

# Ron J. Weiss

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## Education

- **Columbia University Graduate School of Arts and Sciences** New York, NY  
Ph.D. candidate, Electrical Engineering (GPA: 4.0/4) May 2009 (expected)
  - Graduate research assistant in the Laboratory for the Recognition and Organization of Speech and Audio (LabROSA), under the supervision of Professor Dan Ellis
  - Thesis topic: Underdetermined source separation using speaker-adaptive models
  - Research interests: noise robust speech recognition, machine learning, music information retrieval
- **Columbia University School of Engineering and Applied Science** New York, NY  
M.S., Electrical Engineering (GPA: 3.93/4) May 2005  
B.S., Computer Engineering, Magna Cum Laude (GPA: 3.88/4, major GPA: 4.1/4) May 2004
  - Electrical Engineering Teaching Fellowship, Fall 2004 - Spring 2005
  - Member of Tau Beta Pi engineering honor society
  - Dean's List, Fall 2000 - Fall 2002

## Work Experience

- **Google, Inc.** New York, NY  
Software Engineering Intern June 2007 - September 2007  
Host: Trausti Kristjansson January 2008 - March 2008  
Researched methods for voice activity detection (VAD) to improve performance of Goog411 speech recognition. Developed novel algorithm that adapts to changing environmental noise conditions. Filed patent application on this work with Trausti Kristjansson.
- **Columbia University Multimedia Signal Processing Lab** New York, NY  
Research Assistant Fall 2003  
Assisted in evaluating applicability of the logarithmic number system for use in low power MPEG-4 video DSP processors. Responsible for software simulation of MPEG-4 video encoder/decoder and evaluating testing procedures.
- **Columbia University Department of Computer Science** New York, NY  
Systems Administrator, Central Research Facility January 2002 - May 2003  
Assisted in maintenance of the compute resources for the CS department. Maintained 500+ Sun Solaris, Microsoft Windows, and RedHat Linux machines including user accounts, backups, upgrading and installing software, security, and printers. Managed DHCP, DNS, NIS, NFS, and mail systems.

## Selected Publications

- R. J. Weiss, M. I. Mandel and D. P. W. Ellis, "Source separation based on binaural cues and source model constraints", Proceedings of Interspeech 2008.
- R. J. Weiss and T. Kristjansson, "DySANA: Dynamic Speech and Noise Adaptation for Voice Activity Detection", Proceedings of Interspeech 2008.
- R. J. Weiss and D. P. W. Ellis, "Speech separation using speaker-adapted eigenvoice speech models", Computer Speech and Language, accepted for publication.  
See web page for full list of peer reviewed publications and supplemental material.

## Teaching Experience

- **Columbia University** New York, NY  
Teaching Assistant  
ELEN E4896 - Music Signal Processing Spring 2005, Spring 2007  
ECBM E3060/E4060 - Introduction to Genomic Information Systems Fall 2004  
COMS W4118 - Operating Systems I Fall 2003  
Responsibilities included lecturing, grading homework and exams, holding weekly office hours to assist students, and leading recitation sections to review necessary background material.

## Skills

- Software design and implementation in Java, Matlab, C/C++ , Python, Perl.
- Unix/Linux system administration (10 years).
- Facility with GNU programming tools, MS Windows, L<sup>A</sup>T<sub>E</sub>X, Emacs