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## Donald S. Williamson

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<b>EDUCATION</b>	<i>Ph.D.</i> in Computer Science and Engineering	2016
	<i>M.Sc.</i> in Computer Science and Engineering The Ohio State University, Columbus, OH	2014
	<i>M.Sc.</i> in Electrical Engineering Drexel University, Philadelphia, PA	2007
	<i>Bachelor</i> of Electrical Engineering University of Delaware, Newark, DE Minors: Mathematics and Computer and Information Science Honors: <i>cum laude</i>	2005
<b>EXPERIENCE</b>	<b><i>Assistant Professor,</i></b> School of Informatics and Computing Indiana University	2016 -
	<b><i>Graduate Research Associate,</i></b> Perception and Neurodynamics Laboratory Department of Computer Science and Engineering The Ohio State University	2012 - 2016
	<b><i>Research Intern, Advanced Research Team</i></b> Audience, Inc., Mountain View, CA Supervisor: Dr. Carlos Avendano	May 2014 - Aug. 2014
	<b><i>Member Engineering Staff,</i></b> Lockheed Martin, Moorestown, NJ	2007 - 2010
	<b><i>Graduate Research Assistant,</i></b> Music and Entertainment Technology Laboratory Department of Electrical and Computer Engineering Drexel University, Philadelphia, PA	2005 - 2007
	<b><i>Summer Intern</i></b> Bechtel Bettis Inc., Bettis Atomic Power Laboratory, West Mifflin, PA	2005
	<b><i>Summer Intern</i></b> Dade Behring, Newark, DE	2004
<b><i>Undergraduate Research Assistant,</i></b> Department of Electrical and Computer Engineering University of Delaware, Newark, DE Advisor: Dr. Kenneth Barner	2003 - 2004	

- TEACHING EXPERIENCE**
- Lecturer,** 2016  
Machine Perception and Audition  
School of Informatics and Computing  
Indiana University
- Guest Presenter,** 2014 - 2015  
Survey of Artificial Intelligence II: Advanced Techniques  
Department of Computer Science and Engineering  
The Ohio State University
- Lecturer, Graduate Teaching Associate** 2012  
Computer Assisted Problem Solving  
Department of Computer Science and Engineering  
The Ohio State University
- Laboratory Instructor, Graduate Teaching Associate** 2011 - 2012  
Computer Assisted Problem Solving for Business  
Department of Computer Science and Engineering  
The Ohio State University
- Guest Lecturer,** 2008  
Introduction to MATLAB Programming  
Lockheed Martin, Moorestown, NJ  
Engineering Leadership Development Program
- Guest Presenter,** 2007  
Machine Listening & Music Information Retrieval  
Department of Electrical and Computer Engineering  
Drexel University
- PUBLICATIONS**
- [8] **D. Williamson**, Y. Wang, and D. L. Wang, "Complex ratio masking for joint enhancement of magnitude and phase" in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 5220-5224, 2016.
- [7] **D. Williamson**, Y. Wang, and D. L. Wang, "Complex ratio masking for monaural speech separation," *IEEE/ACM Trans. on Audio, Speech, and Lang. Process.*, vol. 24, pp. 483-492, 2016.
- [6] **D. Williamson**, Y. Wang, and D. L. Wang, "Estimating nonnegative matrix model activations with deep neural networks to increase perceptual speech quality," *Journal of the Acoustical Society of America*, vol. 138, pp. 1399-1407, 2015.
- [5] **D. Williamson**, Y. Wang, and D. L. Wang, "Deep neural networks for estimating speech model activations," in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 5113-5117, 2015.
- [4] **D. Williamson**, Y. Wang, and D. L. Wang, "Reconstruction techniques for improving the perceptual quality of binary masked speech," *Journal of the Acoustical Society of America*, vol. 136, pp. 892-902, 2014.
- [3] **D. Williamson**, Y. Wang, and D. L. Wang, "A two-stage approach for improving the perceptual quality of separated speech" in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 7084-7088, 2014.

[2] **D. Williamson**, Y. Wang, and D. L. Wang, “A sparse representation approach for perceptual quality improvement of separated speech” in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 7015-7019, 2013.

[1] Y. Kim, **D. S. Williamson**, and S. Pilli, “Towards quantifying the album effect in artist classification,” in *Proc. International Symposium on Music Information Retrieval*, Victoria, Canada 2006 (online abstract and poster presentation).

## PRESENTATIONS

[4] *Reconstruction Techniques for Improving the Perceptual Quality of Masked Speech*, Audience, Inc., Mountain View, CA 2014

[3] *Sparse Reconstruction for Improving the Perceptual Quality of Binary Masked Speech*, *Midwest Cognitive Science Conference*, Columbus, OH 2013

[2] *Music Similarity Analysis* 2007  
Research Day, Drexel University, Philadelphia, PA (poster)

[1] *Improving the iPod: Automatic Identification and Classification of Music* 2006  
Research Day, Drexel University, Philadelphia, PA (poster)

## SERVICE

### Reviewer

IEEE Transactions on Audio, Speech, and Language Processing  
IEEE International Conference on Acoustics, Speech, and Signal Processing  
Springer Journal of Circuits, Systems and Signal Processing  
Trends in Hearing  
EURASIP Journal on Audio, Speech, and Music Processing

### Community

Graduate Engineering Research Colloquium, *The Ohio State University* 2014–2016  
Graduate Panelist, *The Ohio State University* 2014  
Buckeye Village Resident’s Association, *The Ohio State University* 2014–2015  
Volunteer tutor, Excel Tutoring, *First Church of God* 2014  
Oral Presentation Judge, Philadelphia’s *BEST* Hub Robotics 2007–2008  
Oral Presentation Judge, Philadelphia’s *FIRST* Robotics 2007–2008  
Volunteer teacher, Junior Achievement, New Jersey and Delaware 2007–2008  
Lab tour guide, Electrical and Computer Engineering, *Drexel University* 2006–2007  
Lab instructor, Summer Engineering Experiences at Drexel (SEED) 2006  
Council on Student Diversity and Success, *University of Delaware* 2003–2005

## PROFESSIONAL MEMBERSHIPS

American Society for Engineering Education (ASEE) 2015–present  
Institute of Electrical and Electronics Engineers (IEEE) 2013–present  
IEEE, Signal Processing Society 2013–present  
IEEE, Robotics and Automation Society 2015–present  
National Society of Black Engineers (NSBE) 2002–2005  
NSBE, Vice President 2004–2005  
NSBE, Program Chair 2003–2004  
Upsilon Pi Epsilon Honor Society  
Tau Beta Pi Engineering Honor Society  
Golden Key International Honor Society

**HONORS &  
AWARDS**

Graduate Research Award, <i>The Ohio State University</i>	2016
Dean's Graduate Enrichment Fellowship, <i>The Ohio State University</i>	2010–2016
FOCUS Fellows Program, <i>Georgia Institute of Technology</i>	2015
NSF Bridge to the Doctorate Fellow, <i>Drexel University</i>	2005–2007
Honorable Mention, Research Day Poster Award, <i>Drexel University</i>	2006
African American Students of Distinction Award	2002–2005
RISE Outstanding Academic Achievement Award	2002–2005
Engineering Scholars Program, University of Delaware	2003–2004
Merit Scholarship, <i>University of Delaware</i>	2001–2005
MBNA Delaware Scholar, <i>University of Delaware</i>	2001–2005
RISE Corporate Friends Award, <i>University of Delaware</i>	
RISE Conectiv Power Award, <i>University of Delaware</i>	
• Demonstrating outstanding scholarship and promise for success in the profession	