

## Donald A. Metzler Jr.

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### RESEARCH INTERESTS

I am interested in theoretical and practical problems that arise in information retrieval, natural language processing, and data mining. I'm also interested in machine learning applied to large scale textual applications. My research has focused on retrieval models, query/document representations, term weighting, term proximity, and learning to rank (machine learned ranking functions). I am always interested in expanding the breadth and the depth of my research into other related areas or fields of study. I am also passionate about seeing my research applied to real world problems, especially those dealing with large, complex data sets. Along these lines, I have real-world experience designing and evaluating novel technologies for news search, web search, summarization, and online advertising systems.

### EMPLOYMENT

Senior Software Engineer, May 2012 – Present  
Google, Venice, CA

Research Assistant Professor, July 2011 – March 2012  
Department of Computer Science  
University of Southern California, Los Angeles, CA

Technology Advisor, July 2011 – March 2012  
Chomp, San Francisco, CA

Computer Scientist, April 2010 – March 2012  
Natural Language Group  
Information Sciences Institute, Marina del Rey, CA

Senior Research Scientist, September 2007 – April 2010  
Search and Computational Advertising Group  
Yahoo! Research, Santa Clara, CA

Research Intern, June 2006 – August 2006  
Adaptive Systems and Interaction Group  
Microsoft Research, Seattle, WA

Research Assistant, September 2002 – August 2007  
Center for Intelligent Information Retrieval  
University of Massachusetts, Amherst, MA

### EDUCATION

Ph.D., Computer Science, September 2007  
University of Massachusetts, Amherst, MA  
Thesis: *Beyond Bags of Words: Effectively Modeling Dependence and Features in Information Retrieval*

Advisor: W. Bruce Croft  
Committee Members: James Allan, John Buonaccorsi, Andrew McCallum

M.S., Computer Science, May 2005  
University of Massachusetts, Amherst, MA

B.S., Computer Science and Mathematics, Summa Cum Laude, May 2002  
Rose-Hulman Institute of Technology, Terre Haute, IN

- TEACHING EXPERIENCE    Instructor, CSCI 599: Applications of Natural Language Processing – Information Retrieval, University of Southern California, Spring 2012
- Teaching Assistant, CMPSCI 646: Information Retrieval, University of Massachusetts, Amherst, Fall 2006
- BOOKS    Metzler, D. “A Feature-Centric View of Information Retrieval,” Information Retrieval Series, Springer, 2011.
- Croft, W.B., Metzler, D., and Strohman, T. “Search Engines: Information Retrieval in Practice,” Addison Wesley, 2009.
- THESES    Metzler, D. “Beyond Bags of Words: Effectively Modeling Dependence and Features in Information Retrieval,” Ph.D. Dissertation, University of Massachusetts, Amherst. Amherst, MA, 2007.
- JOURNAL ARTICLES    Metzler, D. and Croft, W.B. “Linear Feature-Based Models for Information Retrieval,” in *Information Retrieval*, 10(3), 257-274, 2007.
- Metzler, D. and Croft, W.B. “Analysis of Statistical Question Classification for Fact-based Questions,” *Information Retrieval*, 8(3), 481-504, 2005.
- Metzler, D. and Croft, W.B. “Combining the Language Model and Inference Network Approaches to Retrieval,” *Information Processing and Management Special Issue on Bayesian Networks and Information Retrieval*, 40(5), 735-750, 2004.
- TUTORIALS ORGANIZED    Metzler, D. and Kurland, O. “Empirical Methods for Information Retrieval,” half-day tutorial presented at the *35th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, Portland, OR, 2012.
- Metzler, D. and Lavrenko, V. “Probabilistic Models for Information Retrieval,” full-day tutorial presented at the *32nd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, Boston, MA, 2009.
- WORKSHOPS ORGANIZED    Diaz, F., Hovy, E., King, E., Li, J., Metzler, D., Moens, M., Tang, J., and Zhang, L. “The 3rd Workshop on Social Web Search and Mining (SWSM2011): Analysis of User Generated Content Under Crisis ,” full day workshop held in conjunction with the *34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, Beijing, China, 2011.
- CONFERENCE PAPERS    Metzler, D., Cai, C., and Hovy, E. “Structured Event Retrieval over Microblog Archives,” in the *Proceedings of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL-HLT 2012)*, 2012.
- Bendersky, M., Metzler, D., and Croft, W.B. “Effective Query Formulation with Multiple Information Sources,” in the *Proceedings of the ACM Conference on Web Search and Data Mining (WSDM 2012)*, 2012.

Bendersky, M., Metzler, D., and Croft, W.B. “Parameterized Concept Weighting in Verbose Queries,” in the *Proceedings of the 34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (SIGIR 2011), 2011.

Asadi, N., Metzler, D., Elsayed, T., and Lin, J. “Pseudo Test Collections for Learning Web Search Ranking Functions,” in the *Proceedings of the 34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (SIGIR 2011), 2011.

Wang, L., Lin, J., and Metzler, D. “A Cascade Ranking Model for Efficient Ranked Retrieval,” in the *Proceedings of the 34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (SIGIR 2011), 2011.

Lang, H., Metzler, D., Wang, B., and Li, J. “Improved Latent Concept Expansion Using Hierarchical Markov Random Fields,” in the *Proceedings of the ACM Conference on Information and Knowledge Management*, 2010.

Wang, L., Metzler, D., and Lin, J. “Ranking Under Temporal Constraints,” in the *Proceedings of the ACM Conference on Information and Knowledge Management*, 2010.

Wang, L., Lin, J., and Metzler, D. “Learning to Efficiently Rank,” in the *Proceedings of the 33rd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (SIGIR 2010), 2010.

Diaz, F., Metzler, D., and Amer-Yahia, S. “Relevance and Ranking in Online Dating Systems,” in the *Proceedings of the 33rd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (SIGIR 2010), 2010.

Bendersky, M., Gabrilovich, E., Josifovski, V., and Metzler, D., “The Anatomy of an Ad: Structured Indexing and Retrieval for Sponsored Search,” in the *Proceedings of the 19th International World Wide Web Conference* (WWW 2010), 2010.

Bendersky, M., Metzler, D., and Croft, W.B. “Learning Concept Importance Using a Weighted Dependence Model,” in the *Proceedings of the ACM Conference on Web Search and Data Mining*, 2010.

Carterette, B., Gabrilovich, E., Josifovski, V., and Metzler, D. “Measuring the Reusability of Test Collections,” in the *Proceedings of the ACM Conference on Web Search and Data Mining*, 2010.

Chapelle, O., Metzler, D., Zhang, Y., and Grinspan, P. “Expected Reciprocal Rank for Graded Relevance,” in the *Proceedings of the ACM Conference on Information and Knowledge Management*, 2009.

Metzler, D., Zaragoza, H. “Semi-Parametric and Non-Parametric Term Weighting for Information Retrieval,” in the *Proceedings of the 2nd International Conference on the Theory of Information Retrieval* 2009.

Metzler, D., Novak, J., Cui, H., and Reddy, S. “Building Enriched Document Representations using Aggregated Anchor Text,” in the *Proceedings of the 32nd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 2009.

Broder, A. Ciccolo, P., Gabrilovich, Josifovski, V., Metzler, D., Riedel, L., and Yuan, J. “Online Expansion of Rare Queries for Sponsored Search,” in the *Proceedings of the ACM*

*Conference on the World Wide Web*, 2009.

Broder, A. Ciaramita, M., Fontoura, M., Gabrilovich, E., Josifovski, V., Metzler, D., Murdock, V., and Plachouras, V. "To Swing or not to Swing: Learning when (not) to Advertise," in the *Proceedings of the ACM Conference on Information and Knowledge Management*, 2008.

Metzler, D. "Generalized Inverse Document Frequency," in the *Proceedings of the ACM Conference on Information and Knowledge Management*, 2008.

Metzler, D., Strohman, T., and Croft, W.B., "A Statistical View of Binned Retrieval Models," in the *Proceedings of the 30th European Conference on Information Retrieval*, 2008.

Metzler, D. "Automatic Feature Selection in the Markov Random Field Model for Information Retrieval," in the *Proceedings of the 16th ACM Conference on Information and Knowledge Management*, 253-262, 2007.

Metzler, D and Croft, W.B. "Latent Concept Expansion Using Markov Random Fields," in the *Proceedings of the 30th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* 311-318, 2007.

Metzler, D., Dumais, S., and Meek, C. "Similarity Measures for Short Segments of Text," in the *Proceedings of the 29th European Conference on Information Retrieval*, 16-27, 2007.

Diaz, F., and Metzler, D. "Pseudo-Aligned Multilingual Corpora," in the *Proceedings of the 20th International Joint Conference on Artificial Intelligence*, 2727-2732, 2007.

Metzler, D., and Croft, W.B. "Beyond Bags of Words: Modeling Implicit User Preferences in Information Retrieval," in the *Proceedings of the AAAI'06 Nectar Track*, 2006.

Diaz, F. and Metzler, D. "Improving the Estimation of Relevance Models Using Large External Corpora," in the *Proceedings of the 29th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 154-161, 2006.

Metzler, D., Bernstein, Y., Croft, W.B., Moffat, A., and Zobel, J. "Similarity Measures for Tracking Information Flow," in the *Proceedings of the 14th ACM Conference on Information and Knowledge Management*, 517-524, 2005.

Metzler, D. and Croft, W.B., "A Markov Random Field Model for Term Dependencies," in the *Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 472-479, 2005.

Metzler, D., and Manmatha, R., "An Inference Network Approach to Image Retrieval," in the *Proceedings of the International Conference on Image and Video Retrieval*, 42-50, 2004

UNREFEREED  
CONFERENCE  
PAPERS Metzler, D. and Cai, C. "USC/ISI at TREC 2011: Microblog Track," in the *Proceedings of the 2011 Text REtrieval Conference (TREC 2011)*, 2011.

Elsayed, T., Asadi, N., Metzler, D., Wang, L., and Lin, J. "UMD and USC/ISI: TREC 2010 Web Track Experiments with Ivory," in the *Proceedings of the 2010 Text REtrieval Conference (TREC 2010)*, 2010.

Lin, J., Metzler, D., Elsayed T., and Wang, L., "Of Ivory and Smurfs: Loxodontan MapReduce Experiments for Web Search," in the *Proceedings of the 2009 Text REtrieval Confer-*

ence, 2009.

Turtle, H. and Metzler, D., “CIIR Experiments for TREC Legal 2007,” in the *Proceedings of the 2007 Text REtrieval Conference*, 2007.

Metzler, D., Strohman, T., and Croft, W.B., “Indri at TREC 2006: Lessons Learned From Three Terabyte Tracks,” in the *Proceedings of the 2006 Text REtrieval Conference*, 2006.

Metzler, D., Strohman T., Zhou, Y., and Croft, W.B., “UMass Robust 2005: Using Mixtures of Relevance Models for Query Expansion,” in the *Proceedings of the 2005 Text REtrieval Conference*.

Metzler, D., Strohman T., Zhou, Y., and Croft, W.B., “Indri at TREC 2005: Terabyte Track,” in the *Proceedings of the 2005 Text REtrieval Conference*.

Metzler, D., Strohman T., Turtle H., and Croft, W.B., “Indri at TREC 2004: Terabyte Track,” in the *Proceedings of the 2004 Text REtrieval Conference*.

WORKSHOP  
PAPERS

Metzler, D., and Hovy, E. “Mavuno: A Scalable and Effective Hadoop-Based Paraphrase Acquisition System,” in the *Proceedings of the KDD Workshop on Large-scale Data Mining: Theory and Applications* (LDMTA 2011), 2011.

Gouws, S., Hovy, D., and Metzler, D. “Unsupervised Mining of Lexical Variants from Noisy Text,” in the *Proceedings of the EMNLP Workshop on Unsupervised Learning in NLP* (UNSUP 2011), 2011.

Gouws, S., Metzler, D., Cai, C., and Hovy, E. “Contextual Bearing on Linguistic Variation in Social Media,” in the *ACL Workshop on Language in Social Media* (LSM 2011), 2011.

Metzler, D. and Kanungo, T. “Machine Learned Sentence Selection Strategies for Query-Biased Summarization,” in the *Proceedings of the ACM SIGIR Learning to Rank for Information Retrieval Workshop*, 2008.

DEMOS AND  
SHORT PAPERS

Elsayed, T., Lin, J., and Metzler, D. “When Close Enough Is Good Enough: Approximate Positional Indexes for Efficient Ranked Retrieval,” in the *Proceedings of the ACM Conference on Information and Knowledge Management* (CIKM 2011), 2011.

Asadi, N., Lin, J., and Metzler, D. “Cross-Corpus Relevance Projection,” in the *Proceedings of the 34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (SIGIR 2011), 2011.

Metzler, D., Hovy, E., and Zheng, C. “An Empirical Evaluation of Data-Driven Paraphrase Generation Techniques,” in the *Proceedings of the The 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies* (ACL-HLT 2011), 2011.

Broder, A., Gabrilovich, E., Josifovski, V., Mavromatis, G., Metzler, D., Wang, J. “Exploiting Site-Level Information to Improve Web Search,” in the *Proceedings of the ACM Conference on Information and Knowledge Management*, 2010.

Metzler, D., Jones, R., Peng, F., and Zhang, R. “Improving Search Relevance for Implicitly Temporal Queries,” in the *Proceedings of the 32nd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* 2009.

Zhang, R., Chang, Y., Zheng, Z., Metzler, D., and Nie, J. "Search Result Re-ranking by Feedback Control Adjustment for Time-sensitive Query," in the *Proceedings of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies*, 2009.

Metzler, D. "Using Gradient Descent to Optimize Language Modeling Smoothing Parameters" in the *Proceedings of the 30th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 687-688, 2007.

Metzler, D., "Estimation, Sensitivity, and Generalization in Parameterized Retrieval Models," in the *Proceedings of the 15th ACM Conference on Information and Knowledge Management*, 2006.

Metzler, D., Bernstein, Y., Croft, W.B., Moffat, A., and Zobel, J., "The Recap System for Identifying Information Flow," *Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 678-678, 2005.

Strohman, T., Metzler, D., Turtle, H., and Croft, W.B., "Indri: A Language-Model Based Search Engine for Complex Queries," in the online *Proceedings of the International Conference on Intelligence Analysis*, 2005.

Metzler, D., Lavrenko, V., and Croft, W. B., "Formal Multiple-Bernoulli Models for Language Modeling," *Proceedings of ACM SIGIR 2004*, 540-541, 2004.

TECHNICAL  
REPORTS

Cui, H., Reddy, S., and Metzler, D. "QueryText – Using Queries and Clicks to Improve Text Matching for Web Search," Yahoo! Labs Technical Report, 2009.

Metzler, D., Jones, R., Peng, F., and Zhang, R. "An Analysis of Implicitly Year Qualified Queries," Yahoo! Labs Technical Report, 2009.

Metzler, D., "Estimation, Sensitivity, and Generalization in Parameterized Retrieval Models (Extended Version)," CIIR Technical Report, 2006.

Donald Metzler, "Direct Maximization of Rank-based Metrics," CIIR Technical report.

Strohman, T., Metzler, D., Turtle, H., and Croft, W.B., "Indri: A Language-Model Based Search Engine for Complex Queries (Extended Version)". CIIR Technical Report.

PATENTS  
GRANTED

Jones, R. and Metzler, D., and Peng, F. *Identifying and Expanding Implicitly Temporally Qualified Queries*, United States Patent 8,156,111.

Kanungo, T., and Metzler, D. *System and Method for Automatically Ranking Lines of Text*, United States Patent 8,005,845.

PATENTS  
UNDER  
REVIEW

*System for Determining and Optimizing Relevance in Match-Making Systems*  
Inventors: Fernando Diaz, Donald Metzler, and Sihem Amer-Yahia

*Contextual Indexing of Search Results*  
Inventors: Andrei Broder, Evgeniy Gabrilovich, Vanja Josifovski, George Mavromatis, Jianlin Wang, and Donald Metzler

*Hierarchically-Structured Indexing and Retrieval*  
Inventors: Donald Metzler, Evgeniy Gabrilovich, Vanja Josifovski, and Michael Bendersky

*Term Weighting for Contextual Advertising*

Inventors: Donald Metzler, Andrei Broder, Vanja Josifovski, Kishore Papineni, Alexander Smola, George Mavromatis, and Evgeniy Gabrilovich

*Method and System for Utilizing User Selection Data to Determine Relevance of a Web Document for a Search Query*

Inventors: Jasmine Novak, Donald Metzler, Hang Cui, Srihari Reddy, and Emre Velipasaoglu

*Enriched Document Representations Using Aggregated Anchor Text*

Inventors: Donald Metzler, Jasmine Novak, Hang Cui, and Srihari Reddy

*Phrase Identification using Break Points*

Inventors: Hadar Shemtov, Tapas Kanungo, Rajhans Samdani, and Donald Metzler

*Prediction of a Degree of Relevance Between Query Rewrites and a Search Query*

Inventors: Evgeniy Gabrilovich, Donald Metzler, Vanja Josifovski, Andrei Broder, Vassilis Plachouras, Vanessa Murdock, and Massimiliano Ciaramita

*Rare Query Expansion by Web Feature Matching*

Inventors: Donald Metzler, Lance Riedel, Evgeniy Gabrilovich, and Vanja Josifovski

*System and Method for Improved Search Relevance Using Proximity Boosting*

Inventors: Fuchun Peng, Xing Wei, Yumao Lu, Xin Li, Donald Metzler, Hang Cui, Beniot Dumoulin

*Systems And Methods For Building A Prediction Model To Predict A Degree Of Relevance Between Digital Ads And A Search Query Or Webpage Content*

Inventors: Evgeniy Gabrilovich, Vassilis Plachouras, Andrei Broder, Vanessa Murdock, Donald Metzler, Vanja Josifovski, Massimiliano Ciaramita, and Marcus Fontoura

*Systems and Methods for Predicting a Degree of Relevance Between Digital Ads and Webpage Content*

Inventors: Evgeniy Gabrilovich, Vassilis Plachouras, Andrei Broder, Vanessa Murdock, Donald Metzler, Vanja Josifovski, Massimiliano Ciaramita, and Marcus Fontoura

*Systems and Methods for Predicting a Degree of Relevance Between Digital Ads and a Search Query*

Inventors: Evgeniy Gabrilovich, Vassilis Plachouras, Andrei Broder, Vanessa Murdock, Donald Metzler, Vanja Josifovski, Massimiliano Ciaramita, and Marcus Fontoura

*Systems And Methods For Query Expansion In Sponsored Search*

Inventors: Andrei Z. Broder, Evgeniy Gabrilovich, Vanja Josifovski, Donald Metzler, Lance Riedel and Peter Ciccolo

RESEARCH  
GRANTS

Key Personnel, DARPA Grant, "Situational Awareness for Social Media: Theories, Models and Algorithms," University of Southern California, \$6,206,500, 2012-2015.

PI, NSF Grant, "EAGER: Constructing, Indexing, and Searching Super-Enriched Document Representations in the Cloud," University of Southern California, \$250,000, 2011-2013.

PI, NSF Grant, "III: EAGER: Automatically Building Test Collections Using Implicit Relevance Signals from the Web," \$150,000, University of Southern California, 2011-2012.

PI, Amazon Web Services Research Grant, University of Southern, California, \$4,000, 2011.

PI, Yahoo! Faculty Research Engagement Grant, “User Representations for Search, Advertising, and Content Applications”, \$7,000, University of Southern California, 2010-2011.

AWARDS AND  
HONORS

Honorable Mention for Best Paper Award, SIGIR 2011.

Shortlisted for Best Interdisciplinary Paper Award, CIKM 2010.

Best Reviewer Award, EMNLP 2010.

Microsoft Research / Live Labs Graduate Fellow, 2006-2007

Best Student Paper Award, ACM SIGIR 2005

Passed Ph.D. Qualifier with Distinction, 2005

INVITED  
TALKS

“Data Representations, Features, and Models for Learning to Rank”  
1st Southern California Workshop on Machine Learning  
Irvine, CA, September 2011

“Towards Structured Search over Microblog Streams”  
University of Massachusetts Amherst  
Amherst, MA, May 2011.

“The Science Behind Effectively Ranking at Scale”  
Los Angeles Area Machine Learning Meetup  
Los Angeles, CA, April 2011.

“Towards Structured Search over Microblog Streams”  
University of Washington  
Seattle, WA, April 2011.

“Towards Structured Search over Microblog Streams”  
Microsoft Research  
Redmond, WA, April 2011.

“Learning to Effectively and Efficiently Rank”  
University of California, Irvine Artificial Intelligence / Machine Learning Seminar  
Irvine, CA, October 2010.

“Supporting Research with Open Web-Based APIs”  
SIGIR 2010 Web N-Gram Workshop  
Geneva, Switzerland, July 2010

“Specialized Query Understanding”  
SIGIR 2010 Query Representation and Understanding Workshop  
Geneva, Switzerland, July 2010

“Learning Query Concept Importance Using a Weighted Dependence Model”  
University of Southern California - Information Sciences Institute  
Los Angeles, CA, December 2009.



“To Swing or Not to Swing: Learning when (not) to Advertise”  
National University of Singapore  
Singapore, July 2008.

“Overview of Computational Advertising”  
University of Massachusetts  
Amherst, MA, March 2008

“An Overview of the Indri Search Engine”  
University of Illinois  
Champaign, IL, March 2005.

PROFESSIONAL Professional Memberships  
ACTIVITIES

- Senior Member, Association for Computing Machinery (ACM)
- Member, ACM Special Interest Group on Information Retrieval (SIGIR)

Area Chair / Senior Program Committee Member

- Program Chair, Open Research Areas in Information Retrieval (OAIR/RIAO), 2013
- Senior PC, ACM Conference on Information and Knowledge Management (CIKM), 2012
- Area Chair, Conference on Artificial Intelligence (AAAI), 2012
- Area Chair, ACM International Conference on Research and Development in Information Retrieval (SIGIR), 2011-2012
- Track Chair, International World Wide Web Conference (WWW), 2011
- Poster Track Chair, ACM International Conference on Research and Development in Information Retrieval (SIGIR), 2009

Editorial Boards

- ACM Transactions on Information Systems (TOIS)
- Information Retrieval Journal

Organizing Committee Member

- Publicity Chair, ACM Conference on Information and Knowledge Management (CIKM), 2011
- Best Paper Chair, International Conference on the Theory of Information Retrieval (ICTIR), 2011

Program Committee Member

- ACM Conference on Information and Knowledge Management, 2011-2012
- ACM Conference on Web Search and Data Mining (WSDM), 2008-2012
- ACM International Conference on Research and Development in Information Retrieval (SIGIR), 2007-2011
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2010-2012
- Asian Information Retrieval Societies Conference (AIRS), 2011
- Empirical Methods for Natural Language Processing Conference (EMNLP), 2008-2011
- European Association for Computational Linguistics Conference (EACL), 2008, 2012
- European Conference on Information Retrieval (ECIR), 2008, 2012
- International AAAI Conference on Weblogs and Social Media (ICWSM), 2012

- International Conference on Computational Linguistics (COLING), 2010
- International Conference on Machine Learning (ICML), 2008, 2010, 2012
- International Conference on the Theory of Information Retrieval (ICTIR), 2011
- International Joint Conference on Natural Language Processing (IJCNLP), 2011
- International World Wide Web Conference (WWW), 2008, 2010-2012
- North American Chapter of the Association for Computational Linguistics - Human Language Technologies Conference (NAACL-HLT), 2007, 2011

#### Workshop Program Committees

- Beyond Binary Relevance Workshop (SIGIR 2008, 2009)
- Enriching Information Retrieval Workshop (SIGIR 2011)
- Human Language Technologies Conference, Demo Track (2008)
- Information Retrieval for Advertising Workshop (SIGIR 2008, 2009)
- Learning to Rank Workshop for Information Retrieval (SIGIR 2007, 2008)
- Workshop on Crowdsourcing for Search and Data Mining (WSDM 2011)
- Workshop on Crowdsourcing for Search Evaluation (SIGIR 2010-2011)
- Workshop on Enriching Information Retrieval (SIGIR 2011)
- Workshop on Feature Generation and Selection for Information Retrieval (SIGIR 2010)
- Workshop on Query Representation and Understanding (SIGIR 2011)
- Workshop on The Peoples Web meets NLP: Collaboratively Constructed Semantic Resources and their Applications to NLP (EACL 2012)
- Workshop on User Modeling for Web Applications (WSDM 2011)
- Workshop on Web Search Result Summarization and Presentation (WWW 2009)

#### Other Committees

- Best Paper Awards Committee, European Conference on Information Retrieval (ECIR), 2012
- Student Session PC, ACL/HLT, 2011
- Tutorial PC, ACM Conference on Web Search and Data Mining (WSDM), 2012
- Tutorial PC, ACM International Conference on Research and Development in Information Retrieval (SIGIR), 2010-2011
- Workshop PC, ACM Conference on Web Search and Data Mining (WSDM), 2011
- Workshop PC, ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2012

#### Journal Reviewer

- ACM Transactions on Intelligent Systems and Technology (TIST)
- ACM Transactions on Knowledge Discovery from Data (TKDD)
- ACM Transactions on Information Systems (TOIS)
- Data Mining and Knowledge Discovery (DMKD)
- Electronics and Telecommunications Research Institute Journal (ETRI)
- Foundations and Trends in Information Retrieval (FnTIR)
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- Information Processing and Management (IP&M)

- Information Processing Letters (IPL)
- Journal of Artificial Intelligence Research (JAIR)
- Journal of the American Society for Information Science and Technology (JASIST)
- Journal of Machine Learning Research (JMLR)
- Pattern Recognition Letters (PATREC)

Other Service

- National Science Foundation Panelist (2008, 2011)
- National Science Foundation Ad Hoc Reviewer (2010)