



# VIRGIL PAVLU

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**INTERESTS** Information Retrieval, Machine Learning, Applied Math, AI for Games

**EDUCATION** **PhD Candidate in Computer Science, Northeastern University**, adviser: Javed Aslam.  
Thesis: *Evaluation for Large Scale Information Retrieval*; it was awarded the Northeastern University Completion Fellowship for Spring 2008. Expected graduation: Summer 2008.  
**PhD Candidate in Computer Science, Dartmouth College 2001-2003**, adviser: Javed Aslam.  
Graduate level coursework: Algorithms, CS Theory, Systems, Machine Learning, Information Retrieval, AI, Programming Languages, Robotics, Computer Architecture, Information Theory, Parallel Computing, Functional Programming.  
**Bachelor in Mathematics (major) and Computer Science (minor)**, University of Bucharest, Romania. Graduation: June 2000.  
**Highschool**: National Romanian Math Team 1992-1996; National Math Olympiad first prize 1994-1995.

- PAPERS**
- **Million Query Track 2007 Overview** with James Allan, Ben Carterette, Javed A. Aslam, Blagovest Dachev, Evangelos Kanoulas, TREC 2007
  - **A Practical Sampling Strategy for Efficient Retrieval Evaluation**, with Javed Aslam, under review. [www.ccs.neu.edu/home/vip/study/publications\\_files/submitted.pdf](http://www.ccs.neu.edu/home/vip/study/publications_files/submitted.pdf)
  - **Query Hardness Estimation Using Jensen-Shannon Divergence Among Multiple Scoring Functions**, with Javed Aslam, ECIR 2007.
  - **The Hedge Algorithm for Metasearch at TREC 2006**, with Javed Aslam and Carlos Rei, TREC 2006.
  - **Semi-supervised Data Organization for Interactive Anomaly Analysis**, with Javed Aslam and Sergey Bratus, ICMLA 2006.
  - **A Statistical Method for System Evaluation Using Incomplete Judgments**, with Javed Aslam and Emine Yilmaz, SIGIR 2006.
  - **The Maximum Entropy Method for Analyzing Retrieval Measures**, with Javed Aslam and Emine Yilmaz, SIGIR 2005.
  - **A Geometric Interpretation of R-precision and Its Correlation with Average Precision**, with Javed Aslam and Emine Yilmaz, SIGIR 2005.
  - **Measure-based Metasearch**, with Javed Aslam and Emine Yilmaz, SIGIR 2005.
  - **A Sampling Technique for Efficiently Estimating Measures of Query Retrieval Performance Using Incomplete Judgments**, with Javed Aslam and Emine Yilmaz, ICML 2005 Workshop on Learning with Partially Classified Training Data.

- **A Unified Model for Metasearch, Pooling, and System Evaluation**, with Javed Aslam and Robert Savell, CIKM 2003.
- **A Unified Model for Metasearch and the Efficient Evaluation of Retrieval Systems via the Hedge Algorithm**, with Javed Aslam and Robert Savell, SIGIR 2003.

#### ACTIVITY

**Development.** Evaluation method used by Million Query Track, TREC 2007  
**Program Committee.** SIGIR 2007  
**External Reviewer.** SIGIR 2005-2006, CIKM 2005-2007  
 ACM member

#### TEACHING

**Instructor of Record**  
 Information Retrieval (CSG 535) Northeastern University (2005, 2006 and 2007). Teaching review score 25% higher than the college average.  
[www.ccs.neu.edu/home/vip/teach/IRcourse/](http://www.ccs.neu.edu/home/vip/teach/IRcourse/)  
**Teaching assistant**  
 Dartmouth College: Algorithms (2001,2002), Theory (2002), Discrete Math (2001,2003), Computer Architecture (2002)  
 Northeastern Univ: Theory (2003), Information Retrieval (2005)  
 University of Bucharest, Romania: Lab assistant, TA for discrete structures class.

#### OTHER WORKS

**Black Box Software 1998-2001.** Started together with three college friends, the company was focused on software, design and information-systems. We also did web design, educational games, video/audio productions, exposition stands and city info-stations. For some of the current projects visit [www.blackbox.ro](http://www.blackbox.ro), [www.vreausite.net](http://www.vreausite.net) and [webmax.ro](http://webmax.ro)  
**Fixing computers 1996-present.** Built/debugged/maintained over 100 systems and networks on different architectures and platforms; among those is the cluster the IR group at Northeastern University is currently using.  
**Private math tutor 1994-2001.** Private tutor for math and computer science for primary school, high school and college.  
**Carpenter apprentice 2001-2003** while at Dartmouth College, New Hampshire.

#### SKILLS

**outstanding:** teaching, presentation software  
**very good:** applied math, design, lecturing, problem-solving, Matlab, retrieval & matching, MS Office, Mac Office  
**good:** algorithm design, machine learning, data analysis, optimization, compression schemes, hacks & improvisations, C/C++, Perl, MS Visual Studio, Latex, Windows OS, MAC OS, Linux OS, hardware, interfaces  
**familiar with:** audio/video formats, Java, html, shell scripting, image processing, photography

#### HOBBIES

Geometry, Latin Dancing, Bridge, Percussion, Music and DJ-ing, Wood working, Table Tennis, Strategy Games