

# Huiji Gao

---

## CONTACT INFORMATION

02C08-S05, Level 2, LSNF  
LinkedIn Corporation  
605 W. Maude Avenue  
Sunnyvale, CA 94085, USA

*Cell:*  
*E-mail:* hgao@linkedin.com  
*Homepage:* <http://www.nini2yoyo.com>  
*LinkedIn:* <https://www.linkedin.com/profile/view?id=58387894>

## RESEARCH INTERESTS

- Computational Advertising, CTR Prediction, Large-scale Recommender Systems
- Location-Based Mobile Social Networking, Crowdsourcing for Disaster Relief
- Data Mining, Machine Learning, Social Computing

Citations on Google Scholar: 1167; h-index:17; i10-index: 20

## EDUCATION

**Arizona State University**, Tempe, AZ, U.S

Ph.D., Computer Science, GPA 4.00/4.00, 2009 – 2015

Thesis: Personalized POI Recommendation on Location-Based Social Networks

Advisor: Huan Liu

**Beijing University of Posts and Telecommunications**, Beijing, China

M.S, Signal and Information Processing, GPA: 90.05/100, Rank: 2/500, 2007 – 2009

Advisor: Jun Guo

- *Admitted without the Graduate Entrance Examination*

**Beijing University of Posts and Telecommunications**, Beijing, China

B.S, Information Automation, GPA: 84.73/100, Rank: 2/59, 2003 – 2007

## SELECTED HONORS AND AWARDS

- ASU Graduate Education Dissertation Fellowship (Awarded to 1 Student per School), 2014
- ASU President's Award for Innovation, 2014
- SDM Doctoral Student Forum Scholarship, 2013
- The 3rd Place in Task 2: Next Location Prediction of Nokia Mobile Data Challenge, 2012
- ICWSM Student Travel Award, 2012
- SBP Student Travel Award, 2011
- SDM Doctoral Student Forum Scholarship, 2011
- Best Performer in Baseline Ranking of TREC Blog Faceted Blog-Distillation Task, 2009
- "Samsung" Scholarship (Awarded to Top 3 of 500 Students), 2008
- World Top 200 in "Microsoft Imagine Cup Embedded System Competition", 2007
- The Third Prize in "Technology Paper" Award of "Innovation Competition", BUPT, 2007.
- The Third Prize in "Artistic Design" Award of "Innovation Competition", BUPT, 2007.
- Outstanding Undergraduate Student of Beijing, China, 2007
- First Prize Scholarship (Awarded to Top 5% Students), BUPT, 2006
- First Prize in "INTEL Cup" - National College Students Embedded System Competition", 2006
- The Second Prize University Scholarship, BUPT, 2003-2005.

## EXPERIENCE

Feb 2015 - Present: **Applied Research Engineer**, Ads Relevance, LinkedIn Corporation, CA.

- Area of Research: Computational Advertising, CTR Prediction
- Predict click-through rate (CTR) of LinkedIn's sponsored updates. Improve the performance and efficiency of CTR prediction w.r.t. cold-start and warm-start models. Develop features including LDA and GBDT under Spark and Hadoop MR. Implement offline/online evaluation metrics for decision making.

Aug 2009 - Dec 2014: **Research Assistant**, Data Mining and Machine Learning Lab, ASU, AZ.

- Area of Research: Data Mining, Machine Learning, Social Computing
- Lead the project ASU Coordination Tracker (ACT), an open disaster relief system to enhance coordination among government and non-government organizations with crowdsourcing and group-sourcing for Disaster Relief. (Demo Page: <http://alive-dev.asu.edu/homepage>)

May 2014 - Aug 2014: **Software Engineering Intern**, LinkedIn Corporation, CA.

- Area of Research: Data Mining, Machine Learning, and Recommender Systems
- Investigate company interest problem to capture member's interests in companies in terms of job application. Develop company interest models for job recommendation and recruiter search on Hadoop Distributed File System (HDFS) using pig and java.

May 2013 - Aug 2013: **Research Intern**, IBM Almaden Research Center, CA.

- Area of Research: Social Media Mining
- Investigate online users' attitude towards controversial topics in online social media in terms of sentiment polarity, opinion preferences, and online actions with mathematical models.

Aug 2009 - Dec 2009: **Teaching Assistant**, Arizona State University, Tempe, AZ.

- Fall 2009: CSE 180: Computer Literacy

Sep 2007 - Jun 2009: **Research Assistant**, PRIS Lab, BUPT, China

- Area of Research: Information Retrieval
- Participated in the project COSE (Campus Object Search Engine), an campus oriented information retrieval system of BUPT

Dec 2005 - Jun 2007: **Research Assistant**, Innovation Lab, BUPT, China

- Area of Research: Embedded Systems
- Participated in the project FAES (First-Aid Expert System), an embedded system designed to monitor the health status of patients
- Led the project See-Saw, an intelligent system for improving study efficiency of primary students

## PUBLICATIONS

### Books

1. Huiji Gao and Huan Liu. "Mining Human Mobility in Location-Based Social Networks", Morgan & Claypool Publisher, April, 2015.

### Book Chapters

1. Huiji Gao and Huan Liu. "Data Analysis on Location-Based Social Networks" in Mobile Social Networking: An Innovative Approach. Editors: Alvin Chin and Daqing Zhang, pp. 165-194, Springer, 2014.
2. Nitin Agarwal, Shamanth Kumar, Huiji Gao, Reza Zafarani and Huan Liu. "Analyzing Behavior of Influentials Across Social Media" in Behavior Computing: Modeling, Analysis, Mining and Decision, pp. 3-19, Springer, 2012.

### Journal Papers

1. Jiliang Tang, Huiji Gao, Atish Das Sarma, Yingzhou Bi, and Huan Liu. "Trust Evolution: Modeling and Its Applications", IEEE Transactions on Knowledge and Data Engineering (TKDE), 27(6), pp. 1724-1738, 2015
2. Huiji Gao, Jiliang Tang, and Huan Liu. "Addressing the Cold-Start Problem in Location Recommendation using Geo-Social Correlations", Data Mining and Knowledge Discovery (DMKD), 29(2), pp. 299-323, 2014.
3. Jiliang Tang, Xufei Wang, Huiji Gao, Xia Hu and Huan Liu. "Enriching Short Texts Rep-

- resentation in MicroBlog for Clustering”. *Frontiers of Computer Science*, 6(1), pp. 88-101, 2011.
4. Geoffrey Barbier, Reza Zafarani, Huiji Gao, Gabriel Fung and Huan Liu. “Maximizing Benefits from Crowdsourced Data”. *Computational and Mathematical Organization Theory*, 18(3), pp. 257-279, 2011.
  5. Huiji Gao, Geoffrey Barbier, and Rebecca Goolsby. “Harnessing the Crowdsourcing Power of Social Media for Disaster Relief”, *IEEE Intelligent Systems*, 26(3), pp. 10-14, 2010.

### Conference and Workshop Papers

1. Fred Morstatter, Huiji Gao, and Huan Liu. “Discovering Location Information in Social Media”, *IEEE Data Engineering Bulletin Special Issue on Location-based Social Media Analysis (IEEE-DEB)*, pp. 4-13, 2015.
2. Huiji Gao, Jiliang Tang, Xia Hu, and Huan Liu. “Content-aware point of interest recommendation on location-based social networks”, the 29th AAAI Conference on Artificial Intelligence (AAAI), pp. 1721-1727, 2015.
3. Huiji Gao, Jalal Mahmud, Jilin Chen, Jeffrey Nichols, and Michelle Zhou. “Modeling User Attitude toward Controversial Topics in Online Social Media”, the Eighth International AAAI Conference on Weblogs and Social Media (ICWSM), pp. 121-130, 2014.
4. Xinxin Zhao, Huiji Gao, Lingjun Li, Huan Liu, and Guoliang Xue. “An efficient privacy preserving location based service system”, *IEEE Global Communications Conference (GLOBECOM)*, pp. 576-581, 2014.
5. Jalal Mahmud and Huiji Gao. “Why Do You Spread This Message? Understanding Users Sentiment in Social Media Campaigns”, the Eighth International AAAI Conference on Weblogs and Social Media (ICWSM), pp. 607-610, 2014.
6. Xia Hu, Jiliang Tang, Huiji Gao, and Huan Liu. “Social spammer detection with sentiment information”, 2014 *IEEE International Conference on Data Mining (ICDM)*, pp. 180-189, 2014.
7. Jiliang Tang, Xia Hu, Huiji Gao, and Huan Liu. “Discriminant Analysis for Unsupervised Feature Selection”, the 14th SIAM International Conference on Data Mining (SDM), pp. 938-946, 2014.
8. Huiji Gao, Jiliang Tang, Xia Hu, and Huan Liu. “Modeling Temporal Effects of Human Mobile Behavior on Location-Based Social Networks”, the 22nd ACM International Conference on Information and Knowledge Management (CIKM), pp. 1673-1678, 2013.
9. Huiji Gao, Jiliang Tang, Xia Hu, and Huan Liu. “Exploring Temporal Effects for Location Recommendation on Location-Based Social Networks”, the 7th ACM Recommender Systems Conference (RecSys), pp. 93-100, 2013.
10. Jiliang Tang, Huiji Gao, Xia Hu, and Huan Liu. “Context-Aware Review Helpfulness Rating Prediction”, the 7th ACM Recommender Systems Conference (RecSys), pp. 1-8, 2013.
11. Huiji Gao, Xuwei Wang, Jiliang Tang, and Huan Liu. “Network Denoising in Social Media”, the *IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, pp. 564-571, 2013.
12. Jiliang Tang, Xia Hu, Huiji Gao, and Huan Liu. “Exploiting Local and Global Social Context for Recommendation”, the 23rd International Joint Conference on Artificial Intelligence (IJCAI), pp. 2712-2718, 2013.
13. Xia Hu, Jiliang Tang, Huiji Gao, and Huan Liu. “Unsupervised Sentiment Analysis with Emotional Signals”, the 22nd International World Wide Web Conference (WWW), pp. 607-618, 2013.

14. Jiliang Tang, Xia Hu, Huiji Gao, and Huan Liu. “Unsupervised Feature Selection for Multi-view Data in Social Media”, the 13th SIAM International Conference on Data Mining (SDM), pp. 270-278, 2013.
15. Xia Hu, Jiliang Tang, Huiji Gao, and Huan Liu. “ActNeT: Active Learning for Networked Texts in Microblogging”, the 13th SIAM International Conference on Data Mining (SDM), pp. 306-314, 2013.
16. Jiliang Tang, Huiji Gao, Xia Hu, and Huan Liu. “Exploiting Homophily Effect for Trust Prediction”(hTrust), the 6th ACM International Conference on Web Search and Data Mining (WSDM), pp. 53-62, 2013.
17. Huiji Gao, Jiliang Tang, and Huan Liu. “gSCorr: Modeling Geo-Social Correlations for New Check-ins on Location-Based Social Networks”, the 21st ACM International Conference on Information and Knowledge Management (CIKM), pp. 1582-1586, 2012.
18. Huiji Gao, Jiliang Tang, and Huan Liu. “Mobile Location Prediction in Spatio-Temporal Context”, Nokia Mobile Data Challenge, 2012.
19. Jiliang Tang, Huiji Gao, Huan Liu, and Atish Das Sarma. “eTrust: Understanding Trust Evolution in an Online World”, the 18th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), pp.253-261, 2012.
20. Huiji Gao, Jiliang Tang, and Huan Liu. “Exploring Social-Historical Ties on Location-Based Social Networks”, the Sixth International AAAI Conference on Weblogs and Social Media (ICWSM), pp. 114-121, 2012.
21. Jiliang Tang, Huiji Gao, and Huan Liu. “mTrust: Discerning Multi-Faceted Trust in a Connected World”, the Fifth ACM International Conference on Web Search and Data Mining (WSDM), pp. 93-102, 2012.
22. Huiji Gao, Xufei Wang, Georey Barbier, and Huan Liu. “Promoting Coordination for Disaster Relief - From Crowdsourcing to Coordination”, Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP), pp. 197-204, 2011.
23. Lei Tang, Huiji Gao, and Huan Liu. “Network Quantification Despite Biased Labels”. Workshop on Mining and Learning with Graphs, KDD, pp. 147-154, 2010.
24. Xufei Wang, Lei Tang, Huiji Gao, and Huan Liu. “Discovering Overlapping Groups in Social Media”, the Tenth IEEE International Conference on Data Mining series (ICDM), pp. 569-578, 2010.
25. Huiji Gao, Weiran Xu, and Jun Guo. “Feed Ranking Refinement with Similitary Distribution in Blog Distillation”, IITAW, pp. 420-423, 2009.

#### TUTORIALS

- Huiji Gao, Jiliang Tang, and Huan Liu, “Personalized Location Recommendation on Location-based Social Networks”, the ACM Recommender System Conference (RecSys 2014).

#### PATENTS

- US 14/675729: “Organizational Interest Modeling”, with Kun Liu, Wen Pu, Anmol Bhasin, and Haishan Liu, LinkedIn, Filed, 2015.
- US 14/293094: “Modeling User Attitudes Toward A Target from Social Media”, with Jalal Mahmud, Jilin Chen, and Michelle Zhou, IBM, Published, 2015 (Filed in 2014).

#### INVITED TALKS

- “Personalized POI Recommendation on Location-Based Social Networks”, Beijing University of Aeronautics and Astronautics, 2014.
- “Location Recommendation with Geo-Social Correlations”, Beijing University of Posts and Telecommunications, 2014.
- “Beyond Crowdsourcing for HADR”, Panel session in HADR Tech Conference organized by University of Colorado at Colorado Springs, 2011.

## SKILLS

- Programming Language: Pig, Spark, Java, C#, Matlab
- Web Developing: ASP.NET, JSP, PHP, AJAX, Mysql, Pinot, Dreamwaver
- Video Production and Animation: Premiere, After Effects
- SDK: Visual Studio, Eclipse, QT, Zend Studio, Play

## ACADEMIA SERVICES **Program Committee**

- ICDM Workshop on Representation Learning for Semantic Data (ReLSD), 2015
- ICDM Workshop on Behavior Analysis, Modeling, and Steering (BEAMS), 2015
- SIGIR Workshop on Temporal, Social and Spatially-aware Information Access (TAIA), 2015
- ACM RecSys International Workshop on Location-Aware Recommendations (LocalRec), 2015
- ECML/PKDD Workshop on Representation Learning (RL), 2014
- IEEE ICCS Symposium on Social Networks and Big Data (SNBD), 2014
- ACM CIKM Workshop on data-driven user behavioral modeling and mining from social media (DUBMOD), 2014
- The 8th International Conference on Weblogs and Social Media (ICWSM), 2014
- The 21st ACM International Conference on Multimedia (ACM Multimedia), 2013

## Reviewer

- Transactions on Intelligent Systems and Technology (TIST), 2010&2012&2013&2015
- Transactions on Knowledge and Data Engineering (TKDE), 2013&2014&2015
- Behaviour & Information Technology (TBIT), 2013&2015
- Transactions on Mobile Computing (TMC), 2015
- Computational Intelligence and Neuroscience (CIN), 2015
- Technological Forecasting and Social Change (TFSC), 2015
- SAGE Open Journal, 2015
- Transactions on Knowledge Discovery from Data (TKDD), 2014
- ACM Transactions on Multimedia Computing, Communications and Applications (TOMM), 2014
- Special Issue of Transportation on Emerging, Passively Generated Datasets for Travel Behavior and Policy Analysis, 2014
- Advances in Computer Engineering (ACE), 2014
- Global Environmental Change (GEC), 2013
- New Review of Hypermedia and Multimedia, 2013
- Disasters Journal (DIAS), 2013
- Social Science Computer Review, 2012
- International World Wide Web Conference (WWW), 2010&2013&2014
- ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2012
- ACM WSDM Conference Series Web Search and Data Mining (WSDM), 2010&2014
- ACM International Conference on Information and Knowledge Management (CIKM), 2011&2014
- Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP), 2013
- Modeling and Mining Ubiquitous Social Media - International Workshops MSM (MSM-MUSE), 2011

- IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2011

OTHER ACTIVITIES

- President in Graduate Students' Union, BUPT, 2007–2008
- Monitor in School of Information Engineering, BUPT, 2007–2009
- Director in Technical Department of Students' Union, BUPT, 2004–2005