

Simon Henin, M.Sc.

CONTACT INFORMATION	Ph.D. Program in Speech-Language-Hearing Sciences The Graduate Center, The City University of New York 365 Fifth Avenue, 7402 New York, NY 10016 (212) 817-8866 shenin@gc.cuny.edu
RESEARCH INTERESTS	Otoacoustic emissions, psychoacoustics, signal processing, auditory modeling.
EDUCATION	The Graduate Center, The City University of New York , New York, NY USA Doctoral Student, Ph.D. Program in Speech-Language-Hearing Sciences, September 2008 (Expected graduation date: May 2012) Aalborg University , Aalborg, Denmark M.Sc. Acoustics, June, 2007 (Thesis: Perception & Thresholds of Nonlinear Distortion Using Complex Signals) Stevens Institute of Technology , Hoboken, NJ, USA B.E. Electrical Engineering, May, 2004 New York University , New York, NY, USA B.S. Mathematics, May, 2004
HONORS & AWARDS	Science Fellow, Ph.D. Program in Speech-Language-Hearing Sciences, September 2008 - August 2010 Doctoral Student Research Grant, December 2009 Susan Rosenberg Zalk Student Travel and Research Fund Award, 2009-2010 Cum Laude, New York University Cum Laude, Stevens Institute of Technology Deans Honor List, New York University, 2000-2002 Deans Honor List, Stevens Institute of Technology, 2002-2004
PUBLICATIONS	Henin S. , Thompson S., Abdelrazeq S., Long G.R., (in press) Changes in amplitude and phase of distortion product otoacoustic emission fine structure and separated components during efferent activation. Zhou X., Henin S. , Long G.R., and Parra L.C., (under review) Impaired Cochlear Function Correlates with the Presence of Tinnitus and its Spectral Profile. Zhou X., Henin S. , Thompson S.E., Long G.R., and Parra L.C., Sensitization to masked tones following notched-noise correlates with estimates of cochlear function using distortion product otoacoustic emissions, <i>J. Acoust. Soc. Am.</i> 127, 970 (2010)
CONFERENCE PRESENTATIONS	Henin S. , (talk) Changes in distortion product otoacoustic emission (DPOAE) phase during contralateral acoustic stimulation, Eastern Auditory Retreat, Columbia University, June 11, 2010. Henin S. , Long G., Abdelrazeq S., Thompson S., "The Importance of Considering Phase When Evaluating Efferent Function with DPOAE", in 33rd ARO Mid-Winter Meeting, Anaheim, California, February, 6-10, 2010.

Zhou X., **Henin S.**, Long G.R., and Parra L.C., "Spectral profile of tinnitus can be predicted from high-resolution audiogram and DPOAE for a subset of subjects," in 3rd Tinnitus Research Initiative Meeting, Stresa, Italy, June 2009.

Thompson, S., Abdelrazeq, S., Long, G., and **Henin S.**, "Differential Effects of Efferent Stimulation by Contralateral Bandpass Noise on the Two Major Components of Distortion Product Otoacoustic Emissions," in 32nd ARO Mid-Winter Meeting, Baltimore, Maryland, February, 14-19, 2009.

Abdelrazeq, S., Thompson, S., Long, G., and **Henin S.**, "Optimizing DPOAE Primaries for the Evaluation of Efferent Function," in AAA Annual Meeting 2009, Dallas, Texas, April, 1-4, 2009.

TEACHING
EXPERIENCE

The Graduate Center, New York, NY USA

Instructor

2008 - present

Designed and taught one class per semester on MATLAB programming to graduate students during first year instrumentation course.

PROFESSIONAL
SERVICE

Admissions Committee, Ph.D. Program in Speech-Language-Hearing Sciences, 2010-Present

Executive Committee, Ph.D. Program in Speech-Language-Hearing Sciences, 2009-2010

SELECTED
RESEARCH &
PROJECTS

Otoacoustic Emissions Laboratory

Fall 2008 - Present

Basic research into the use of otoacoustic emissions (OAEs) in humans as a measure of cochlear function. Selected research topics include: improving OAE methodology; Medial olivocochlear suppression of OAEs; Middle-ear forward/reverse transmission and OAEs.

Tinnitus as A Result of Gain Adaptation

Spring 2008 - October 2010

Research assistant on tinnitus research funded by the Tinnitus Research Initiative (PI: Lucas Parra, Ph.D., The City College of New York; CO-PI: Glenis Long, Ph.D., The Graduate Center of the City University of New York). Investigated the use of peripheral measures including distortion-product otoacoustic emissions to predict and diagnose tinnitus.

Perception & Thresholds of Nonlinear Distortion Using Complex Signals

Spring 2007

(*Masters Thesis*) Investigated the use of auditory models in the subjective assessment of nonlinear distortion in complex music signals. The psychoacoustic models were applied in the determination of perceptually relevant thresholds of nonlinear distortion.

Recording Techniques for Improved Spatial Imaging in 5.1 Surround Sound

Fall 2006

Investigated various surround sound & stereo microphone techniques commonly used in audio reproduction.

Active Noise Cancellation In Hearing Protectors

Spring 2006

Designed and implemented feedforward & feedback adaptive filter designs in low-frequency noise cancellation.

Digital Graphic Equalizer Design & Implementation

Fall 2005

Designed and implemented a digital graphic equalizer in MATLAB and C programming environments.

COMPUTER SKILLS

Mathematical Analysis: MATLAB, R, SPSS

General Programming: C, C++, Java, Unix/Linux Shell

Web Programming: PHP, MySQL, ASP, Javascript

Interface Development: Cocoa, iPhone OS

General Purpose: L^AT_EX, Microsoft Word, Excel, Powerpoint, Access

COURSE WORK	Digital Signal Processing Acoustic Measurement Techniques Acoustic Noise & Vibration Human Sound Perception & Psychometry Hearing Science Auditory Physiology Digital Audio Adaptive Filtering Microelectronic Circuits Differential Equations Communications Systems Advanced Calculus	Fundamentals of Acoustics Architectural Acoustics Acoustical Transducers Audio Engineering Speech Science Neuroscience I & II Auralization & Virtual Reality Sound Joint Time-Frequency Analysis Signals & Systems Probability and Stochastic Processes Microprocessor Systems Abstract Algebra
RELEVANT SKILLS	Digital Signal Processing, Acoustical Measurement Techniques, Psychometric Methods, Binaural Recording Techniques, Analog Electronics Design, Surround Sound Recording Techniques	
OTHER WORK EXPERIENCE	<i>Research Assistant</i> New York, NY Research Assistant in Otoacoustic Emissions & Psychoacoustics Laboratory of Glenis Long, Ph.D. including lab managerial duties, data collection, and data analysis. <i>Freelance Programmer</i> New York, NY Web development and database programming services for various artists, individuals and companies including Coco 66, BoomBoom Collective, Grey Entertainment LLC. <i>Legal Assistant</i> New York, NY Legal assistant in corporate law firm. <i>Accounts Payable Assistant</i> New York, NY Assistant to the head accountant; Responsible for all financial services including check requisition processing, royalties processing, and unit cost analysis.	Ph.D. Program in Speech-Language-Hearing Sciences December 2008 - Present Varied 2008 - Present Davis Polk & Wardwell September 2004 - August 2005 NYU Press September 2001 - August 2004