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Education

Ph.D. Information Science, University of North Carolina at Chapel Hill, 2010.

M.A. Information Science, Indiana University Bloomington, 2006.

B.E. Chemical Engineering, East China University of Science & Technology, 1998.

Employment

Assistant Professor, Drexel University, September 1, 2010 - present.

Adjunct Instructor, University of North Carolina, 2009.

Research Assistant, University of North Carolina, 2007 - 2010.

Research Assistant, Indiana University Bloomington, 2004 - 2007.

Project Manager, eBay China, Shanghai, 2002.

Software Development Manager, Lycos (Asia) China, 1999 - 2002.

Software Engineer, Great-Wall eInfoNet, Shanghai, China 1998 - 1999.

Peer Reviewed Publications

Book Chapters

3. Weimao Ke (2012). Decentralized Search and the Clustering Paradox in Large Scale Information Networks. In C. Jouis, I. Biskri, J.G. Ganascia, & M. Roux (Eds.), *Next Generation Search Engines: Advanced Models for Information Retrieval* (pp. 29-46). IGI Global.
2. Weimao Ke and Javed Mostafa (2011). Toward Collective Intelligence for Information Retrieval in Distributed Networked Environments: Integrating Perspectives from Multiple Research Communities. Accepted to J. Sobecki and N.T. Nguyen (Eds.), *Computational Collective Intelligence and Hybrid Systems: Concepts and Applications* (pp. 1-20). IGI Global.
1. Javed Mostafa, Kazuhiro Seki, and Weimao Ke (2009). Beyond Information Retrieval: Literature Mining for Biomedical Knowledge Discovery. In J.Y. Chen, S. Lonardi, and R. Cohen (Eds.), *Biological Data Mining* (pp. 449-485). Chapman and Hall/CRC Press.

Journal Articles

8. Yan Zhang, Ramona Broussard, Weimao Ke, and Xuemei Gong (2013). The Evaluation of a Scatter/Gather Interface for Supporting Distinct Health Information Search Tasks. Accepted to the *Journal of American Society for Information Science and Technology*, pp. 1-25. Wiley.
7. Weimao Ke and Javed Mostafa (2013). Studying the Clustering Paradox and Scalability of Search in Highly Distributed Environments. To appear in *ACM Transactions on Information Systems*, 31(2), pp. 1-37. ACM Press.
6. Weimao Ke (2013). A Fitness Model for Scholarly Impact Analysis. *Scientometrics*, 94(3), pp. 981-998. OnlineFirst July 2012. Springer.
5. Gavin LaRowe, Sumeet Ambre, John Burgoon, Weimao Ke, and Katy Börner (2008). The Scholarly Database and Its Utility for Scientometrics Research. *Scientometrics*, 79(2), pp. 219-234. Springer.
4. Katy Börner, Shashikant Penumarthy, Mark Meiss, and Weimao Ke (2006). Mapping the Diffusion of Information among Major U.S. Research Institutions. *Scientometrics*, 68(3), pp. 415-426. Springer.
3. Marco Janssen, Michael Schoon, Weimao Ke, and Katy Börner (2006). Literature analysis on Resilience, Vulnerability and Adaptation. *Global Environmental Change, special issue on Resilience, Vulnerability and Adaptation*, 16(3), pp. 240-252. Elsevier.
2. Weimao Ke, Yueyu Fu and Javed Mostafa (2005). Advanced information retrieval Web services for digital libraries. *Library Collections, Acquisitions, and Technical Services*, 29(2), pp. 220-224. Elsevier.
1. Katy Börner, Luca Dallsta, Weimao Ke, and Alessandro Vespignani (April 2005). Studying the Emerging Global Brain: Analyzing and Visualizing the Impact of Co-Authorship Teams. *Complexity, special issue on Understanding Complex Systems*, 10(4), pp. 58-67. Wiley.

Full Research Papers in Proceedings

16. Weimao Ke (2013). Information-theoretic Term Weighting Schemes for Document Clustering. Accepted to *JCDL'13: ACM/IEEE Joint Conference on Digital Libraries*, pp. 1-10. Indianapolis, IN.
15. Weimao Ke and Xuemei Gong (2012). Collaborative Hierarchical Clustering in the Browser for Scatter/Gather on the Web. In *ASIS&T'12: Proceedings of the 75th American Society for Information Science and Technology conference*, pp. 1-8.
14. Weimao Ke (2012). Least Information Document Representation for Automated Text Classification. In *ASIS&T'12: Proceedings of the 75th American Society for Information Science and Technology conference*, pp. 1-10.
13. Weimao Ke and Javed Mostafa (2010). Scalability of Findability: Efficient and Effective IR Operations in Large Information Networks. In *SIGIR '10: Proceedings of the 33rd annual international ACM SIGIR conference on research and development in information retrieval*, pp. 74-81. Geneva, Switzerland. July 19-23, 2010. (17% acceptance)
12. Weimao Ke and Javed Mostafa (2009). Strong Ties vs. Weak Ties: Studying the Clustering Paradox for Decentralized Search. In *Proceedings of the 7th Workshop on Large-Scale Distributed Systems for Information Retrieval (LSDS-IR09) in conjunction with SIGIR '09*, pp. 49-56. Boston, MA.
11. Weimao Ke, Cassidy R. Sugimoto, and Javed Mostafa (2009). Dynamicity vs. effectiveness: Studying online clustering for Scatter/Gather. In *SIGIR '09: Proceedings of the 32nd annual international ACM SIGIR conference on research and development in information retrieval*, pp. 19-26. Boston, MA. July 19-23, 2009. (16% acceptance)

10. Weimao Ke and Javed Mostafa (2009). A Referral Approach to Finding Medical Informatics Reviewers. In *Proceedings of the 12th International Conference on Network-Based Information Systems*, pp. 194-199. Indianapolis, IN. August 19-21, 2009.
9. Diane Kelly, Chirag Shah, Cassidy R. Sugimoto, Earl W. Bailey, Rachael A. Clemens, Ann K. Irvine, Nicholas A. Johnson, Weimao Ke, Sanghee Oh, Anezka Poljakova, M.A. Rodriguez, M.G. van Noord, and Yan Zhang. (2008). Effects of performance feedback on users' evaluations of an interactive IR system. *Proceedings of the 2nd Symposium on Information Interaction in Context (IliX)*, London, UK. October 14-17, 2008.
8. Weimao Ke and Javed Mostafa (2008). Collaborative Expertise Retrieval: A Referral Approach to Finding Distributed Experts. In *Proceedings of the SIGIR 2008 Workshop on Future Challenges in Expertise Retrieval (fCHER)*, pp. 37-40, 2008.
7. Weimao Ke, Javed Mostafa, and Yong Liu (2008). Toward Responsive Visualization Services for Scatter/Gather Browsing. In *Proceedings of the 71st Annual Meeting of the American Society for Information Science and Technology (ASIS&T 2008)*, pp. 1-10. Columbus, OH.
6. Weimao Ke and Tiago Simas (2007). Mapping a Local Web Domain. In *Proceedings of the 11th International Conference on Information Visualisation (IV'07)*, pp. 215-218.
5. Bruce W. Herr, Weimao Ke, Elisha Hardy, and Katy Börner (2007). Movies and Actors: Mapping the Internet Movie Database. In *Proceedings of the 11th International Conference on Information Visualisation (IV'07)*, pp. 439-443.
4. Weimao Ke, Javed Mostafa, and Yueyu Fu (2007). Collaborative Classifier Agents: Studying the Impact of Learning in Distributed Document Classification. In *JCDL'07: Proceedings of the 7th ACM/IEEE-CS joint conference on digital libraries*, pp. 428-437.
3. Gavin LaRowe, Sumeet Ambre, John Burgoon, Weimao Ke, and Katy Börner (2007). The Scholarly Database and Its Utility for Scientometrics Research. In *Proceedings of the 11th biennial International Conference on Scientometrics and Informetrics (ISSI 2007)*, June 25-27, Madrid, Spain 2007.
2. Kiduk Yang, Ning Yu, Alejandro Valerio, Hui Zhang, and Weimao Ke (2007). Fusion Approach to Finding Opinions in Blogosphere. In *Proceedings of the First International Conference on Weblogs and Social Media*, Boulder, Colorado, U.S.A.
1. Colin Murray, Weimao Ke, and Katy Börner (2006). Mapping Author Expertise and Scientific Disciplines Based on Personal Bibliography Files. In *Proceedings of the 10th International Conference on Information Visualisation (IV'06)*, pp. 258-263.

Short Papers in Proceedings

9. Xuemei Gong, Weimao Ke, Yan Zhang, and Ramona Broussard (2013). Interactive Search Result Clustering: A Study of User Behavior and Retrieval Effectiveness. Accepted to *JCDL'13: ACM/IEEE Joint Conference on Digital Libraries*, pp. 1-4. Indianapolis, IN.
8. Xuemei Gong, Weimao Ke, and Ritu Khare (2012). Studying Scatter/Gather Browsing for Web Search. In *ASIS&T'12: Proceedings of the 75th American Society for Information Science and Technology conference*, pp. 1-4. Baltimore, MD.
7. Weimao Ke (2009). The Rich Get Richer: Studying Scholarly Impact in the Emerging Field of Information Visualization. In *Proceedings of the Fourth Annual iSchools Conference (iConference'09)*.

6. Weimao Ke, Javed Mostafa, and Gayathri S. Athreya (2008). Computer Supported Workflow for Cataloging and Management in Digital Libraries. In *Proceedings of the 71st Annual Meeting of the American Society for Information Science and Technology (ASIS&T 2008)*, pp. 1-5. Columbus, OH.
5. Weimao Ke and Javed Mostafa (2008). Visualizing Multi-Agent Collaboration for Classification of Information. In *Proceedings of the 71st Annual Meeting of the American Society for Information Science and Technology (ASIS&T 2008)*, pp. 1-4. Columbus, OH.
4. Yueyu Fu, Javed Mostafa, and Weimao Ke (2005). Toward information retrieval Web services for digital libraries. In *Proceedings of the 68th Annual Meeting of the American Society for Information Science and Technology (ASIS&T 2005)*.
3. Yueyu Fu, Weimao Ke, Javed Mostafa (2005). Automated text classification using a multi-agent framework. In *JCDL '05: Proceedings of the 5th ACM/IEEE-CS joint conference on digital libraries*.
2. Colin Murray, Weimao Ke, Hana Milanov, Mark Meiss, Sharavan Rajagopal, and Katy Börner (2005). Geographical Visualization of Technology Data in the US. *Proceedings of the 11th IEEE Symposium on Information Visualization (INFOVIS'05)*. (Honorable mention in IEEE InfoVis 2005 Contest)
1. Weimao Ke, Katy Börner, and Lalitha Viswanath (2004). Major Information Visualization Authors, Papers and Topics in the ACM Library. In *Proceedings of the 10th IEEE Symposium on Information Visualization (INFOVIS'04)*. (First Place Winner of IEEE InfoVis 2004 Contest)

Invited Publications

2. Weimao Ke (2010). Scalability of Findability: Decentralized Search and Retrieval in Large Information Networks. *ACM SIGIR Forum*, 44(2), 86. December 2010.
1. Katy Börner and Weimao Ke (2006). Mapping the Social Network and Expertise of “Network Science” Researchers. In *Report to the U.S. National Research Council Study on Network Science*, 88-92. The National Academies Press.

Dissertation and Non-Refereed Publications

4. Weimao Ke (2012). Least Information Modeling for Information Retrieval. CoRR, abs/1205.0312. <http://arxiv.org/abs/1205.0312>.
3. Weimao Ke (2010). *Scalability of Findability: Decentralized Search and Retrieval in Large Information Networks*. PhD thesis, School of Information and Library Science, the University of North Carolina, Chapel Hill, NC, USA.
2. Weimao Ke, Cassidy R. Sugimoto, and Javed Mostafa (2008). *Dynamicity vs. Effectiveness: A User Study of a Clustering Algorithm for Scatter/Gather* (Tech. Rep. No. TR-2008-03). Chapel Hill, NC, U.S.A.: UNC SILS.
1. Yong Liu, Javed Mostafa, and Weimao Ke (2007, November). *A fast online clustering algorithm for Scatter/Gather browsing* (Tech. Rep. No. TR-2007-06). Chapel Hill, NC, U.S.A.: UNC SILS.

Submissions and Work in Progress

3. Weimao Ke (2013). Studying Decentralized Search Scalability in Self-organized Information Networks. Submitted to *SIGIR'13: Proceedings of the 36th annual international ACM SIGIR conference on research and development in information retrieval*, pp. 1-10. Dublin, Ireland.
2. Weimao Ke (2012). An Information-centric Approach to Term Weighting for Document Clustering. Submitted to the international journal of *Data Mining and Knowledge Discovery*, pp. 1-23. Springer.
1. Weimao Ke (2012). Least Information Modeling for Information Retrieval. Submitted to the *Information Retrieval* journal, pp. 1-23. Springer.

Teaching Experience

Drexel University

Assistant Professor, College of Information Science and Technology

INFO 371: Data Mining with Machine Learning, developed for the new Bachelor of Science in Informatics program (2013/2014 -) (course coordinator)

INFO 624: Information Retrieval Systems, Fall & Spring terms, 2010 - present (course coordinator)

INFO 151: Web Systems and Services, Winter terms, 2011 - present (course coordinator)

Independent research/study supervision: Xiaoli Song (2013), Xuemei Gong (2012), Yizhou Zang (2012)

University of North Carolina at Chapel Hill

Teaching Assistant and Adjunct Instructor, School of Information and Library Science

INLS 461: Information Tools, Fall 2009 (instructor)

INLS 523: Database I, Spring 2009 (teaching assistant and co-instructor)

INLS 890: Cyberinfrastructures (teaching assistant)

Indiana University Bloomington

Teaching Assistant, School of Library and Information Science

L579: Information Visualization, Spring 2005, 2006

L597: Structural Data Mining and Modeling, Fall 2004, 2005

Invited Lectures and Presentations

Invited talk at CVDI Seminar, The iSchool at Drexel, 2013: *Clustering Paradox and Least Info Theory*.

Presentation at R&T Talks, The iSchool at Drexel, 2011: *Large-scale distributed systems for IR*.

Invited talk at NCSU Computer Science, 2010, Raleigh, NC: *Scalability of Findability*.

Posters at **ALISE 2010**, Boston, MA: *Scatter/Gather & Scalability of Findability*.

Presentation at **NBiS 2009**, Indianapolis, IN: *Decentralized Reviewer Finding*.

Presentation at **LSDS-IR 2009**, Boston, MA: *Clustering Paradox and Decentralized Search*.

Presentation at **SIGIR 2009**, Boston, MA: *Scatter/Gather Clustering*.

Guest lecture at **DocShop, Spring 2009**, Chapel Hill, NC: *L^AT_EX and Scientific Writing*.

Poster at **iConference 2009**, Chapel Hill, NC: *The Rich Get Richer*.

Poster at **ALISE 2009**, Denver, CO: *Agent Referral for Expertise Retrieval*.

Presentation & Posters at **ASIS&T 2008**, Columbus, OH: *Scatter/Gather & Multi-Agent*.

Presentation at **SILS Doctoral Symposium 2008**, Chapel Hill, NC: *Scatter/Gather Study*.

Invited talk at **ASIS&T Carolina Chapter 2008**, Chapel Hill, NC: *Info Vis for IR Research*.

Guest lecture at **Info Organization, Spring 2008**, Chapel Hill, NC: *Clustering*.

Presentation at **JCDL 2007**, Vancouver, Canada: *Collaborative Classifier Agent*.

Presentation at **IUDL 2007**, Bloomington, IN: *Multi-Agent Collaboration for Info Classification*.

Poster at **NSDL 2006**, Washington, DC: *Project Enable: Web Search and Scatter/Gather*

Invited talk at **IUDL 2005**, Bloomington, IN: *Project ENABLE: System Workflow*.

Poster at **NSDL 2004**, Chicago, IL: *Project ENABLE: Bioinformatics Learning Environment*.

Presentation & Poster at **InfoVis 2004**, Austin, TX: *Major IV Authors, Papers & Topics in ACM*.

Honors and Awards

Graduate Research Scholarship, SILS & TraCS, UNC Chapel Hill, 2007 - 2010

Carnegie Grant, SILS, UNC Chapel Hill, 2009

SIGIR Student Travel Grant, SIGIR & Microsoft Research, ACM, 2009

SIG/STI CAS Student Award, ASIS&T, 2008

Best paper nominee, International Conference on Weblog & Social Media, AAAI, 2007

SLIS Research Scholarship, Indiana University Bloomington, 2006 - 2007

Full Merit Scholarship, Indiana University Bloomington, 2004 - 2006

National Chancellor's List, Indiana University Bloomington, 2005

Honorable mention, InfoVis 2005 Contest, IEEE, 2005

Student Showcase Award, University Information Technology Services, 2005, 2006

First Place Award, InfoVis 2004 Contest, IEEE, 2004

Services

Professional

Program committee, ACM SIGIR Conference, 2011, 2013

Reviewer, ACM Transactions on the Web, 2012

Program committee, American Society for Information Science and Technology, 2012

Reviewer, ACM Transactions on Intelligent Systems and Technology, 2012

Reviewer, Information Processing & Management, 2010, 2012

Review coordinator & program committee, ACM IHI Health Informatics Conference, 2012

Reviewer, ACM Transactions on Information Systems, 2011

Reviewer, Journal of Autonomous Agents and Multi-Agent Systems, 2010

Reviewer, Computational Collective Intelligence and Hybrid Systems, 2009

Reviewer, IEEE Information Visualization Conference (IEEE InfoVis), 2009

Program committee, NAACL HLT Student Research Workshop, 2009

Reviewer and volunteer, The Fourth iSchools Conference, 2009

Student volunteer, IEEE Visualization Conference, 2004

Student Advising

Member, Dissertation committee, Xuning Tang (2012, final defense February 2013)

Member, Prospectus committee, Mi Zhang (2012)

Member, Dissertation committee, Xin Chen (final defense December 2012)

Chair, Portfolio review committee, Xuemei Gong (2012)

Member, Portfolio review committee, Ling Jiang (2012)

Member, Dissertation committee, Zunyan Xiong (2012)

Member, Dissertation committee, Jia Huang (2012)

Member, Dissertation committee, Haozhen Zhao (2011, 2012)

Member, Portfolio review committee, Zunyan Xiong (2011)

Member, Portfolio review committee, Jia Huang (2010, 2011)

Member, Dissertation committee, Lifan Guo (2011)

Independent Research/Project Supervision

Xiaoli Song, Doctoral student, Winter 2013: Hadoop/MapReduce

Xuemei Gong, Doctoral student, Summer 2012: Scatter/Gather

Yizhou Zang, Masters student, Summer 2012: Distributed clustering

Anh Nguyen, Undergraduate, Winter 2011: Honors option project

College and University

Curruculum Committee (undergraduate curriculum subcommittee), The iSchool at Drexel, 2012-2013

Ad Hoc Committee on Undergraduate Education, The iSchool at Drexel, 2011-2012

Committee on Research and Teaching Talks, The iSchool at Drexel, 2010-2011

Computer Skills

With over 15 years' experience in professional software engineering as well as research-oriented complex system development.

Statistical Packages: R (favorite) and SAS.

Computer Languages: SQL, JAVA, Perl, PHP, ASP, D/HTML, Awk, VB/A, etc.

Databases: PostgreSQL (favorite), MySQL, SQL Server, MS Access, Oracle, etc.

Systems for Research: Lucene, Weka, JADE, Lemur, Haddop, GridGain, Cougaar, Diet, MPI, etc.

Operating Systems: Linux/FreeBSD/Unix, Mac OS, Windows, etc.

Languages

Chinese - native speaker

English - speak fluently and read/write with high proficiency

Hokkien - native speaker (a southern Chinese dialect, a.k.a., Taiwanese)

Professional Affiliations and Memberships

Information Retrieval Facility (IRF)

Association for Computing Machinery (ACM)

ACM Special Interest Group on Information Retrieval (SIGIR)

American Society for Information Science and Technology (ASIS&T)

Association for Library and Information Science Education (ALISE), 2009-2010

Biomedical Informatics Core, NC Translational and Clinical Sciences (TraCS) Institute, 2009-2010