

# Emine Yilmaz

## *Office Address*

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## *Home Address*

17 Radcliffe Court  
Rose Crescent  
Cambridge CB2 3LR, UK  
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**Research Interests** Information Retrieval, Machine Learning and Statistics, Information Theory.

## **Education** **Northeastern University, Boston, MA, U.S.A**

Ph.D. in Computer Science, December 2007.

Thesis Title : Efficient and Informative Evaluation of Retrieval Systems.

Advisor: Prof. Javed A. Aslam

## **Northeastern University, Boston, MA, U.S.A**

M.S. in Computer Science, December 2004.

Concentration Area: Information Retrieval, Machine Learning, Information Theory

Advisor: Prof. Javed A. Aslam

GPA : 4.0/4.0

## **Middle East Technical University, Ankara, Turkey**

B.S. in Computer Science, June 2002.

Thesis Title : Behavior Based Robotics

GPA : 3.49/4.0

## **Professional Experience**

### **Microsoft Research**

Cambridge, UK

*Postdoc Researcher*

February 2008-present

Research in information retrieval, learning to rank, effect of evaluation metrics in learning to rank, modeling user behavior.

### **Northeastern University**

Boston, MA

*Research Assistant (Advisor : Javed A. Aslam)*

2003-2008

Research in information retrieval, applications of machine learning and information theory.

### **Microsoft Research**

Cambridge, UK

*Research Intern (Supervisor : Stephen Robertson)*

June 2006 – September 2006

Research in efficient evaluation of retrieval systems and rank correlation statistics.

**Northeastern University**

Boston, MA

*Teaching Assistant*

Spring 2002 – Fall 2003

Assisted in teaching by holding office hours, grading, helping create assignments and exams for:

- *Artificial Intelligence and Problem Solving (Graduate)* (Spring 2003).
- *Information Retrieval (Undergraduate)* (Spring 2003).
- *Computer Graphics (Undergraduate)* (Spring 2003).
- *Artificial Intelligence (Undergraduate)* (Fall 2004).

**AkNet**

Istanbul, Turkey

Software Research and Development Department, (July 2002 – December 2002)

*Full time employee:* Improvement of the performance and security of transaction system of a bank.

**Middle East Technical University**

Ankara, Turkey

Software Research and Development Center (SRDC) (January 2002 – July 2002)

*Part time employee:* Building an e-commerce system that exploits web service semantics using ebXML Registries and Software Agents.

**Hahn-Meitner Institut Research Center**

Berlin, Germany

*Research Intern* (July 2001 – September 2001): Building data analysis tools using Lab-View for research on compact media storage.

**Professional  
Activities****Consulting several tracks in TREC, INEX and CLEF on evaluation.**

xinfAP, an evaluation measure proposed by Emine Yilmaz, Evangelos Kanoulas and Javed Aslam, SIGIR '08 adopted by several tracks in TREC, INEX and CLEF.

**Local Organizer**

ICTIR (International Conference on the Theory of Information Retrieval) 2009

**Program Committee Member**

SIGIR (ACM Conference on Research and Development in Information Retrieval) 2007, 2008, 2009

ICTIR (International Conference on the Theory of Information Retrieval) 2009

ISCIS (International Symposium on Computer and Information Sciences) 2009

**Reviewer**

IPM (Information Processing and Management Journal)

TOIS (ACM Transactions on Information Systems Journal)

**External Reviewer**

SIGIR (ACM Conference on Research and Development in Information Retrieval) 2005, 2006

CIKM (ACM Conference on Information and Knowledge Management) 2005, 2007

**Organizer**

Artificial Intelligence Seminar. College of Computer and Information Science, (Spring 2002 – Spring 2003).

<b>Honors/ Academic Achievements</b>	<p>TREC (Text Retrieval Conference, National Institute of Standards and Technology) Terabyte and VID track adopts infAP, an evaluation measure proposed by Emine Yilmaz and Javed Aslam (July 2006)</p> <p>Outstanding Researcher Award, Department of Computer and Information Science, Northeastern University (May 2006)</p> <p>Selected for the Dean's Office honors/high honors list for all semesters in Middle East Technical University (September 1998 – June 2002)</p> <p>IAESTE (The International Association for the Exchange of Students for Technical Experience) Scholarship (July 2001 – September 2001)</p>
<b>Demos/ Invited Talks</b>	<p><b>Relevance Feedback Track, TREC 2009</b> Emine Yilmaz, Dennis Fetterly, Nick Craswell and Stephen Robertson. Submission of a relevance feedback system.</p> <p><b>Retrieval Effectiveness, Relevance judgements, and Learning to Rank.</b> Microsoft Research Cambridge, Technical Advisory Board Meeting, June 2009.</p> <p><b>Evaluating the Evaluation of Search Results.</b> Milad Shokouhi, Emine Yilmaz, Stephen Robertson, Nick Craswell. TechFest 2009.</p> <p><b>On the Choice of Effectiveness Measures for Learning to Rank.</b> University of Glasgow, March 2009.</p> <p><b>Document Selection Methodologies for Efficient and Effective Learning.</b> Microsoft Research Redmond, February 2009.</p> <p><b>On the Choice of Effectiveness Measures for Learning to Rank.</b> Microsoft Research Silicon Valley, February 2009.</p> <p><b>Efficient and Effective Evaluation of Retrieval Systems.</b> Yahoo! Research, June 2007; Bogazici University, September 2007.</p>
<b>Students Supervised</b>	<p>Chang Wang (University of Massachusetts at Amherst). Internship, Summer 2009.</p> <p>Evangelos Kanoulas (Northeastern University). Internship, Summer 2008.</p>
<b>Publications</b>	<p><b>Deep versus Shallow Judgments in Learning to Rank</b> Emine Yilmaz and Stephen Robertson. In <i>Proceedings of the 31th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval</i>, July 2009.</p> <p><b>Document Selection Methodologies for Efficient and Effective Learning-to-Rank</b> Javed A. Aslam, Evangelos Kanoulas, Virgil Pavlu, Stefan Savev, Emine Yilmaz. In <i>Proceedings of the 31th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval</i>, July 2009.</p> <p><b>On the Choice of Effectiveness Measures for Learning to Rank</b> Emine Yilmaz and Stephen Robertson. In <i>Special Issue on Learning to Rank for IR, Information Retrieval Journal</i>, 2009. To Appear.</p>

### **Incorporating user behavior information in IR evaluation**

Emine Yilmaz, Milad Shokouhi, Nick Craswell and Stephen Robertson. In *Understanding the user - Logging and interpreting user interactions in information search and retrieval, Workshop in Conjunction with the ACM SIGIR Conference on Research and Development in Information Retrieval, July 2009*.

### **On the Choice of Effectiveness Measures for Learning to Rank.**

Emine Yilmaz and Stephen Robertson. In *Learning to Rank for Information Retrieval. Workshop in Conjunction with the ACM SIGIR Conference on Research and Development in Information Retrieval, July 2009*

### **Relevance Assessment: Are Judges Exchangeable and Does it Matter?**

Peter Bailey, Nick Craswell, Ian Soboroff, Paul Thomas, Arjen P. de Vries, Emine Yilmaz. In *Proceedings of the 30th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, July 2008*.

### **A New Rank Correlation Coefficient for Information Retrieval**

Emine Yilmaz, Javed A. Aslam and Stephen Robertson. In *Proceedings of the 30th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, July 2008*.

### **A Simple and Efficient Sampling Method for Estimating AP and NDCG**

Emine Yilmaz, Evangelos Kanoulas, Javed A. Aslam. In *Proceedings of the 30th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, July 2008*.

### **Estimating Average Precision when Judgments are Incomplete**

Emine Yilmaz and Javed A. Aslam. In *International Journal of Knowledge and Information Systems, 2008*.

### **Inferring Document Relevance from Incomplete Information**

Javed A. Aslam and Emine Yilmaz. In *Proceedings of the 16th International Conference on Information and Knowledge Management(CIKM).*, November 2007.

### **Estimating Average Precision with Incomplete and Imperfect Information**

Emine Yilmaz and Javed A. Aslam. In *Proceedings of the 15th International Conference on Information and Knowledge Management (CIKM)*, October 2006. Invited to Appear In *International Journal of Knowledge and Information Systems*.

### **A Statistical Method for System Evaluation Using Incomplete Judgments**

Javed A. Aslam, Virgil Pavlu and Emine Yilmaz. In *Proceedings of the 29th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, August 2006.

### **Inferring Document Relevance via Average Precision**

Javed A. Aslam and Emine Yilmaz. In *Proceedings of the 29th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, August 2006.

### **A Geometric Interpretation and Analysis of R-Precision**

Javed A. Aslam and Emine Yilmaz. In *Proceedings of the 14th International Conference on Information and Knowledge Management(CIKM)*, October 2005.

### **The Maximum Entropy Method for Analyzing Retrieval Measures**

Javed A. Aslam, Emine Yilmaz and Virgil Pavlu. In *Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, August 2005.

### **A Geometric Interpretation of R-precision and Its Correlation with Average Precision**

Javed A. Aslam, Emine Yilmaz and Virgil Pavlu. In *Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, August 2005.

### **Measure-based Metasearch**

Javed A. Aslam, Virgil Pavlu and Emine Yilmaz. In *Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, August 2005.

### **A Sampling Technique for Efficiently Estimating Measures of Query Retrieval Performance Using Incomplete Judgments**

Javed A. Aslam, Virgil Pavlu and Emine Yilmaz. In *Proceedings of the Workshop on Learning with Partially Classified Training Data at the 22nd International Conference on Machine Learning (ICML)*, August 2005.