

Jeffrey Junfeng Pan

CONTACT INFORMATION

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BRIEF BIO

Junfeng Pan is an active researcher and engineer focusing on ads quality, optimization, machine learning and data mining.

In Google, he focuses on online advertising algorithms and systems for improving ads quality and coverage, including keyword relevance, ranking, pattern extraction, suggestion, pCTR, etc. He won Google's prestigious all-company OC Award (a.k.a EMG Award) 2010 for his contribution, impact and innovation in AdWords Quality.

He has many papers published in referred conferences and journals such as TOIS, TKDE, ACM SIGKDD, AAAI and IJCAI. He serves as a general co-chair/session chair for several conferences and workshops such as NIPS, AAAI and IJCAI. He is a (senior) program committee member for nearly 30 research conferences such as ACM KDD, AAAI and WSDM. He also serves as a regular reviewer for 10+ journals in ACM, IEEE and others. Junfeng Pan was the world champion of ACM Knowledge Discovery and Data Mining (KDD) Cup 2005 on all the three awards: Precision, Performance and Creativity Awards.

Junfeng Pan's work is described in several books such as *Search User Interface (2009)* by Prof. Marti Hearst (UC Berkeley). Junfeng Pan's work has been followed by many researchers such as Dr. Andrei Broder (Fellow and Vice President of Yahoo! Research).

HONORS AND AWARDS

Google's prestigious OC Award (a.k.a EMG Award) 2010 for my contribution to AdWords Quality.

World Champion of the 2005 ACM Knowledge Discovery and Data Mining (KDD) Cup on:

- Precision Award
- Performance Award
- Creativity Award

Query classification has very wide applications such as interest-based ads targeting by analyzing query log. The proposed solution won the championship worldwide. The performance was far better than the runners-up, and was close to the performance of human experts in both precision and recall. The work was reported in professional media and has been widely studied and applied.

Several other prizes and honors nationwide.

IMMIGRATION STATUS

2010 Extraordinary Scientist (EB-1A). Permanent Resident.
2010 Outstanding Researcher (EB-1B).
2009 Extraordinary Scientist (O-1A).

WORK EXPERIENCE **Research Engineer, Google, Mountain View**

Dec. 2007 - Current

- Focused Area: online advertising algorithms for improving ads quality and coverage, including keyword relevance, ranking, pattern, suggestion, predicted click through rate models, etc.
- 2010 Google Peer Bonus Award from Expanded Match Team for my contribution to pattern discovery and the application in keyword classification.
- 2010 Google Peer Bonus Award from Expanded Match Team for my contribution to query enrichment and the application in keyword matching.
- 2010 Google Peer Bonus Award from UI Experience Research Team for my contribution to user intent understanding with machine learning.

- 2010 Google Peer Bonus Award from Google Search Team for my contribution to web-based information extraction framework.

Engineering Intern, Google, New York City

Jun. 2006 - Nov. 2006

- Learning-based information extraction systems and models.

EDUCATION

Hong Kong University of Science and Technology (HKUST)

Hong Kong

Ph.D. Major in Computer Science and Engineering

2004-2007

Fulfill Partial credits in Shanghai Jiao Tong University

2003-2004

Massachusetts Institute of Technology (MIT)

Boston

Visiting Scholar. Learning-based User Behavior Recognition.

2007-2007

Zhongshan (Sun Yat-sen) University (ZSU)

China

Bachelor of Science. Major in Computer Science. Ranked top %1.

1999-2003

Excellent Graduate Award, 2003.

Excellent Student Scholarship, 2000, 2001, 2002.

Excellent New Student Award, 1999.

PUBLICATIONS

Jeffrey J. Pan, Sinno Jialin Pan, Qiang Yang and Lionel Ni. Tracking Mobile Users in Wireless Networks via Semi-Supervised Co-Localization. *in submission*, 2010.

Jeffrey J. Pan, Seth Teller, Qiang Yang. Semi-Supervised Localization via Action Respecting Manifold. The International Joint Conference on Artificial Intelligence (IJCAI) Workshop on Intelligent Systems for Assisted Cognition. Pasadena, CA. July, 2009.

Vincent W. Zheng, Sinno J. Pan, Qiang Yang and **Jeffrey J. Pan**. Transferring Multi-device Localization Models using Latent Multi-task Learning. In Proceedings of the 23rd AAAI Conference on Artificial Intelligence (AAAI-08). Chicago, Illinois, USA. July 2008.

Jie Yin, Qiang Yang and **Jeffrey J. Pan**. Sensor-Based Abnormal Human-Activity Detection for Security Monitoring. Special Issue on Intelligence and Security Informatics, IEEE Transactions on Knowledge and Data Engineering (TKDE). Vol 20, No. 8, August 2008.

Jeffrey J. Pan, Sinno J. Pan, Vincent W. Zheng and Qiang Yang. Digital Wall: A Power-efficient Solution for Location-based Data Sharing. In Proceeding of PerCom-08 Workshop on Power-Aware Pervasive Devices (PerDev-08), Hong Kong. March 17-21, 2008.

Jeffrey J. Pan, Qiang Yang, Yiming Yang, Lei Li, Francis T. Li and George W. Li. Cost-Sensitive-Data Preprocessing for Mining Customer Relationship Management Databases. IEEE Intelligent Systems. (Vol. 22, No. 1). Pages 46-51. January/February 2007.

Jeffrey J. Pan, Qiang Yang, Jialin Pan. Online Co-Localization in Indoor Wireless Networks. In Proceedings of the 22nd National Conference on Artificial Intelligence (AAAI-07). Vancouver, Canada. July 2007.

Jeffrey J. Pan, Qiang Yang. Co-Localization from Labeled and Unlabeled Data Using Graph Laplacian. In Proceedings of the Twentieth International Joint Conference on Artificial Intelligence (IJCAI-07). Hyderabad, India. Pages 2166-2171. January 2007.

Rong Pan, Junhui Zhao, Wenchen Zheng, **Jeffrey J. Pan**, Dou Shen, Jialin Pan, and Qiang Yang. Domain-Constrained Semi-Supervised Mining of Tracking Models in Sensor Networks. ACM SIGKDD. San Jose, USA. August 2007.

Jialin Pan, James T. Kwok, Qiang Yang, **Jeffrey J. Pan**. Adaptive Localization in a Dynamic WiFi Environment Through Multi-view Learning. In Proceedings of the *22nd National Conference on Artificial Intelligence (AAAI-07)*. Vancouver, Canada. July 2007.

Jeffrey J. Pan, Qiang Yang, Hong Chang, Dit-Yan Yeung. A Manifold Regularization Approach to Calibration Reduction for Sensor-Network Based Tracking. In Proceedings of the *Twenty-First National Conference on Artificial Intelligence (AAAI-06)*. Pages 988-993. Boston, USA. July 2006.

Jeffrey J. Pan, James T. Kwok, Qiang Yang, Yiqiang Chen. Multidimensional Vector Regression for Accurate and Low-Cost Location Estimation in Pervasive Computing. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*. Pages 1181-1193. Vol 18, No. 9, September 2006.

Ivor W. Tsang, James T. Kwok, Brian Mak, Kai Zhang, **Jeffrey J. Pan**. Fast speaker adaptation via maximum penalized likelihood kernel regression. In Proceedings of the *International Conference on Acoustics, Speech, and Signal Processing (ICASSP-06)*. Toulouse, France. May 2006

Dou Shen, Rong Pan, Jian-Tao Sun, **Jeffrey J. Pan**, Kangheng Wu, Jie Yin and Qiang Yang. Query Enrichment for Web-query Classification. *ACM Transactions on Information Systems (TOIS)*. Pages 1-33. Vol. 24, No. 3, July 2006.

Jeffrey J. Pan, James T. Kwok, Qiang Yang, Yiqiang Chen. Accurate and low-cost location estimation using kernels. In *Proceedings of the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI-05)*. Edinburgh, United Kingdom. Pages 1366-1371. July 2005.

Dou Shen, Rong Pan, Jian-Tao Sun, **Jeffrey J. Pan**, Kangheng Wu, Jie Yin and Qiang Yang. Q2C@UST: Our Winning Solution to Query Classification in KDD Cup 2005. *SIGKDD Explorations*. Page 100-110. Volume 7, Issue 2, December 2005.

Rong Pan, Qiang Yang, **Jeffrey J. Pan**, Lei Li. Competence-driven case-based mining. In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI-05)*. Pittsburgh, Pennsylvania, USA. Pages 228-233. July 2005.

Junbiao Pan , **Jeffrey J. Pan**. The Principal and Improvement of Hot Fix for S12-Switch. *Science and Research of Telecommunications*. Pages 56-64, Vol.7, No.2. June 2003.

Jiancong Bai , **Jeffrey J. Pan** and Jianbo Luo. Programming in PHP. China Machine Press, ISBN-7111-08596-5, January 2001.

SELECTED
PROFESSIONAL
ACTIVITIES

Chairs for Conferences and Workshops

- 2010 Session Chair on “Physically Grounded AI: Human Behaviors” of the 24th Conference on Artificial Intelligence (AAAI)
- 2010 Session Chair on “Physically Grounded AI: Behaviour Modeling” of the 24th Conference on Artificial Intelligence (AAAI)
- 2009 Session Chair on “Unsupervised Learning” of the the 21st International Joint Conference on Artificial Intelligence (IJCAI)
- 2009 Session Chair on “Dimensionality Reduction” of the the 21st International Joint Conference on Artificial Intelligence (IJCAI)
- 2008 Session Chair on “Activity Recognition” of the 23rd Conference on Artificial Intelligence
- 2008 Session Chair on “Model Transfer” of the 23rd Conference on Artificial Intelligence (AAAI)
- 2008 Co-Organizer of Workshop on Beyond Search: Computational Intelligence for the Web, Neural Information Processing Systems (NIPS)

Program Committee members for Conferences and Workshops

- 2011 Senior Program Committee member of the 22nd Internal Joint Conference on Artificial

- Intelligence (IJCAI)
- 2011 Program Committee member of the 4th ACM International Conference on Web Search and Data Mining (WSDM)
 - 2011 Program Committee member of the 4th International Conference on Advances in Computer-Human Interaction (ACHI)
 - 2010 Program Committee member of the 16th annual ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)
 - 2010 Program Committee member of the 24th AAAI Conference on Artificial Intelligence (AAAI)
 - 2010 Program Committee member of the 3rd ACM International Conference on Web Search and Data Mining (WSDM)
 - 2010 Program Committee member of the 3rd International Conference on Advances in Computer-Human Interaction (ACHI)
 - 2010 Program Committee member of the IEEE/WIC/ACM International Conference on Web Intelligence (WI)
 - 2010 Program Committee member of the 3rd Annual International Workshop on Data Mining and Audience Intelligence for Advertising (ADKDD)
 - 2010 Program Committee member of the Multimedia Data Mining Workshop (MDM/KDD)
 - 2010 Program Committee member of the 2nd Asian Conference on Machine Learning (ACML)
 - 2009 Program Committee member of the European Conference on Machine Learning (ECML)
 - 2009 Program Committee member of the Internal Joint Conference on Artificial Intelligence
 - 2009 Program Committee member of the SIAM International Conference on Data Mining (SDM)
 - 2009 Program Committee member of the 2nd ACM International Conference on Web Search and Data Mining (WSDM)
 - 2009 Program Committee member of the 18th ACM Conference on Information and Knowledge Management (CIKM)
 - 2009 Program Committee member of the IEEE/WIC/ACM International Conference on Web Intelligence (WI)
 - 2009 Program Committee member of the International Conference on Data Mining (ICDM) Workshop on Transfer Mining.
 - 2009 Program Committee member of the 1st Asian Conference on Machine Learning (ACML)
 - 2009 Program Committee member of the International Conference on Web Information Systems and Mining (WISM)
 - 2009 Program Committee member of the International Conference on Intelligent User Interfaces
 - 2009 Program Committee member of the the 5th International Conference on Algorithmic Aspects in Information and Management (AAIM)
 - 2009 Program Committee member of the 2nd International Conference on Advances in Computer-Human Interaction (ACHI)
 - 2009 Program Committee member of the Joint International Conferences on Asia-Pacific Web Conference (APWeb) and Web-Age Information Management (WAIM)
 - 2008 Program Committee member of the 23rd Conference on Artificial Intelligence (AAAI)
 - 2008 Program Committee member of the 10th Pacific Rim International Conference on Artificial Intelligence (PRICAI)
 - 2008 Program Committee member of the IEEE/WIC/ACM International Conference on Web Intelligence (WI)
 - 2008 Program Committee member of the 1st International Conference on Advances in Computer-Human Interaction (ACHI)
 - 2007 Program Committee member of the IEEE ICDM Data Mining Contest
 - 2006 Program Committee member of the 1st IEEE International Workshop on Data Mining and Wireless Sensor Networks (DM-WSN)

Reviewers for Journals

- Reviewer for ACM Transactions on Intelligent Systems and Technology (ACM TIST)
- Reviewer for ACM Transactions on Knowledge Discovery from Data (TKDD)
- Reviewer for Communications of the ACM (CACM)

- Reviewer for IEEE Transaction on Knowledge Discovery and Data Engineering (TKDE)
- Reviewer for IEEE Transaction on Neural Networks (TNN)
- Reviewer for IEEE Transaction on Mobile Computing (TMC)
- Reviewer for IEEE Intelligent Systems