

CURRICULUM VITAE

Personal

Name: Sumitrajit Dhar
Current Position: Associate Professor
Dept. of Communication Sciences and Disorders
Northwestern University
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Degrees

- 2001 Ph.D. Purdue University, West Lafayette, IN
Thesis: A detailed study of distortion product otoacoustic emission fine structure in normal-hearing adult human ears.
- 1995 M.S. Utah State University, Logan, UT
Thesis: The dependence of the $2f_1 - f_2$ distortion product otoacoustic emissions on primary levels in normal-hearing ears.
- 1992 B.Sc. University of Bombay, Mumbai, India

Experience

- Associate Professor – Roxelyn & Richard Pepper Department of Communication Sciences & Disorders, Northwestern University, Evanston, IL. August 2008 – present.
- Assistant Professor – Department of Communication Sciences & Disorders, Northwestern University, Evanston, IL. August 2004 – August 2008.
- Assistant Professor – Department of Speech & Hearing Sciences, Indiana University, Bloomington, IN. August 2000 – July 2004.
- Graduate Research Assistant – Otoacoustic Emissions Research Laboratory, Purdue University, West Lafayette, IN. August 1995 – August 2000.
- Audiologist & Clinical Supervisor – Purdue University Audiology Clinic, West Lafayette, IN. June 1998 – May 2000.
- Clinical Fellow – Purdue University Audiology Clinic, West Lafayette, IN. August 1997 – May 1998.
- Audiology Intern – Cache county school district, Cache county, UT. November 1994 – December 1994.
- Clinical Audiologist – Speech and Hearing Institute and Research Center, Kolkata, India. June 1992 – February 1993.
- Audiology Intern – Utah Valley Regional Medical Center, Provo, UT. June 1994 – August 1994.
- Coordinator of Clinical Services – Speech and Hearing Institute and Research Center, Kolkata, India. March 1993 – July 1993.
- Teaching Assistant – Department of Audiology and Speech Sciences, Purdue University, West Lafayette, IN. August 1995 – May 2000.

Honors & Awards

- President's Award – The Illinois Academy of Audiology; “For extraordinary efforts in promoting the education of audiologists and for outstanding advocacy for the profession”, January 2010.
- Invited Member, Working Group on Affordable Hearing Health Care – National Institutes of Health, August 2009.
- Future Leaders of Audiology – Class of 2008 (inaugural class) – American Academy of Audiology, 2008.
- Inaugural Junior Investigator Presentation – American Auditory Society, 2008.
- Award for Early Career Contribution in Research – American Speech-Language-Hearing Association, 2006.
- Teaching Excellence Recognition Award – College of Arts and Sciences, Indiana University, 2004.
- Member – Sigma Xi Scientific Research Society.
- Summer Faculty Fellowship - Indiana University, Summer 2003.
- Neuroscience Fellowship - Interdisciplinary program in Neuroscience, Purdue University, 1996 - 1997.
- Neuroscience Off-Campus Training Award - Interdisciplinary program in Neuroscience, Purdue University, 1996.
- Outstanding Teaching Assistant Award - Dept. of Audiology & Speech Sciences, Purdue University, 1995 - 1996. Voted by students of the department.
- Outstanding Clinical Graduate – Dept. of Communicative Disorders, Utah State University, 1995.
- Graduated at top of class of 1992 with special distinction - University of Bombay, India (1992)

Professional Affiliations

- American Academy of Audiology
- American Auditory Society
- American Speech-Language Hearing Association
- Association for Research in Otolaryngology
- Illinois Academy of Audiology

FUNDING

Current

Institution:	NIH/NIDCD [1R01DC010016-01A2]
Role:	Principal Investigator with Nina Kraus
Title:	Neural Correlates of Auditory Function and Training in Adults.
Period:	July 2010 - June 2015
Amount:	\$1,854,519
Institution:	Department of Defense [Navy, STTR]
Role:	Co-Investigator
Principal Investigator:	Jonathan Siegel
Title:	An Improved Otoacoustic Emission Probe Based on Experience with a High Performance Prototype.
Period:	July 2010-
Amount:	
Institution:	NIH/NIDCD [R01 DC008420-01A1]
Role:	Principal Investigator
Co-investigators:	Jonathan Siegel, Steven Zecker
Title:	Reformulating hearing assessment: Translating new discoveries through a large-scale study in the audiology clinic.
Period:	June 2007 - May 2012
Amount:	\$3,163,442
Institution:	NIH/NIDCD [R01 DC003552-09A1]
Role:	Principal-investigator for NU subcontract
Principal Investigator:	Caroline Abdala, House Ear Institute
Title:	Peripheral auditory system function in humans: A continuum of maturation and aging.
Period:	July 2008- June 2013
Amount:	\$481,097 [NU subcontract value]
Institution:	NIH/NHLBI [HHSN268200625236C]
Role:	Co-investigator
Principal Investigator:	Martha L. Daviglus (Preventive Medicine, Northwestern)
Title:	Hispanic Community Health Study, Field Center
Period:	October 06 - August 2013
Amount:	\$9,600,000
Consultant	<i>NIH Toolbox project</i> , area of hearing.
Consultant	<i>Auditory temporal processing difficulties in older listeners: From a review to a future view of presbycusis</i> , Hearing Foundation of Canada; Prof. Kathy Pichora-Fuller (PI), University of Toronto.
Consultant	<i>A complete model of the auditory system</i> , National Science Foundation; Prof. Aditya P. Mathur (PI), Purdue University.

Intramural

Institution: The Knowles Center for Hearing Research, Northwestern University
 Role: Mentor
 Post-doctoral Fellow: Lauren Calandruccio, Ph.D.
 Title: Efferent Modulation of Cochlear Mechanics
 Period: December 20, 2007 - August 31, 2009
 Amount: \$ 50,359

Previous

Institution: NIH/NIDCD [R01 DC003552-09A1S1; American Recovery and Reinvestment Act]
 Role: Principal-investigator for NU subcontract
 Principal Investigator: Caroline Abdala, House Ear Institute
 Title: Peripheral auditory system function in humans: A continuum of maturation and aging.
 Period: August 2009- July 2010
 Amount: \$226,408

Institution: NIH/NIDCD [5R03DC005692-03]
 Role: Principal Investigator
 Title: Investigation of DPOAE components in time and frequency domains
 Period: January 2004 - December 2007
 Amount: \$216,000

Institution: Starkey Laboratories
 Role: Principal Investigator
 Title: Effect of training on directional benefit in hearing aid users
 Co-investigator: Cynthia Clark, Au.D. student
 Period: January 2008 - December 2008
 Amount: \$85,500 (in equipment to Audiology clinic)

Institution: Starkey Laboratories
 Role: Principal Investigator
 Title: Acceptance of a high-power BTE
 Co-investigator: Lowery Mayo (CSD, Northwestern)
 Period: March 2007 - October 2007
 Amount: \$20,000 (in equipment to Audiology clinic)

Institution: Starkey Laboratories
 Role: Principal Investigator
 Title: User satisfaction with modern hearing aids
 Co-investigator: Lowery Mayo (CSD, Northwestern)
 Period: March 2006 - October 2006
 Amount: \$20,000 (in equipment to Audiology clinic)

Institution: Deafness Research Foundation
 Role: Principal Investigator

Title: Clinical Applications of Reflection-Source Otoacoustic Emissions
Period: 2003-2005
Amount: \$60,000

Institution: Indiana University
Role: Principal Investigator
Title: Evaluation of DPOAE components in the time domain
Period: Summer 2003
Amount: \$8,000

Institution: Women in Science Program, Indiana University
Role: Mentor
Title: Components of DPOAEs
Mentee: Kelley M. Harmon
Period: July 2001 – June 2002
Renewed July 2002 - June 2003
Amount: \$2,000 to research account plus scholarship to student.

Institution: NIH/NIDCD
Role: Co-investigator
Title: Modeling the Mammalian Cochlea
Principal Investigator: Carrick L. Talmadge
Period: July 1997 – June 2002
Amount: \$349,904 plus indirect costs

PUBLICATIONS

Peer reviewed

- P1. Calandruccio, L., Van, E., **Dhar, S.**, Bradlow, A. R. (2010). The effectiveness of clear speech as a masker, *Journal of Speech, Language, and Hearing Research*. *in press*.
- P2. Calandruccio, L., **Dhar, S.**, Bradlow, A. R. (2010). Speech-on-speech masking with variable access to the linguistic content of the masker speech, *Journal of the Acoustical Society of America*. 128(2), 860-869.
- P3. Wong, P.C.M, Ettlinger. M, Sheppard, J.P, Gunasekera, G.M, **Dhar, S** (2010) Neuroanatomical Characteristics and Speech Perception in Noise in Older Adults, *Ear and Hearing*. 31(4), 471-479.
- P4. Abdala, C, **Dhar, S** (2010). Differences in distortion product otoacoustic emission phase recorded from human neonates using two popular probes, *JASA Express Letters*, 128, 49-55.
- P5. Zhao, W, **Dhar, S** (2010). The Effect of Contralateral Acoustic Stimulation on Spontaneous Otoacoustic Emissions. *Journal of the Association for Research in Otolaryngology*. 11(1), 316-325.
- P6. Abdala, C, **Dhar, S** (2010). Distortion product otoacoustic emission phase and component analysis in human newborns, *Journal of the Acoustical Society of America*. 127(1), 316-325
- P7. Deeter, R, Calandruccio, L, Abel, R, & **Dhar, S** (2009). Contralateral Acoustic Stimulation Alters the Magnitude and Phase of Distortion Product Otoacoustic Emissions. *Journal of the Acoustical Society of America*. 126(5), 2413-2424.
- P8. Meltzer, J.B, & **Dhar, S**. (June 2009) A Montage of Outstanding Questions and Clinical Applications of Otoacoustic Emissions. Featured Article 2238, *Audiology Online*. (Peer reviewed by the Publications Board of the American Speech Language-Hearing Association)
- P9. Worthington, D. A., Wilber, L. A., Siegel, J. H., Garstecki, D. C., Faber, B. M., Dunckley, K. T., & **Dhar, S** (2009) Mass-storage personal listening devices: Objective measurements and usage reports, *Journal of the Acoustical Society of America*. 125(6), 3733-3741.†
- P10. **Dhar, S**, Abel, R, Hornickel, J, Nicol, T, Skoe, E, Zhao, W, & Kraus N (2009) Exploring the relationship between physiological measures of cochlear and brainstem function. *Clinical Neurophysiology*. 120(5), 959-966.
- P11. Wong, P.C.M., Jin, J.X., Gunasekera, G.M., Abel, R., Lee, E.R., **Dhar, S.** (2009). Aging and Cortical Mechanisms of Speech Perception in Noise. *Neuropsychologia*. 47, 693-703.
- P12. Klemp, E. J., & **Dhar, S** (2008) Speech Perception in Noise using Directional Microphones in Open-canal Hearing Aids, *Journal of the American Academy of Audiology*, 19, 571-578.†
- P13. Wong, P. C. M, Uppunda, A. K., Parrish, T. B., & **Dhar, S** (2008) Cortical Mechanisms of Speech Perception in Noise, *Journal of Speech-Language Hearing Research*. 51, 1026-1041.
- P14. **Dhar, S.** & Abdala, C. (2007) A comparative study of distortion-product-otoacoustic-emission fine structure in human newborns and adults with normal hearing, *Journal of the Acoustical Society of America*. 122, 2191-2202.
- P15. Ferro, L. M., Tanner, G., Erler, S. F., Erickson, K, & **Dhar, S** (2007) Comparison of Universal Newborn Screening Programs in Illinois hospitals, *International Journal of Pediatric Otorhinolaryngology*. 71, 217-230.†
- P16. Nordrum, S., Erler, S., Garstecki, D. & **Dhar, S.** (2006) Comparison of Performance on the Hearing in Noise Test Using Directional Microphones and Digital Noise Reduction Algorithms. *American Journal of Audiology*. 15, 81-91.†
- P17. Shaffer, L.A. & **Dhar, S.** (2006) DPOAE component estimates and their relationship to hearing thresholds. *Journal of the American Academy of Audiology*. 17, 279-292.†

- P18. Withnell, R.H., **Dhar, S.** & Thomsen, A.M. (2005) A comparison of OAEs arising from different generation mechanisms in guinea pig. *Hearing Research*. 207, 76-86.
- P19. **Dhar, S.**, Long, G.R., Talmadge, C.L. & Tubis, A. (2005) The effect of stimulus-frequency ratio of distortion product otoacoustic emission components. *Journal of the Acoustical Society of America*. 117(6), 3766-3776. [Chosen by the American Physical Society for re-publication in the *Virtual Journal of Biological Physics Research*, 9(11).]
- P20. **Dhar, S.**, & Shaffer, L.A. (2004). The effects of a suppressor tone on DPOAE fine structure: Why a universal suppressor level is not a practical solution to obtaining single-generator DP-grams! *Ear and Hearing*. 25 (6), 573-585.
- P21. **Dhar, S.**, Humes, L.E., Calandruccio, L., Barlow, N., & Hipskind, N. (2004). Predictability of directional benefit in speech recognition from acoustic measurements. *Ear and Hearing*. 25, 147-158.
- P22. Shaffer, L.A., Withnell, R.H., **Dhar, S.** Lilly, D.J., Goodman S.J., Harmon, K.M., (2003) Sources and mechanisms of DPOAE generation: Implications for the prediction of auditory sensitivity. *Ear and Hearing*. 24, 367-379.
- P23. **Dhar, S.**, Talmadge, C. L., Long, G. R., & Tubis, A. (2002). Multiple internal reflections in the cochlea & their effect on distortion product otoacoustic emission fine structure. *Journal of the Acoustical Society of America*. 112 (6), 2882-2897.
- P24. Tubis, A. , Talmadge, C.L., Tong, C. & **Dhar, S.** (2000). On the relationships between the fixed- f_1 , fixed- f_2 & fixed-ratio phase derivatives of the $2f_1 - f_2$ distortion product otoacoustic emission, *Journal of the Acoustical Society of America*. 108(4), 1772-1785.
- P25. Strickland, E. A., **Dhar, S.** (2000). An analysis of quasi-frequency modulated noise and random-sideband noise as comparisons for amplitude-modulated noise. *Journal of the Acoustical Society of America*. 108(2), 735-42.
- P26. Ricketts, T. A., **Dhar, S.**, (1999). Comparison of performance across three directional hearing aids. *Journal of the American Academy of Audiology*. 10, 180-89.
- P27. Talmadge, C.L., Long, G.R., Tubis, A & **Dhar, S.** (1999). Experimental confirmation of the two-source interference model for the fine structure of distortion product otoacoustic emissions. *Journal of the Acoustical Society of America*, 105, 275-292.
- P28. **Dhar, S.**, Long, G. R., Culpepper, N. B., (1998). The dependence of the distortion product $2f_1-f_2$ on primary levels in non-impaired human ears. *Journal of Speech Language & Hearing Research*. 41(6), 1307-18.

† Primary and/or corresponding author.

Peer-reviewed Proceedings

- C1. Withnell, R.H., **Dhar, S.**, Shaffer, L.A., Talmadge, C. L., Roberts, R., deBoer, E., & McPherson, D. (2002). Temporal characteristics of distortion product otoacoustic emissions. In A. Gummer (Ed). *International Symposium on Cochlear Biophysics*. World Scientific, Singapore.
- C2. Long, G.R., Shaffer, L.S., **Dhar, S.**, & Talmadge, C.L. (2000). Cross species comparison of otoacoustic fine-structure. In H. Wada, T. Takasaka, K. Ikeda, K. Ohyama, T. Koike (Eds) *Symposium on Recent Developments in Auditory Mechanics*. World Scientific Press, Singapore. pp. 367-373.
- C3. Talmadge, C.L., Tubis, A., Tong, C., Long, G.R., & **Dhar, S.** (1999). Temporal aspects of distortion product otoacoustic emissions. In H. Wada, T. Takasaka, K. Ikeda, K. Ohyama, T. Koike (Eds) *Symposium on Recent Developments in Auditory Mechanics*. World Scientific Press, Singapore. pp. 353-359.
- C4. Long, G.R., Shaffer, L. A., **Dhar, S.**, & Talmadge, C. L. (1999). Cross species comparison of otoacoustic fine structure. In H. Wada, T. Takasaka, K. Ikeda, K. Ohyama, T. Koike (Eds) *Symposium on Recent Developments in Auditory Mechanics*. World Scientific Press, Singapore. pp. 353-359.

Invited

- R1. **Dhar, S.** (September, 2009) Measuring the MOC Reflex using DPOAEs. *Newsletter of the Minnesota Academy of Audiology*.

- R2. **Dhar, S.** (February, 2009) Separation Anxiety: DPOAE components refuse to be apart. Guest Editorial, OAE Portal Zone. <http://www.oae.it/>
- R3. **Dhar, S.** (2009) Bullish on Otoacoustic Emissions, The Newsletter of the Illinois Academy of Audiology, Fall 2009.
- R4. Garstecki, D., & **Dhar, S.** (2007) The future of assistive technology for hearing impairment. *Engineering in Medicine and Biology. in preparation.*
- R5. **Dhar, S.** (2006) More to DPOAEs than meets the microphone. ASHA-Kiran, The newsletter of the Asian-Indian Caucus of the American Speech-Language-Hearing Association, Fall 2006.
- R6. Shaffer, L.A., **Dhar, S.** (2004) Clinical implications of OAE generation theory for the prediction of behavioral hearing thresholds. OAE Portal Zone. <http://www.oae.it/>
- R7. **Dhar, S.**, (2003). Otoacoustic emissions: Do we know enough about them to use them clinically? A simple guide to audiology, Interactive CD ROM. Ed. S. Bhan, Mumbai: India.

PRESENTATIONS

Competitively Reviewed

- R1. **Dhar, S.** (March, 2010) Complexities in Efferent Modulation of Otoacoustic Emissions Explained. American Auditory Society, Scottsdale, AZ.
- R2. Abdala, C., **Dhar, S.** (March, 2010) DPOAE Fine Structure in Infants: Latest Findings and Future Directions. American Auditory Society, Scottsdale, AZ.
- R3. Calandruccio, L., Brouwer, K., Van Engen, J., **Dhar, S.**, and Bradlow, A. (November, 2009) Non-native speech perception in the presence of non-native competing speech. American Speech-Language-Hearing Association, New Orleans, LA.
- R4. Duncley, K.T., Sriram, D., **Dhar, S.**, (November, 2008) Fine Structure and Spontaneous Otoacoustic Emissions in a Range of Normally-Hearing Ears. National Convention of the American Speech-Language-Hearing Association, Chicago, IL.
- R5. **Dhar, S.**, (April, 2007). OAEs at the afterparty: Hearing after a night of clubbing. American Academy of Audiology, Denver, CO.
- R6. **Dhar, S.**, (March, 2006). Distortion-product component behavior and spontaneous otoacoustic emissions. American Auditory Society, Scottsdale, AZ.
- R7. **Dhar, S.**, (January, 2006). New frontiers in the application of distortion product otoacoustic emissions. Illinois Academy of Audiology, Chicago, IL.
- R8. **Dhar, S.**, (March, 2005). DPOAE level and hearing thresholds: Is fine structure the culprit? American Auditory Society, Scottsdale, AZ.
- R9. **Dhar, S.**, (March, 2002). Multiple internal reflections in the cochlea & DPOAE fine structure. American Auditory Society, Scottsdale, AZ.

Invited

- I1. **Dhar, S.**, (October, 2010) The Past, Present, and Future of Otoacoustic Emissions, Department of Otolaryngology, University of Illinois at Chicago, Chicago, IL.
- I2. **Dhar, S.**, (May, 2010) The Evidence is Not In, Arkansas Academy of Audiology, Mount Magazine, AR.
- I3. **Dhar, S.**, (May, 2010) Otoacoustic Emissions: Known answers & remaining questions, Arkansas Academy of Audiology, Mount Magazine, AR.
- I4. **Dhar, S.**, (February, 2010) Otoacoustic Emissions: Back to the Future, San Diego State University, San Diego, CA.
- I5. **Dhar, S.**, (November, 2009) Sifting for Facts: The Importance of Research in an Increasingly Complex World, Twentieth Mayo Clinic Videoconference, Rochester, MN.
- I6. **Dhar, S.**, (September, 2009) Otoacoustic Emissions: Science and Applications. Audiology Keynote, Indiana Speech-Language-Hearing Association, Indianapolis, IN.
- I7. **Dhar, S.**, (April, 2009) Distortion Product Otoacoustic Emissions: It is Time for the Details. Featured Session, Audiology NOW, Dallas, TX.
- I8. **Dhar, S.**, & Meltzer, J.B. (February, 2009) Otoacoustic Emissions: From Theory to Practice. Expert Seminar, Audiology Online.
- I9. **Dhar, S.** (November, 2008) Otoacoustic Emissions: Views through the Rear-view Mirror and the Telescope. National Convention of the Academy of Doctors of Audiology. ** Featured Session.
- I10. **Dhar, S.** (March, 2008). Lesson of an infancy in academia. American Auditory Society,

Scottsdale, AZ. ** Inaugural Young Investigator Presentation.

- I11. **Dhar, S.**, (January, 2007). Spontaneous otoacoustic emissions: A non-invasive window into cochlear mechanics; Northwestern University Institute on Complex Systems, Evanston, IL.
- I12. **Dhar, S.**, (January, 2007). Exploring otoacoustic emissions: Can the old dog learn new tricks. *Best of Illinois Lecture*, Illinois Academy of Audiology, Chicago, IL.
- I13. **Dhar, S.**, (October, 2006). Exploring otoacoustic emissions: Can the old dog learn new tricks. *Audiology Keynote Speech at the Innovations in Clinical Communication Sciences Conference*, James Madison University, Harrisonburg, VA.
- I14. **Dhar, S.**, (March, 2006). The simple case of spontaneous otoacoustic emissions. Rush University Medical Center, Chicago, IL.
- I15. **Dhar, S.**, (October, 2005). The relationship between cochlear mechanics and current applications of otoacoustic emissions: Is there one? Alaska Speech-Language-Hearing Association, Anchorage, AK.
- I16. **Dhar, S.**, (August, 2005). The art and science of otoacoustic emissions. Northwestern University School of Medicine, Chicago, IL.
- I17. **Dhar, S.**, (July, 2005). DPOAE fine structure: what, why, and why should we care! The House Ear Institute, Los Angeles, CA.
- I18. **Dhar, S.**, (February, 2005). DPOAEs: A second opinion. Dept. of Otolaryngology, Northwestern Memorial Hospital, Chicago, IL.
- I19. **Dhar, S.**, (October, 2004). Making the instrument disappear: Probe-microphone real-ear measurements. Chicago Audiology Speech Language Association, Chicago, IL.
- I20. **Dhar, S.**, (March, 2004). Distortion product otoacoustic emissions: From the lab to the clinic, University of Texas at Austin, Austin, TX.
- I21. **Dhar, S.**, (March, 2004). Distortion product otoacoustic emissions: From the lab to the clinic, Northwestern University, Evanston, IL.
- I22. **Dhar, S.**, (October, 2003). The origin and application of DPOAE fine structure. School of Hearing and Speech Sciences, Ohio University, Athens, OH.
- I23. **Dhar, S.**, (April, 2003). Looking for meaning in cochlear fine structure. Indiana Speech Language Hearing Association, Indianapolis, IN.
- I24. **Dhar, S.**, (October, 2000). Smart hearing aids: Overview of modern hearing aid technology. Crossroads Conference, Purdue University, West Lafayette, IN.
- I25. **Dhar, S.**, (April, 2000). Reflections on the generation of distortion product otoacoustic emissions. Department of Speech & Hearing Sciences, Indiana University, Bloomington, IN.

Other

- E1. **Dhar, S.** (March, 2008) Peter Dallos: Lifetime Achievement Award, American Auditory Society, Scottsdale, AZ.

OTHER PUBLICATIONS

Masters & Ph.D. Theses

- T1. Sumit Dhar. A detailed investigation of distortion product otoacoustic emission fine structure in normal hearing adult ears. Ph.D. Thesis, Purdue University. 2001.
- T2. Sumitrajit Dhar. Dependence of the distortion product $2f_1 - f_2$ on primary levels in normally hearing ears. M.S. Thesis, Utah State University. 1995.

Abstracts & Posters

- A1. Rogers, A., Abdala, C., Abel, R., **Dhar, S.** (March, 2010) DPOAE Phase Characteristics at Low Frequencies. American Auditory Society, Scottsdale, AZ.
- A2. Deeter, R., Lee, J., **Dhar, S.** (March, 2010) Efferent Modulation of DPOAE components. American Auditory Society, Scottsdale, AZ.
- A3. Zhao, W., **Dhar, S.** (March, 2010) Frequency Tuning of the Contralateral MOC Effect on SOAEs. American Auditory Society, Scottsdale, AZ.
- A4. Abdala, C., **Dhar, S.** (February, 2010) Analysis of DPOAE ($2f_1 - f_2$) Phase and Individual DPOAE Components in Human Newborns. Association for Research in Otolaryngology, Anaheim, CA.
- A5. Souza, N., **Dhar, S.**, Siegel, J. (February, 2010) A Critical Test of Alternate Stimulus Level Measures for the Human Ear. Association for Research in Otolaryngology, Anaheim, CA.
- A6. Grolley, E., **Dhar, S.**, Siegel, J. (February, 2010) Interference Patterns in Distortion Product

- Otoacoustic Emissions in Humans. Association for Research in Otolaryngology, Anaheim, CA.
- A7. Abel, R., **Dhar, S.**, Banakis, R., Grolley, E, Lee, J, Siegel, J. (February, 2010) Reliability of Threshold and OAE Measurements Using Two Calibration Methods. Association for Research in Otolaryngology, Anaheim, CA.
- A8. **Dhar, S.**, Abel, R., Lee, J, Banakis, R., Siegel, J. (February, 2010) Comparison of Two Methods of Recording DPOAEs Over a Wide Frequency Range in a Large Population. Association for Research in Otolaryngology, Anaheim, CA.
- A9. Son, H. J., **Dhar, S.** (February, 2010) Probing Nonlinearity at the Base of the Human Cochlea using Distortion Product Input-Output Functions. Association for Research in Otolaryngology, Anaheim, CA.
- A10. Zhao, W., **Dhar, S.** (February, 2010) Fast and Slow Effects of Medial Olivocochlear Efferent Activity on Spontaneous Otoacoustic Emissions in Humans. Association for Research in Otolaryngology, Anaheim, CA.
- A11. Calandruccio, L., Yuen, C., **Dhar, S.**, and Bradlow, A. (May, 2009) Foreign accented speech: energetic or informational masking? Acoustical Society of America, Portland, Oregon.
- A12. Sabin, A.T., Clark, C.A., Eddins, D.A., **Dhar, S.**, & Wright, B.A. (May, 2009) Different outcomes of spectral modulation detection training in individuals with hearing loss vs. normal hearing. Acoustical Society of America, Portland, Oregon.
- A13. Sabin, A.T., Marrone, N., & **Dhar, S.** (May, 2009) A weighting function based approach to subjectively setting hearing aid frequency gain curves. Acoustical Society of America, Portland, Oregon.
- A14. Deeter, R, Calandruccio, L, Abel, R, **Dhar, S** (March, 2009). Changes in DPOAE Fine Structure Due to Contralateral Efferent Stimulation. American Auditory Society, Scottsdale, Arizona.
- A15. Abdala, C, **Dhar, S**, Williams, T., Baiduc, R (March, 2009) DPOAE Component Analysis in Newborns and Adults. American Auditory Society, Scottsdale, Arizona.
- A16. Abel, R, Chan, C, Siegel, J, Hellyer, V, **Dhar, S** (March, 2009). An integrated tool for large-scale research. American Auditory Society, Scottsdale, Arizona.
- A17. Abel, R., Siegel, J., Banakis, R., Chan, C. L., Zecker, S., **Dhar, S.**, (February, 2009) Behavioral Audiograms Measured in Humans Using a Multipurpose Instrument. Abstracts of the Midwinter Meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- A18. Calandruccio, L., Van Heuklem, K., Yuen, C., **Dhar, S.**, Bradlow, A. (November, 2008) Assessing the Clear Speech Benefit With Competing Speech Maskers. National Convention of the American Speech-Language-Hearing Association, Chicago, IL.
- A19. Calandruccio, L., Kim, N. E., **Dhar, S.**, Bradlow, A. (November, 2008) Lexical salience and temporal dips: How does clear speech act as a masker? Annual Auditory Perception, Cognition, and Action meeting. Chicago, IL.
- A20. Abel, R.A., Dann, S., Siegel, J.H., Dreisbach-Hawe, L.D., Dunckley, K.T., & **Dhar, S.** (2008). Going clubbing? Your OAEs mind. Research poster presentation at the American Auditory Society Scientific and Technology Meeting. Scottsdale, AZ.
- A21. Dunckley, K.T., & **Dhar, S.** (2008). Patterns of thresholds and OAEs in exceptionally sensitive ears. Research poster presentation at the American Auditory Society Scientific and Technology Meeting. Scottsdale, AZ
- A22. Dees, T., Bradlow, A., **Dhar, S.**, & Wong, P. C. M. (2007). Effects of Noise on Lexical Tone Perception by Native and Non-Native Listeners. International Congress of Phonetic Sciences. Saarbücken, Germany.
- A23. Dunckley, K. T., Abel, R. A., & **Dhar, S.** (2007). Influence of Stimulus Levels on DPOAE Components and Fine Structure. American Auditory Society, Scottsdale, Arizona.
- A24. **Dhar, S.**, Withnell, R. H., Shaffer, L. A., Talmadge, C. L., de Boer, E., & Tubis, A. (2003). Investigating Energy Propagation in the Cochlea: Time Domain Measurements of Otoacoustic Emissions. Abstracts of the Midwinter Meeting of the Association for Research in Otolaryngology, Daytona Beach, Florida.
- A25. Harmon, K. M., & **Dhar, S.** (2002). Sending out the vibes: Characteristics of DPOAE components. Undergraduate Research Day, Indiana University, Bloomington, IN.
- A26. Talmadge, C. L., Tubis, A., Long, G. R. & **Dhar, S.** (2002). Physical mechanisms of OAE generation & propagation: Transiently-evoked OAE, distortion product OAE, & stimulus-frequency OAE. Abstracts of the Midwinter Meeting of the Association for Research in Otolaryngology, St. Petersburg Beach, Florida.
- A27. Goodman, S. H., Shaffer, L. A., **Dhar, S.**, Lilly, D. J. & Withnell, R. H. (2002). Mechanisms

- of OAE Production in humans. Abstracts of the Midwinter Meeting of the Association for Research in Otolaryngology, St. Petersburg Beach, Florida.
- A28. **Dhar, S.**, Talmadge, C. L., Harmon, K. M. & Tubis, A. (2002). A detailed analysis of the effects of the primary levels on DPOAE components. Abstracts of the Midwinter Meeting of the Association for Research in Otolaryngology, St. Petersburg Beach, Florida.
- A29. Talmadge, C. L., Tubis, A., & **Dhar, S.** (2001). Model studies of source term & reflectance components of synchronous-evoked and distortion-product otoacoustic emissions. Acoustical Society of America, Ft. Lauderdale, Florida.
- A30. Talmadge, C. L., Tubis, A., Long, G. R. & **Dhar S.** (2001). A cochlear-model framework for the fine structure of otoacoustic emission & associated psychoacoustic measures. 17th International Congress on Acoustics, Rome, Italy.
- A31. Talmadge, C. L. Long, G. R., Tubis, A. & **Dhar S.** (2001). Cochlear fine structure - Otoacoustic & psychoacoustic theory and measurement. Perceptual effects of nonlinearity. Delmenhorst, Germany.
- A32. Tubis, A., Talmadge, C.L., Long, G.R., **Dhar, S.** & Tong, C. (2000). Amplitude & group-delay fine structures of distortion product otoacoustic emissions as functions of primary levels & frequency ratios. Abstracts of the Midwinter Meeting of the Association for Research in Otolaryngology, 23, 139.
- A33. **Dhar, S.**, Long, G. R., Talmadge, C. L., & Tubis, A. (2000). Understanding DPOAE generation: Towards a better clinical model. American Academy of Audiology, Chicago, IL.
- A34. Rout, A., & **Dhar, S.** (2000). Evaluation of temporal characteristics of commercially available hearing aids. American Academy of Audiology, Chicago, IL.
- A35. **Dhar, S.**, & Ricketts, T, A. (1998). The performance of three commercially available commercial BTEs. International Conference on Hearing Aid Technology, The Cleveland Clinic, Cleveland, OH.
- A36. Talmadge, C. L., Long, G. R., Tubis, A., & **Dhar, S.** (1998). Study of cochlear reflectance using distortion product otoacoustic emissions. Abstracts of the Midwinter Meeting of the Association for Research in Otolaryngology, 21.
- A37. Rao, A., Long, G. R., Narayanan, S. S., & **Dhar, S.** (1996). Changes in the temporal characteristics of TEOAEs & the fine structure of DPOAEs with aspirin consumption. Abstracts of the Midwinter Meeting of the Association for Research in Otolaryngology, 19.

Student Presentations

- A1. Dunckley, K.T. (2008). Can we do better than clinical audiometry to detect NIHL? A case study. Podium presentation at the Illinois Academy of Audiology, Chicago IL. ** Awarded best student presentation.

TEACHING

Northwestern University

Overall instruction and course ratings from CTEC in square brackets [].

Maximum equals 6.0 in rating scale.

- N1. CSD423: *Evaluation of peripheral hearing.* (F04 [6.0, 6.0], F05 [5.64, 5.36])
- N2. CSD411: *Amplification.* (W05 [5.7, 5.3], W06 [5.55, 5.45])
- N3. CSD570: *Seminar – Capstone Project.* (Team taught with Profs. Erler & Garstecki)
- N4. CSD516: *Seminar – Experimental and theoretical aspects of audiology* (Team taught with Profs. Ruggero and Siegel)

Indiana University

- I1. SPHS S201: *Anatomy and Physiology for Speech.* (FALL 02)
- I2. SPHS S275: *Human Hearing and Communication.* (SPR 01, FALL 01, 02, 03)
- I3. SPHS S474: *Basic Audiological Testing.* (FALL 00, 01, 03, SPRING 03)
- I4. SPHS S475: *Advanced Audiological Testing.* (SPR 02)
- I5. SPHS S576: *Amplification for the Hearing Impaired.* (SPR 01, 02, 03)

Research Supervision

Student Presentations, Awards, & Honors:

- *Wei Zhao*: Slow and Fast Efferent Effects on Spontaneous Otoacoustic Emissions. 2010 ARO Midwinter Meeting Travel Award.
- *Kathleen Dunckley*: Can we do better than clinical audiometry to detect noise-induced hearing loss? A case study. Illinois Academy of Audiology, January 2008; *Best Student Presentation Award*.
- *Dunckley, K.T., & Dhar, S.* (2008). Patterns of thresholds and OAEs in exceptionally sensitive ears. Research poster presentation at the American Auditory Society Scientific and Technology Meeting. Scottsdale, AZ. *NIH mentored student poster award*.

Post Doctoral Research

- *Lauren Calandruccio, PhD*: January 2008 - August 2010, Current position: Assistant Professor, Queens College, City University of New York.

Ph.D. Research

- *Wei Zhao*: Chair, Dissertation committee, Northwestern University Neuroscience Institute.
- *Rachael Baiduc*: Chair, Dissertation committee.
- *Kathleen Dunckley*: Member, Dissertation committee.
- *Kristin Van Engen*: Member, Dissertation committee, Linguistics.
- *Alexandra Parberry-Clark*: Member, Dissertation committee.
- *Samira Anderson*: Member, Dissertation committee.

Au.D. Research

- *Serena Dann*: Chair, Capstone committee.
- *Emily Klemp*: Chair, Capstone committee.
- *Stacie Nordrum*: Chair, Capstone committee.

- *Lia Ferro*: Chair, Capstone committee.
- *Christopher Hamilton*: Chair, Capstone committee.
- *Darrin Worthington*: Laboratory research assistant & Capstone committee.

Masters Research

- *Robert Risley*: Chair, Thesis committee.
- *Lynne Horey*: Chair, Thesis committee.

Doctoral Research (Indiana University)

- *Deanna Rogers*: Member, dissertation committee; Speech & Hearing Sciences.
- *Shawn Goodman*: Member, dissertation committee; Speech & Hearing Sciences; Supported by the National Institutes of Health; Direct supervision of project in CML, Fall 2001; Work presented at the Association for Research in Otolaryngology. [Graduated – May 2003]
- *Rachel Chalmers*: Direct supervision; Speech & Hearing Sciences.; Work presented at international conference in Germany, Summer 2002.
- *Brian R. Nelson*: Member, dissertation committee; Biology.

Masters Research (Indiana University)

- *Lauren Calandruccio*: Chair, Masters thesis; Speech & Hearing Sciences. [Graduated – Spring, 2002]
- *Melissa Coy-Brannam*: Member, Masters thesis; Speech & Hearing Sciences. [Completed Fall, 2001]
- *Radhika Sharma*: Independent study; Speech & Hearing Sciences. [Spring, 2002]

Undergraduate Research (Indiana University)

- *Angela M. Thomsen*: Independent research; The effect of stimulus frequency ratio on DPOAE components, Hearing Research. (*Indiana University Student Foundation 2004 Little 500 Scholarship; \$1000.00*)
- *Nina B. Klein*: Honors program Speech & Hearing Sciences; Honors Thesis: Why do we have trouble understanding speech in background noise? (*Honors thesis award, College of Arts and Sciences, \$1000.00; Speech & Hearing Sciences Honors Thesis award, \$500*) [2003-04]
- *Kelley M. Harmon*: Women in Science Undergraduate Research Fellow; Supported by the National Science Foundation; Part of work presented at Association for Research in Otolaryngology. [Summer 2001 to Fall 2002]
- *Jennifer O'Donnell*: Honors program Speech & Hearing Sciences. [Spring, 2002]
- *Rebecca Kay Taylor*: Honors program Speech & Hearing Sciences; Honors Thesis: The role of cochlear reflectance in determining DPOAE component characteristics. (*Winner: Best thesis award, Dept. of Speech & Hearing Sciences; \$250.00*) [2002-03]
- *Megan Weberling*: Honors program Speech & Hearing Sciences. [Spring, 2003]
- *Alison Wheeler*: Honors program Speech & Hearing Sciences. [Spring, 2003]

SERVICE

Department (Northwestern University)

- D1. January 2007 - present: Interim Audiology clinic administration committee.
- D2. June 2007 - present: Audiology faculty search committee.
- D3. March 2007 - August 2007: Au.D. examination committee.
- D4. 2007: Audiology planning committee (Chair).
- D5. Summer 2006: Concept, planning and implementation audiology learning laboratory.
- D6. 2005 - present: Faculty Advisor – Northwestern chapter of the National Association of the Future Doctors of Audiology.
- D7. 2005 - 2006: Au.D. examination committee (Chair).
- D8. April 2005 - October 2005: Strategic planning committee (elected by fellow-faculty).
- D9. 2005 - Departmental representative - New Student Week Academic and Student Services Fair
- D10. Departmental representative to the ASHA education summit, Scottsdale, AZ. (March 2005).
- D11. 2004 - present: Au.D. program committee.
- D12. 2004 - present: Ph.D. student recruitment weekend committee.

School of Communication

- C1. June 2005 - October 2005: Advisory committee to the Dean on CSD chair search.

Northwestern University

- N1. Dec 2007 - present: Director, Graduate certificate in Language, Music, and Communication, Northwestern Institute on Complex Systems.

Department (Indiana University)

- I1. Member: Technology committee; August 2001 - August 2004.

- I2. Member: Diversity committee: Fall 2003 - August 2004.
- I3. Member: Au.D. advisory committee: Summer 2003 - August 2004.
- I4. Member: Ad Hoc committee for transition to Au.D.:

- I5. Director: Undergraduate Studies; Spring-Summer, 2003:

- I6. Consultant to the Indiana University Audiology clinic in developing norms for otoacoustic emission testing.
- I7. Academic advisor to all masters students in Audiology. (Masters program terminated Summer of 2003)
- I8. Member: Masters team; August 2000 to May 2001.
- I9. Search and screen committees:
 - Open position in audiology/hearing science; October 2000 to March 2001.
 - Assistant professor positions in speech science; December 2001 to March 2002.

University (Indiana University)

- U1. Member: Dissertation committee; Brian Nelson, Doctoral candidate in Biology.
- U2. Core faculty: Cognitive Sciences program.
- U3. Core member: Center for Integrative Study of Animal Behavior.
- U4. Organizing Committee: National conference of the Animal Behavior Society held on IU campus (Summer 2002). Specifically responsible for audio-visual and computing needs of all presenters.

Local & National

- N1. Chair, National Education Committee, American Academy of Audiology (2010-2013).
- N2. President, Illinois Academy of Audiology (2008).
- N3. Board of Directors, Illinois Academy of Audiology (2007-2010).
- N4. National Academic Education Committee (2007 - 2010), American Academy of Audiology.
- N5. National Research Committee (2007 - 2010), American Academy of Audiology.
- N6. National Honors Committee (2008 - 2011), American Academy of Audiology.
- N7. Member - American Hearing Research Foundation, Research Committee.
- N8. Assistant Editor - Journal of the American Academy of Audiology.
- N9. Guest Associate Editor - American Journal of Audiology.
- N10. Grant reviewer:
 - American Hearing Research Foundation
 - United States Navy, Office of Research.
 - American Academy of Audiology
- N11. Editorial consultant:
 - Journal of the Acoustical Society of America
 - Ear and Hearing
 - Journal of Speech-Language-Hearing Research
 - International Journal of Audiology
 - American Journal of Audiology
 - Hormone and Behavior
- N12. Technology coordinator - Animal Behavior Society national conference, Summer 2003.