decision Technologies (2001 – 2006)

OPIM698/898 "Value Networks" experimental interdisciplinary course in Operations Management and Information Technology with Morris Cohen (2002-2003)

Wharton OPIM Departmental Seminar Committee (2004)

Wharton OPIM PhD Admissions Committee (2003)

Doctoral Dissertation Committee Member

Zhiqiang Zheng (2003), OPIM Department, The Wharton School, Associate Professor at UT Dallas

Shinyi Wu (2003), OPIM Department, The Wharton School, Associate Professor at Arizona State University

Catherine Yang (2004), OPIM Department, The Wharton School, Associate Professor at UC Davis

Undergraduate Senior Research Projects

Thunyarat (Bam) Amornpetchkul (2008), Dual Degree in Computer Science and Actuarial Science.

Amy (Zhao) Yu (2008), Jerome Fisher Management & Technology Program Dual Degrees in Computer Science and Finance.

Sarah Dong (2007), Jerome Fisher Management & Technology Program Dual Degrees in Computer Science and Finance.

Vijayakumar Nagappan (2007), Wharton Research Scholar.

Community Service

Founding Faculty Advisor, UC Berkeley, Haas Data Science Club (2014 – present)
Judge, UC Berkeley Haas, Tech Challenge Case Competition, Fall 2014
Faculty speaker, Leadership for the Business World (High School Programs), University of Pennsylvania (2005 – 2011, 2014)
Board of Directors and Volunteer, University City Hospitality Commission, Philadelphia, PA (2001 – 2009)
Advisory Board, Penn Asian American Community House (2005 – 2009)
Faculty session leader, Penn Reading Project, University of Pennsylvania (2004 – 2009)
Faculty Associate, Fischer-Hassenfeld College House, University of Pennsylvania (2003 – 2009)
Faculty Advisor, Penn Club Cross Country (2004 – 2005)
Moderator, "Technology for Today's Business," Wharton Women Ernst & Young Conference (April 2005)
Panelist, "P2P Networks and Intellectual Property," PennForum (January 2004)
Judge, "Hewlett-Packard MBA Case Competition," Wharton Technology Club (November 2003)
Faculty speaker, Wharton Welcome Weekend (April 2003)
Panel Chair, "Wireless Telecom," Wharton Entrepreneurship Conference (December 2002)
Judge, "Dell MBA Case Competition," Wharton Technology Club (November 2002)

Awards and Research Grants

Wharton Excellence in Teaching Award, Undergraduate Division (2009)
Wharton nominee for Lindback Award for Distinguished Teaching, University of Pennsylvania (2006)
Faculty Honor Tea, Greek Executive Councils, University of Pennsylvania (2006-8)
David W. Hauck Award for Excellence in Teaching (highest award for undergraduate teaching in the Wharton School) (2005)
General Electric Foundation Fellowship (2000)
Massachusetts Institute of Technology Avery Allen Ashdown Award for graduate student service (1998)
Honorable mention, DOD Fellowship (1996)

"Electric Vehicle Charging Patterns for Competitive Benchmarking Simulations," Siebel Energy Institute (2015)
"Using Purchase History to Identify Customer Projects," Wharton Customer Analytics Initiative Research Opportunity, University of Pennsylvania (2014)
"Online Patient Forums to Support Informed Medical Decision Making," Fishman Davidson Center for Service and Operations Management, University of Pennsylvania (2008)
"Semistructured Text Processing of Online Customer Reviews," Fishman Davidson Center for Service and Operations Management, University of Pennsylvania (2005)
"Managing Semistructured Text for Automated Regulatory Compliance," Wharton electronic Business Initiative (WeBI) Grant, Mack Center for Technological Innovation, University of Pennsylvania (2004)
"UDRP Database: Assessing and administering justice using semi-structured data management," (w/ Dan Hunter) University Research Foundation Grant, University of Pennsylvania (2002)

Professional Affiliations and Other Interests

Association for Computing Machinery; Institute of Electrical and Electronics Engineers; Association for Information Systems, Ultimate Frisbee, running, swimming, 24-hour distance running relays.