

# Yinghui (Catherine) Yang

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Graduate School of Management  
University of California, Davis  
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## **EDUCATION**

**Ph.D. Operations and Information Management, May 2004**

The Wharton School, University of Pennsylvania

**M.A. Operations and Information Management, Dec. 2001**

The Wharton School, University of Pennsylvania

**B.E. Management Information Systems, July 1998**

School of Economics and Management, Tsinghua University (Beijing, P. R. China)

## **RESEARCH INTERESTS**

Business Analytics, Big Data Analytics, Predictive modeling  
Research Methods: Data Mining, Machine Learning, Optimization

## **EMPLOYMENT**

**Associate Professor, Graduate School of Management, UC Davis, 2012 – present**

**Assistant Professor, Graduate School of Management, UC Davis, 2004 – 2012**

**Instructor, The Wharton School, University of Pennsylvania, Spring 2002**

**Research Intern, IBM Almaden Research Center, Summer 2000**

## **PUBLICATIONS**

### **Refereed Journals**

1. Yanwu Yang, Daniel Zeng, Yinghui Yang, and Jie Zhang, “Optimal Budget Allocation Across Search Advertising Markets”, *INFORMS Journal on Computing*. 2015. 27(2): 285-300.
2. Hongyan Liu, Yinghui Yang, Zhuohua Chen, and Yong Zheng, “A Tree-Based Contrast Set Mining Approach to Detecting Group Differences”, *INFORMS Journal on Computing*. Spring 2014, 26:208-221.
3. Yinghui Yang, Hongyan Liu and Yuanjue Cai, “Discovery of Online Shopping Patterns across Web Sites”, *INFORMS Journal on Computing*. Winter 2013, 25:161-176.
4. Yinghui Yang, Balaji Padmanabhan, Hongyan Liu and Xiaoyu Wang, “Discovery of Periodic Patterns in Sequence Data: A Variance Based Approach”, *INFORMS Journal on Computing*, Summer 2012, 24:372-386.
5. Rachel Chen, Eitan Gerstner and Yinghui Yang, “Customer Bill of Rights under No-fault Service Failure”,

*Marketing Science*. January/February 2012, vol. 31 no. 1 157-171.

6. Yinghui Yang and Chunhui Hao, "Product Selection for Promotion Planning", *Knowledge and Information Systems*, Vol. 24, No. 2, 2010.
7. Yinghui Yang, "Web User Behavioral Profiling for User Identification", *Decision Support Systems*, Vol. 49, No. 3, pp. 261-271, 2010.
8. Hongyan Liu, Xiaoyu Wang and Yinghui Yang, "Comments on 'An Integrated Efficient Solution for Computing Frequent and Top-k Elements in Data Streams'", *ACM Transactions on Database Systems (TODS)*, Vol. 35, No. 2, 2010.
9. Yinghui Yang and Balaji Padmanabhan, "Toward User Patterns for Online Security: Observation Time and Online User Identification", *Decision Support Systems*, Vol. 48, No. 4, pp. 548-558, 2010.
10. Rachel Chen, Eitan Gerstner and Yinghui Yang, "Should Captive Sardines be Compensated? Serving Customers in a Confined Zone", *Marketing Science*, Vol. 28, No. 3, pp. 599-608, 2009.
11. Yinghui Yang and Balaji Padmanabhan, "GHIC: A Hierarchical Pattern Based Clustering Algorithm for Grouping Web Transactions", *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, Vol. 7, No. 9, pp. 1300-1304, 2005.
12. Yinghui Yang and Balaji Padmanabhan, "The evaluation of online personalization systems: A survey of evaluation schemes and a knowledge-based approach", *Journal of Electronic Commerce Research*, Vol. 6, No. 2, pp. 112-120, May 2005.

#### **Other Publications**

13. Yinghui Yang, Zijie Qi, Hongyan Liu, Jun He. Constrained Clustering Based on the Link Structure of a Directed Graph. In *Proceedings of the Pacific Asia Conference on Information Systems*, July, 2015, Singapore, Association for Information Systems Electronic Library.
14. Yinghui Yang, Zijie Qi, Hongyan Liu. Selective Domain Information Acquisition to Improve Segmentation Quality. In *Proceedings of the 17th International Conference on Electronic Commerce*, Seoul, Republic of Korea, August, 2015. ACM New York, NY, USA.
15. Nan Li, Yinghui Yang and Xifeng Yan, "Cross-Selling Optimization for Customized Promotion", In *Proceedings of 2010 SIAM International Conference on Data Mining (SDM)*, pp. 918-929, 2010. (Acceptance rate:  $82/344=23.8\%$ )
16. Yinghui Yang, Hongyan Liu and Yuanjue Cai, "Online Market Basket Analysis across Web Sites", In *Proceedings of the 18<sup>th</sup> Workshop on Information Technologies and Systems (WITS2008)*, 2008.
17. Yinghui Yang, "Web Design Based On User Browsing Patterns", In *Encyclopedia of Data Warehousing and Mining - 2nd Edition*, John Wang (eds.), Information Science Reference, 2008.
18. Yinghui Yang, "Behavioral Pattern-Based Customer Segmentation", In *Encyclopedia of Data Warehousing and Mining - 2nd Edition*, John Wang (eds.), Information Science Reference, 2008.
19. Yinghui Yang and Balaji Padmanabhan, "Leveraging Unlabeled Data for Classification", In *Encyclopedia of Data Warehousing and Mining - 2nd Edition*, John Wang (eds.), Information Science Reference, 2008.
20. Yinghui Yang, "The Online Customer: New Data Mining and Marketing Approaches", Cambria Press, 2006. (Research book)
21. Steve Kimbrough and Yinghui Yang, "On Representing Special Languages with FLBC: Message Markers and Reference Fixing in SeaSpeak", In *Formal Modeling in Electronic Commerce*. Kimbrough and Wu, eds., Springer, Berlin, 2005.
22. Yinghui Yang and Balaji Padmanabhan, "Divide and Conquer: An Approach to Model Building Using Pattern-Based Clustering", In *Proceedings of the 13th Workshop on Information Technology and Systems (WITS2003)*, Seattle, Washington, December 13-14, 2003. (Acceptance rate:  $37/126 = 29\%$ )

23. Yinghui Yang and Balaji Padmanabhan, "Segmenting Customer Transactions Using a Pattern-Based Clustering Approach", *In Proceedings of The Third IEEE International Conference on Data Mining (ICDM2003)*, Melbourne, Florida, November 19-22, 2003. (Acceptance rate: 58/501 = 11.6%)
24. Steven O. Kimbrough, Thomas Y. Lee, Balaji Padmanabhan, and Yinghui Yang, "On Original Generation of Structure in Legal Documents", *In Proceedings of the 9th International Conference on Artificial Intelligence and Law (ICAIL2003)*, Pages 152-161, Scotland, UK June 24-28, 2003. ACM press.
25. Steven O. Kimbrough, Thomas Y. Lee, Balaji Padmanabhan, and Yinghui Yang, "Generating Original Structure in Regulatory Documents", *In Proceedings of the 2003 National Conference on Digital Government Research (dg.o2003) (sponsored by the National Science Foundation)*, Boston, Massachusetts, May 18-21, 2003.
26. Yinghui Yang and Balaji Padmanabhan, "On Evaluating Online Personalization", *In Proceedings of the 11<sup>th</sup> Workshop on Information Technologies and Systems (WITS2001)*, Pages 35-41, New Orleans, Louisiana, December 15-16, 2001. (Acceptance rate: 33/116=28%)
27. Ramakrishnan Srikant and Yinghui Yang, "Mining Web Logs to Improve Website Organization", *In Proceedings of the 10th International World Wide Web Conference (WWW10)*, Pages 430-437, Hong Kong, May 1-5, 2001. (Acceptance rate: 78/392=19.9%)

## Patent

- Ramakrishnan Srikant and Yinghui Yang, "Method and System for using Access Patterns to Improve Web Site Hierarchy and Organization", U.S. Patent No. 6,981,037. Issued December 27, 2005.

## Working Papers

- Selecting a Compact and High-Quality Representative Review Set with Information Preservation
- Dynamic Budget Allocation in Competitive Search Advertising
- Predicting Downloads for Recommended Mobile Apps

## TEACHING

- 269 Business Intelligence Technologies – Data Mining
- 287 Business Database and Database Marketing

## SERVICE

### Professional Service:

- Associate Editor, *INFORMS Journal on Computing*, Oct. 2015-present
- Vice Chair, *INFORMS College on Artificial Intelligence*, 2015-2016
- Panelist, *China Summer Workshop on Information Management (Panel on Data Science for Business Analytics)*, June, 2015
- Faculty expert, *First Doctoral Consortium of China Association for Information Systems*, June, 2014
- Editorial Review Board member, *Journal of Database Management*, Sept. 2009 - present
- Associate Editor, *Journal of Electronic Commerce Research*, April 2006 – 2013
- Associate Editor, *International Conference on Information Systems (2012)*
- Session chair, *Pacific Asia Conference on Information Systems*, 2015
- Session chair, *China Summer Workshop on Information Management*, 2014, 2015
- Session chair, *Workshop on Information and Technology Systems*, 2013
- Issue editor, *Journal of Electronic Commerce Research*, Feb. 2006 issue

- Program Committee, Workshop on Information Technologies and Systems (WITS), 2009, 2010, 2011
- Program Committee, INFORMS Conference on Information Systems and Technology (CIST), 2004, 2005, 2006, 2010, 2014, 2015, 2016, 2017
- Program Committee, China Summer Workshop on Information Management, 2007, 2008, 2009, 2014, 2015, 2016, 2017

University Service:

- Committee on Undergraduate Scholarships, Honors & Prizes (2016-2017)
- Chair, Committee on Courses (2016-2017)
- MSBA Admission Committee (2016-2017)
- MSBA Launch Marketing Committee (2016-2017)
- MSBA Graduate Program Committee (2016-2017)
- Working Group on UC Davis Global Centers – Asia (2016-2017)
- Faculty Resources & IT Committee (2015-2016)
- Committee on Courses (2015-2016)
- Education Policy Committee (2013-2014, 2014-2015)
- Chair, Faculty Resources & IT Committee (2013-2014)
- Big Data Committee, 2012-2013
- Education Policy Committee, 2012-2013
- Editor, GSM SSRN Research Paper Series, June 2009 – present
- Research Committee, GSM, UC Davis, 2009-2010.
- Newberry Chair Recruitment Advisory Committee, GSM, 2008-2009
- IT Committee, GSM, 2005-2006
- IT Manager Recruiting Committee, GSM, 2006
- Research Committee, GSM, UC Davis, 2004-2005.

***HONORS AND AWARDS***

- 2009-2016 UC Davis Small Grant in Aid of Research
- 2009 Best Paper Award, CSWIM Conference
- 2008 China National Natural Science Foundation Grant (around 30,000USD)
- 2007 Best Paper Nominee, CSWIM Conference
- 2003 AMCIS Doctoral Consortium
- 1999~2003 Wharton Doctoral Fellowship, University of Pennsylvania