

Dec 2016

## CURRICULUM VITAE

Robert S. Schlauch  
 Department of Speech-Language-Hearing Sciences  
 University of Minnesota  
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## I. IDENTIFYING INFORMATION

## A. Academic Rank:

1. Professor
2. Graduate Faculty Appointment in Communication Disorders: Associate Member, 1989; full member, 2002.
3. Adjunct Associate Professor, Department of Otolaryngology, 1996-2009
4. Adjunct Assistant Professor, Department of Otolaryngology, 1994-1996

## B. Degrees Awarded

<u>Degree</u>	<u>Institution</u>	<u>Date Degree Granted</u>
B.S.	University of Hawaii	1979
M.S.	University of Washington	1982
Ph.D.	University of Washington	1987

## C. ASHA Certification Status: None

## D. Employment

Professor & Chair	Dept. of Speech-Language-Hearing Sciences	7/15-present
Professor	Dept. of Speech-Language-Hearing Sciences, U of MN	9/09-6/15
Associate Professor	Dept. of Communication Disorders, U of MN	9/96-8/09
Assistant Professor	Dept. of Communication Disorders, U of MN	9/89-8/96
Postdoctoral Fellow	Dept. of Psychology, U. of California, Berkeley, CA	1988-89
Electronics	U.S. Navy	1971-77

Technician

E. Current Membership in Professional Organizations

Acoustical Society of America  
 American Speech-Language-Hearing Association  
 American Auditory Society

II. RESEARCH AND SCHOLARSHIP

A. Honors and Awards

American Speech-Language Hearing Foundation Scholarship, 1986.  
 NIH National Research Service Award, 1988-89  
 Acoustical Society of America, Fellow, 2002 (for contributions to understanding intensity  
 perception and attentional factors in hearing)  
 Distinguished Alumnus Award, Dept. of Speech and Hearing Sciences, University of Wa.,  
 June, 2008  
 American Speech, Language Hearing Association, Fellow 2011

B. Editorships

Associate Editor, American Journal of Audiology  
 (Nov 05 – Nov 07)  
 Editor, Journal of Speech, Language, Hearing Research (Hearing)  
 (Nov 07- Dec 2010, with responsibilities until Sept 2012)

I have been an ad hoc reviewer over my career for the following journals:

\* contributions in the past year

Reviewer, Acustica.  
 \*Reviewer, American Journal of Audiology  
 Reviewer, American Journal of Speech-Language Pathology  
 Reviewer, Annals of Otology, Rhinology & Laryngology  
 Reviewer, Attention, Perception and Psychophysics  
 Reviewer, Audiology  
 Reviewer, Cerebral Cortex  
 \*Reviewer, Ear and Hearing.  
 Reviewer, Frontiers in Psychology  
 \*Reviewer, Hearing Research.  
 \*Reviewer, International Journal of Audiology  
 Reviewer, Journal of Communication Disorders  
 \*Reviewer, Journal of the Acoustical Society of America.  
 Reviewer, Journal Association of Research in Otolaryngology  
 \*Reviewer, Journal of Speech and Hearing Research  
 Reviewer, Perception and Psychophysics.  
 \*Reviewer, PLOS One

Reviewer, Psychological Science  
Reviewer, Psychonomic Bulletin and Review  
Reviewer, Neuroscience  
Reviewer, Transactions on Neural Systems & Rehabilitation Engineering

C. Consultantships: None

D. Research and Training Grants

1. Non-University Sources

Principal Investigator, "Computer-aided instruction in speech and hearing science," IBM Olympus Grant, University of Washington, 1/86- 6/87.

Principal Investigator, National Research Service Award, NIH, 1988-89.

Co-Investigator, "Mechanisms of auditory and vestibular dysfunction," NIH, Program Project with 7 principle investigators, Co-Investigator on projects P1 (PI: Dave Nelson) and P2 (PI: Neal Viemeister), 1993-98.

Principal Investigator, First Award, "Intensity processing in ears with shifted thresholds." NIH, 1996-2001, \$349,000.

Co-Investigator, "Mechanisms of auditory dysfunction," NIH Program project with 4 principal investigators. Co-investigator on project P2 (PI: Dave Nelson), 1998-03.

Principal Investigator, "A non-speech test for functional hearing loss", Naval Submarine Medical Research Laboratory. June 2010-May 2011. \$28,000 (In addition, the Navy also paid a portion of my salary during the academic year)

2. University Sources

Refining Audiologic Behavioral Tests. Graduate School Grant #0350-2044-05, 1989-90.

Refining Audiological Behavioral Tests. Faculty Summer research Fellowship, University of Minnesota Graduate School, 1990.

Principal Investigator, Intensity processing in ears with shifted thresholds, Graduate School Grant-in-Aid of Research, 1992-93.

Principal Contact. Auditory Perception and Neuroscience Group. Proposal for an Interdisciplinary Graduate Group, 2010. \$3275.

Principal Investigator, Quantifying the role of the middle-ear muscle reflex. Graduate School Grant-in-Aid of Research, 2015-2016.

E. Research Mentoring Support (excluding dissertations, Plan A and Plan B)

1. Selected Undergraduate Students

Burk, Matt. Undergraduate Research Opportunities (UROP) Grant, 1993.

Sanchez, Susan. Directed Research. Co-author on Identification of pseudohypacusis using speech recognition thresholds (published with Arnce, Morison and Doyle), 1995

Erin Donlin. Summa thesis. Judging duration: the effects of instructing listeners to ignore the echo (graduated, 6/01).

Fazel, Adrienne. Summa thesis. The effects of ear-canal pressure on the acoustic reflex threshold (Graduated, 9/01)

Davies-Venn. Evelyn. McNair Fellow, Forward masking: does it represent adaptation or persistence of perception? ( 6/01)

Paumen, Allison. Research Experience for Undergraduate Fellow, Backward masking for speech and tones. (Summer/02)

Binkelman, Sarah. Research Experience for Undergraduate Fellow, Perception of speech with flattened fundamental frequency, (Summer, 05).

Roverud, Elin. Undergraduate Research Opportunities (UROP) Grant, 2005.

Curley, Sean: Undergraduate Research Opportunities (UROP) Grant, 2010.

Margaux Jenson, Undergraduate Research Opportunities (UROP) Grant, 2012.

Emma Ranthum, Undergraduate Research Opportunities (UROP) Grant, 2012.

2. Selected Graduate Students (not thesis related)

Lindsay Morison, Directed research that resulted in two publications.

Harvey, Stephanie. Directed research that resulted in a publication.

Elliot, Sarah. Directed research that resulted in a publication.

Bart Clement, Directed research that resulted in a publication.

Ries, Dennis, Directed research that resulted in multiple publications.

DiGiovanni, Jeffrey, directed research that resulted in multiple publications.

Yingjiu Nie, Graduate Research Partner, 2004

Gregan, Melanie, Graduate Research Partner, 2005

Tess Koerner, Directed Research that resulted in a publication

Elizabeth Anderson, Directed Research that resulted in a publication

Heekyung Han, Directed Research that resulted in a publication

### 3. Visiting Scholar

Li, Yaoli. Directed research that resulted in a publication

## F. Publications

### 1. Refereed

Wier, C.C., Schlauch, R.S., and Norton, S.J. (1984). "The relations among critical ratios, critical bands and intensity difference limens in man," *Journal of the Acoustical Society of America* 76, 1051-1056.

Schlauch, R.S., and Wier, C.C. (1987). "A method for relating loudness-matching and intensity-discrimination data in impaired ears," *Journal of Speech and Hearing Research* 30, 13-20.

Reich, A.R., Mason, J.A., Frederickson, R.A., and Schlauch, R.S. (1989). "Factors influencing fundamental frequency range in children," *Journal of Speech and Hearing Disorders* 54, 429-438.

Arehart, K.A., Burns, E.M., and Schlauch, R.S. (1990). "A comparison of psychometric functions for detection in normal-hearing and hearing-impaired listeners," *Journal of Speech and Hearing Research* 33, 433-439.

Reich, A.R., Fredrickson, R.R., Mason, J.A., and Schlauch, R.S. (1990). "Methodological variables affecting phonational frequency range in adults," *Journal of Speech and Hearing Disorders* 55, 124-131.

Reich, A.R., Fredrickson, R.R., Mason, J.A., and Schlauch, R.S. (1990). "Phonational frequency range: Reply to Awan and Mueller," *Journal of Speech and Hearing Disorders* 55, 805-806.

Schlauch, R.S., & Rose, R.M. (1990). "Two-, three-, and four-alternative forced-choice procedures: Estimator bias and efficiency," *Journal of the Acoustical Society of America* 88, 732-740.

Schlauch, R.S., and Hafter, E.R. (1991). "Listening bandwidths and frequency uncertainty in pure-tone signal detection," *Journal of the Acoustical Society of America* 90, 1332-1339.

Schlauch, R.S. (1992). "A cognitive influence on the loudness of sounds that change continuously in level," *Journal of the Acoustical Society of America* 92, 758-765.

Viemeister, N.F., and Schlauch, R.S. (1992). Issues in developmental psychoacoustics. In L. Olsho & E. Rubel (Eds.), *Developmental psychoacoustics* (pp. 191-209). Hyattsville, MD: American Psychological Association.

Hafter, E.R., Schlauch, R.S., and Tang, J. (1993). "Attending to auditory filters that were not stimulated directly," *Journal of the Acoustical Society of America* 94, 743-747.

Jahner, J., Schlauch, R.S., and Doyle, T. (1994). "A comparison of American Speech-Language-Hearing Association guidelines for comparing speech recognition thresholds," *Ear and Hearing* 15, 324-329.

Schlauch, R.S. (1994). "Intensity resolution and loudness in highpass noise," *Journal of the Acoustical Society of America* 95, 2171-2179.

Schlauch, R.S., and Morison, L.M. (1995). "The spectral spread of loudness adaptation for tones that decrease continuously in level," *Acustica* 81, 279-280.

Schlauch, R.S., Harvey, S. and Lanthier, N. (1995). "Intensity resolution and loudness in broadband noise," *Journal of the Acoustical Society of America* 98, 1895-1902.

Schlauch, R.S., Levine, S., Li, Y., and Haines, S. (1995). "Evaluating hearing threshold differences between ears as a screen for acoustic neuroma," *Journal of Speech and Hearing Research* 38, 1168-1175.

Schlauch, R.S., Arnce, K.D., Morison, L.M., Sanchez, S., and Doyle, T.N. (1996). "Identification of pseudohypacusis using speech recognition thresholds," *Ear and Hearing* 17, 229-236.

Mineau, S., and Schlauch, R.S. (1997). "Threshold measurement in patients with tinnitus: Pulsed or continuous tones," *American Journal of Audiology* 6, 52-56.

Schlauch, R.S., Lanthier, N., and Neve, J. (1997). "Forward masked intensity discrimination: Duration and spectral effects," *Journal of the Acoustical Society of America* 102, 461-467.

Schlauch, R.S., DiGiovanni, J.J., and Ries, D.T. (1998). "Basilar membrane nonlinearity and loudness," *Journal of the Acoustical Society of America* 103, 2010-2020.

Schlauch, R.S., Clement, B.R., Ries, D.T., and DiGiovanni, J.J. (1999). "Masker laterality and cueing in forward-masked intensity discrimination," *Journal of the Acoustical Society of America* 105, 822-828.

- Canevet, G., Scharf, B., Schlauch, R.S., Teghtsoonian, M. and Teghtsoonian, R. (1999). "Perception of changes in loudness," *Nature* 398, 673.
- Ries, D.T., Rickert, M. and Schlauch, R.S. (1999). "The peaked audiometric configuration in Meniere's disease: disease related?," *Journal of Speech Language Hearing Research* 105, 822-828.
- Hunter, L.L., Ries, D.T., Schlauch, R.S., Levine, S.C., and Ward, W.D. (1999). "Safety and clinical performance of acoustic reflex tests," *Ear and Hearing* 20, 506-514.
- Schlauch, R.S., Ries, D.T. and DiGiovanni, J.J. (2001). "Duration discrimination, and subjective duration for ramped and damped sounds," *J. Acoust. Soc. Am.* 109, 2880-2887.
- DiGiovanni, J.J., Nelson, P. and Schlauch, R. (2005). "A psychophysical evaluation of spectral enhancement," *Journal of Speech, Language, Hearing Research* 48, 1121-1135.
- Opperman, D.A., Reifman, W., Schlauch, R.S. and Levine, S. (2006). "Incidence of spontaneous hearing threshold shifts during modern concert performances," *Otolaryngology Head. and Neck Surgery* 134, 667-673.
- Carney, E. and Schlauch, R.S. (2007). "Critical Difference Table for Word Recognition Testing Derived Using Computer Simulation," *Journal of Speech, Language, Hearing Research* 50, 1203-1209.
- DiGiovanni, J.J. and Schlauch, R.S. (2007). "Mechanisms responsible for differences in perceived duration for rising-intensity and falling-intensity sounds," *Ecological Psychology* 19(3), 239-264.
- Schlauch, R.S. and Carney, E. (2007). "A multinomial model for evaluation of significant pure tone threshold shifts," *Journal of Speech, Language, Hearing Research* 50, 1391-1403.
- Watson, P. J. and Schlauch, R.S. (2008). "The effect of fundamental frequency on the intelligibility of speech with flattened intonation contours," *American Journal of Speech-Language Pathology* 17, 348-355.
- Ries, D.T., Schlauch, R.S. and DiGiovanni, J.J. (2008). "The role of temporal masking patterns in the determination of subjective duration and loudness for ramped and damped sounds," *Journal of the Acoustical Society of America* 124, 3772-3783.
- Watson, P.J. and Schlauch, R.S. (2009). "F0 variation and intelligibility of speech with an electrolarynx," *American Journal of Speech-Language Pathology* 18, 162-167.
- Miller, S., Schlauch, R.S., and Watson, P.J. (2010). "The effects of fundamental frequency contour manipulations on speech intelligibility in background noise," *Journal of the Acoustical Society of America* 128, 435-443.

Schlauch, R.S. and Carney, E. (2011). "Are false positive rates leading to an overestimation of noised induced hearing loss?," *Journal of Speech Language Hearing Research*, 54, 679-692.

Schlauch, R.S. and Carney, E. (2012). "The challenge of detecting minimal hearing loss in audiometric surveys," *American Journal of Audiology* 21, 106-119.

Jin, S., Nelson, P.B., Schlauch, R.S. and Carney E. (2013). "Hearing conservation program for marching band members: risk for noise-induced hearing loss?," *American Journal of Audiology* 22, 26-39.

Schlauch, R.S., Anderson, E.S., and Micheyl, C. (2014). "A demonstration of improved precision of word-recognition scores," *Journal of Speech Language Hearing Research* 57, 543-555.

Han, H.J., Schlauch, R.S. and Rao, A. (2014). "The effect of visual cues on the scoring of clinical word-recognition tests," *American Journal of Audiology* 57, 543-555.

Schlauch, R.S., Koerner, T. and Marshall, L. (2015). "Effective identification of functional hearing loss using behavioral threshold measures," *Journal of Speech Language Hearing Research* 58, 452-465.

Zhang, Y., Cheng, B., Koerner, T. K., Schlauch, R. S., Tanaka, K., Kawakatsu, M., ... & Imada, T. (2016). Perceptual Temporal Asymmetry Associated with Distinct ON and OFF Responses to Time-Varying Sounds with Rising versus Falling Intensity: A Magnetoencephalography Study. *Brain Sciences*, 6(3), 27.

Schlauch, R. S., Han, H. J., Tzu-Ling, J. Y., & Carney, E. (2016). Pure-Tone-Spondee Threshold Relationships in Functional Hearing Loss: A Test of Loudness Contribution. *Journal of Speech, Language, and Hearing Research*, 1-8.

## 2. Non-refereed

Hafter, E.R., & Schlauch, R.S. (1992). Cognitive factors and selection of auditory listening bands. In Proceedings of the IVth International Conference on Effects of Noise on the Auditory System (pp. 396-410). Philadelphia: B.C. Decker.

Schlauch, R.S., Ries, D.T., DiGiovanni, J.J. Elliot, S., & Campbell (1998). Intensity discrimination for ramped and damped tones. Conference Proceedings of the International Congress of Acoustics and the Acoustical Society of America, 2, 885-886.

Hafter, E.R., Saberi, K. & Schlauch, R. (2000). The use of cuing to illuminate the site of detection. International Journal of Psychology 35, 93-94. (9)

Schlauch, R.S. (2001). Fundamentals of Hearing: An Introduction (4th edition). William A. Yost, Author and Robert S. Schlauch, Reviewer. *Journal of the Acoustical Society of America* 110, 1713-1714.



Nelson, P.B., DiGiovanni, J.J. and Schlauch, R.S. (2002) "A psychoacoustic basis for spectral sharpening," Proceedings of the International Conference on Spoken Language Processing, 417 – 420. (9)

Schlauch, R.S. (2004). Pseudohypacusis, in R. Kent (Ed.). MIT Encyclopedia of Communication Disorders (MITECD), Boston: MIT Press, p.531-534.

Schlauch, R.S. (2004). Loudness, in J. Neuhoff (Ed.). Ecological Psychoacoustics, Elsevier, p. 317-345.

Schlauch, R.S. (2007). "Calibration of speech in the real world: A request from industry," *Acoustics Today*, 43-44.

Schlauch, R.S. (2008). "Precision of audiometry for early identification of noise-induced threshold shifts," Minnesota Academy of Audiology Newsletter, Winter, p. 13 & 17.

Schlauch, R.S. and Nelson, P. (2009). Pure tone evaluation in Katz Handbook of Clinical Audiology, Edited by Katz, Medwetsky, Burkhard and Hood (Lippincott Williams &Wilkins: Baltimore), 6<sup>th</sup> edition, pp 30-49.

Schlauch, R.S. (2013). "Noise-induced hearing loss in teenagers," *Acoustics Today* 9, 40-44.

Schlauch, R.S. and Nelson, P. (2015). Pure tone evaluation in Katz Handbook of Clinical Audiology, Edited by Katz and Little (Lippincott Williams &Wilkins: Baltimore), 7<sup>th</sup> edition, pp 29-47.

#### F. Papers Presented at Scientific and Professional Meetings

Schlauch, R.S., Wier, C.C., & Norton, S.J. (1982). An objective method of effective masking calibration. Paper presented to the Speech-Language and Hearing Association, Toronto, Ontario.

Schlauch, R.S., Wier, C.C., & Norton, S.J. (1982). The relations among critical ratios, critical bands and intensity difference limens in man. Paper presented to the Acoustical Society of America, Chicago, IL.

Huckins, E., Wier, C.C., & Schlauch, R.S. (1983). Adaptive, forced-choice, loudness-balance tests: Normal and impaired listeners. Paper presented to the American Speech-Language-Hearing Association, Cincinnati, OH.

Schlauch, R.S., Wier, C.C., & Huckins, E. (1983). The relation between loudness growth and intensity discrimination. Paper presented to the Acoustical Society of America, San Diego, CA.

Wier, C.C., Huckins, E., & Schlauch, R.S. (1983). Adaptive, forced-choice, loudness balance tests in normal listeners. Paper presented to the Acoustical Society of America, San Diego, CA.

Burns, E.M., Hoberg, K.E., Schlauch, R.S., Bargones, J.Y., & Beaman, W.B. (1986). Frequency microstructure of pitch-level functions. Paper presented to the Acoustical Society of America, Anaheim, CA.

Schlauch, R.S., & Rose, R.M. (1986). A comparison of 2-, 3- and 4-alternative forced-choice staircase procedures. Paper presented to the Acoustical Society of America, Anaheim, CA.

Hoberg, K.E., Burns, E.M., & Schlauch, R.S. (1987). Psychometric function slopes for detection in normal and impaired listeners. Paper presented to the American Speech-Language-Hearing Association, New Orleans, LA.

Mason, J.A., Reich, A.R., Frederickson, R.A., & Schlauch, R.S. (1987). Factors influencing fundamental frequency range in children. Paper presented to the American Speech-Language-Hearing Association, New Orleans, LA.

Frederickson, R.A., Reich, A.R., Mason, J.A., & Schlauch, R.S. (1988). Phonational frequency range in normal adults. Paper presented to the American Speech-Language-Hearing Association, Boston, MA.

Schlauch, R.S., & Hafter, E.R. (1988). Attentional filters and frequency uncertainty in the detection of one or more tones. Paper presented to the Acoustical Society of America, Honolulu, HI.

Schlauch, R.S. (1991). The loudness of tones that change continuously in level: Range-level effects. Paper presented to the Acoustical Society of America, Houston, TX.

Hafter, E.R., Saberi, K., Schlauch, R.S., Plamondon, L., & Tang, J. (1992). Use of stimulus pre-cues to study various levels of auditory and musical processing. Second International Conference on Music Perception and Cognition, Los Angeles, CA.

Preminger, J.E., Schlauch, R.S., & Thelin, J. (1992). Test-retest reliability for pure-tone audiometry: A binomial model. Paper presented to the American Speech-Language-Hearing Association, San Antonio, TX.

Schlauch, R.S. (1992). Intensity resolution performance and loudness growth in high-pass noise. Paper presented to the Acoustical Society of America, New Orleans, LA.

Levine, S., Schlauch, R.S., & Li, Y. (1994). Evaluating hearing threshold differences between ears as a screen for acoustic tumors. Paper presented at the Midwest section of the Triological Society, Rochester, MN.

Schlauch, R.S. (1994). Some detection-theory models for relating loudness and intensity discrimination. Paper presented to the Acoustical Society of America, Cambridge, MA.

Schlauch, R.S., Arnce, K.D., Morison, L.M., & Sanchez, S. (1994). Identification of pseudohypacusis using speech recognition thresholds. Paper presented to the American Speech-Language-Hearing Association, New Orleans, LA.

Clement, B.R., & Schlauch, R.S. (1995). Mechanisms underlying nonmonotonic Weber fractions in forward-masked intensity discrimination. Paper to be presented to the Acoustical Society of America, Washington, D.C.

Schlauch, R.S., & Lanthier, N. (1995). Forward-masked intensity discrimination: Duration effects. Paper to be presented to the Acoustical Society of America, Washington, D.C.

Viemeister, N.F., & Schlauch, R.S. (1995). Loudness recruitment and intensity discrimination. Advancing Human Communication: An Interdisciplinary Forum on Hearing Aid Research and Development, National Institute of Health, Bethesda, MD.

Schlauch, R.S., & Carney, E. (1996). Strategies for measuring disproportionate loss in word recognition. Paper presented to the American Speech-Language-Hearing Association, Seattle Wa.

Schlauch, R.S., Hunter, L., & Ward, W.D. (1996). Permanent hearing loss caused by acoustic reflex testing. Paper presented to the American Speech-Language-Hearing Association, Seattle Wa.

Schlauch, R.S., DiGiovanni, J.J., and Ries, D.T. (1997). Is the shape of the loudness function determined primarily by the basilar membrane input-output function? Paper presented to the Association for Research in Otolaryngology, St. Petersburg Beach, FL.

Schlauch, R.S., Ries, D.T., DiGiovanni, J.J., Elliot, S. and Campbell (1998). Intensity discrimination for ramped and damped tones. Paper presented to at the meeting of the International Congress of Acoustics and the Acoustical Society of America, Seattle, Wa.

Ries, D.T., DiGiovanni, J.J. and Schlauch, R.S. (1999). Hearing discrete elements of an auditory temporal sequence: Evidence for a central mechanism. Paper presented to the acoustical Society of America. Columbus, Ohio.

Schlauch, R.S. (1999). Cognitive limitations on auditory temporal resolution. Paper presented to the Association for Research in Otolaryngology, St. Petersburg Beach, FL.

DiGiovanni and Schlauch, R.S. (2000). Acoustic reflex and flaccid tympanic membranes. Paper presented to the American Speech-Language-Hearing Association, Washington, D.C.

Ries, D.T., Schlauch, R.S. and DiGiovanni, J.J. (2001). Temporal masking patterns of ramped and damped broadband noise maskers and their relation to subjective duration and loudness. Paper presented to the Association for Research in Otolaryngology, St. Petersburg Beach, FL.

Schlauch, R.S., DiGiovanni, J.J., Olson, K.L., and DonLin, E.E. (2001). Do listeners ignore the echo portion of damped sounds? Paper presented to the Acoustical Society of America, Chicago, IL.

Olson, K.L., Schlauch, R.S. and DiGiovanni, J.J. (2001). Assessing functional word recognition for persons with asymmetric hearing loss. Paper presented to the American Speech-Language Hearing Association, New Orleans, La.

Schlauch, R.S., DiGiovanni, J.J. and Davies-Venn, E. (2002). Persistence in audition. Paper presented to the Association for Research in Otolaryngology, St Petersburg Beach, FL.

DiGiovanni, J.J., Nelson, P. and Schlauch, R.S. (2002). Testing the theoretical viability of spectral enhancement. Paper presented to the Association for Research in Otolaryngology, St Petersburg Beach, FL.

Nelson, P., DiGiovanni, J.J., and Schlauch, R.S. (2002). A psychoacoustic basis for spectral sharpening. Paper presented to the 7th International Conference on Spoken Language Processing, Denver, CO.

Schlauch, R.S. and Carney, E. (2003) A comparison of Levitt and Zwislocki decision rules for use with forced-choice adaptive procedures. Journal of the Acoustical Society of America, 113, p. 2250.

Schlauch, R.S. and Carney, E. (2004) Thresholds for inattentive listeners obtained with adaptive forced-choice procedures. Journal of the Acoustical Society of America, 115, pp. 2387-2388.

Opperman, D.A., Reifman, Schlauch, R.S. and Levine, S. (2005). Incidence of Spontaneous Hearing Threshold Shifts During Modern Concert Performances, American Academy of Otolaryngology.

Watson, P. J. and Schlauch, R.S. (2005) Spectral contributions to intelligibility of sentences with flattened fundamental frequency. Journal of the Acoustical Society of America, 117, 2606.

Paumen, A.L., Schlauch, R.S. and Windsor, J. (2005). Backward masking for speech and tones J. Acoust. Soc. Am. 118, 1933.

Schlauch, R.S., Miller, S.E. and Watson, P.J. (2005). Examining explanations for fundamental frequency's contribution to speech intelligibility in noise. J. Acoust. Soc. Am. 118, 1933

Roverud, E.M. and Schlauch, R.S. (2005). Informational masking and loudness J. Acoust. Soc. Am. 118, 1894.

Gregan, M.J. and Schlauch, R.S. (2005). Across-frequency loudness matches with pure tones and narrow-band noises. J. Acoust. Soc. Am. 118, 1894.

Gregan, M. and Schlauch, R.S. (2007) Loudness Growth Near Threshold For Listeners With Simulated Hearing Loss. Annual Meeting of the American Auditory Society, Phoenix, AZ

Schlauch, R.S. and Carney, E. (2008). False Positive rates in the identification of notched audiograms. Annual meeting of the American Auditory Society, Phoenix, AZ.

Leonard, L., Cacace, A. Verdolini, K., Apel, K., McGregor, K., Justice, L. and Schlauch, R. (2008). Publishing your Research: Guidelines for successful submissions to ASHA's journals. Paper presented to the American Speech Language Hearing Association, Chicago.

Newhoff, M. Apel, K., Justice, L. McGregor, K. Pratt, S. Schlauch, R. and Smith, A. (2009). Publishing your research: Steps to a successful submission. Paper presented to the American Speech Language Hearing Association, New Orleans.

Schlauch, R.S. and Carney, E. (2010). False positive rates and overestimation of noise-induced hearing loss. Annual meeting of the American Auditory Society, Phoenix, AZ.

Pratt, S. Justice, L. Schlauch, R. Oetting, J. Apel, K., Smith, A. Newhoff, M. (2010). Publishing your research: Steps to a successful submission. Paper presented to the American Speech Language Hearing Association, Philadelphia.

Schlauch, R.S. and Carney, E. (2011). Detecting minimal hearing loss in large audiometric samples. Annual meeting of the American Auditory Society, Scottsdale, AZ, March.

Schlauch, R.S., Koerner, T and Marshall, L. (2013). Effective identification of functional hearing loss. Annual meeting of the American Auditory Society, Scottsdale, AZ, March.

Han, H., Schlauch, R.S. and Rao, A. (2014). The effect of visual cues on scoring of speech tests. Annual Meeting of the American Auditory Society, Scottsdale, AZ, March.

Schlauch, R.S., Han, H.J., Yu, T.L., and Rao, A. (2015). Pure tone-spondee threshold relationships in functional hearing loss: A test. Annual Meeting of the American Auditory Society, Scottsdale, AZ, March.

Yu, T. J., Schlauch, R. S., Han, H. J., and Carney, E. (2016). "Sources of discrepancy between loudness perception and model predictions," Presented at the 43rd Annual American Auditory Society Scientific and Technology Meeting.

Han, H.J. and Schlauch, R.S. (2016). Use of sentence cues based on confidence during word-recognition tests. Presented at the 43rd Annual American Auditory Society Scientific and Technology Meeting.

Basu, S., Schlauch, R. S., & Sasisekaran, J. (2016). Backward masking abilities for speech and tones in persons who stutter. *The Journal of the Acoustical Society of America*, 140(4), 3262-3262.

Basu, S., Schlauch, R. S., & Sasisekaran, J. (2016). Backward masking abilities for speech and tones in persons who stutter. Annual conference of the American Speech, Language Hearing Association.

#### G. Selected Invited Presentations

Hafter, E.R., & Schlauch, R.S. (1989). Factors in detection under uncertainty. Paper presented to the Acoustical Society of America, St. Louis, MO.

Hafter, E.R., & Schlauch, R.S. (1990, May). Cognitive factors and selection of auditory listening bands. IVth International Conference on Effects of Noise on the Auditory System, Beaune, France.

Viemeister, N.F., & Schlauch, R.S. (1991). Issues in developmental psychoacoustics. Developmental Psychoacoustics Conference, Seattle, WA.

Schlauch, R.S. (1997, Nov). Basilar membrane nonlinearity and loudness. Northeastern University, Boston, MA.

Davies-Venn, E. and Schlauch, R.S. (2001). Subjective duration of broadband noise impulses at different intensity levels. First Annual International McNair Research Conference, Puerto Rico.

Davies-Venn, E. and Schlauch, R.S. (2001). Subjective duration of broadband noises impulses at different intensity levels. 10th Annual National McNair Research Conference, Madison, WI.

Schlauch, R.S. (2002, April). How does the temporal envelope of a sound affect its percept. Presented to the University of Ca. (Berkeley) Ear Club.

Schlauch, R.S. (2013). Factors that influence speech audiometry testing. 7th International Workshop on Advances in Audiology. Salamanca, Spain.

Schlauch, R.S. (2013). Selective attention and auditory filters. J. Acoust. Soc. Am. 134, 4163.

Schlauch, R.S. (2015). Behavioral measures of functional hearing loss: Preferred clinical procedure and the role of loudness. Boys Town National Research Hospital. August 18, 2015.

Schlauch, R. S., Carney, E., Yu, T. J., and Han, H. J. (2015). Some factors affecting loudness measurement and prediction. Presented at the 170th Meeting of the Acoustical Society of America, 4aNS6.

#### G. Dissertation

Title: Models for relating loudness-balancing and intensity-resolution performance.  
Directed by: Edward Burns

### III. TEACHING AND ADVISING

A. Honors and Awards: None

B. M.A. Students

- Haug, Audrey. The effects of attention and learning on word recognition performance in elderly listeners (Plan B). (Degree Granted, 9/91)
- Jahner, Jacqueline. Speech recognition threshold: ASHA (1979) versus ASHA (1988) guidelines (Plan B). (Degree Granted, 6/91)
- Carlson, Jill. 11/92
- Olean, Ruth. Auditory symptoms of multiple sclerosis (Plan B). (Degree Granted, 3/93)
- Campbell, Julie. Reliability of repeated extended high-frequency auditory threshold determination (Plan B). (Degree Granted, 6/93)
- McCleary, Elizabeth Schilling. The ability of category scaling and magnitude estimation to predict loudness matching data (**Plan A**). (Degree Granted, 6/93)
- Arnce, Kara Gardner. Identification of pseudohypacusis using speech recognition thresholds (**Plan A**). (Thesis Defense, 6/94)
- Lanthier, Nicole. Forward masked intensity discrimination: Duration effects (Plan A). (Degree Granted, 6/95)
- Mineau, Suzette. Assessment of pure tone thresholds with tinnitus: Pulsed vs continuous stimuli (**Plan A**). (Degree Granted, 6/95)
- Flynn, Janet. Melody recognition and pitch interval discrimination performance using nonspectral cues (**Plan A**). (Degree Granted, 6/96)
- Hove, Denise. Using threshold asymmetries for identifying acoustic neuromas in patients referred to the University of Minnesota Audiology Clinic by Otolaryngologists (Plan B). (Degree Granted, 9/96)
- Jansen, Leigha. Melody recognition and musical interval discrimination in subjects with cochlear implants (**Plan A**). (Degree Granted, 9/96)
- Neve, Joseph. Forward masked intensity discrimination: Duration and spectral effects (**Plan A**). (Degree Granted, 9/96)
- Rickert, Michelle. The peaked audiometric configuration in Meniere's disease – diagnostically significant or age related? (Plan-B)(Degree granted 5/97)
- Johnson, Janice. Caloric Testing: Scholarly paper and video (Plan B) (Degree granted, 6/98)
- Anderson, Britt. Dynamic posturography: Scholarly paper and video (Plan B) (Degree granted, 6/98)
- Poole, Amy. Audiology case study (Plan B). (Degree granted, 6/98)
- Ries, Dennis. Evaluating acoustic reflex threshold measures for identifying acoustic tumors at safe presentation levels (Plan B). (Degree granted, 4/98)
- Baartman, Sharyce. Audiology case study (Plan B). (Degree granted, 6/99)
- Khetrapal, Tara. Audiology case study (Plan B). (Degree granted, 6/99)
- Teufert, Sara Marie. Scholarly paper (Plan B). (Degree granted, 7/99)

- Blazick-Peterson, Pat. Self-assessment questionnaires for hearing aid users (Plan B).  
(Degree granted, 1/00)
- Elliot, Sarah. The effect of otitis media on auditory and visual attention **(Plan A)**.  
(Degree granted, 1/00)
- Dodds, Jeff. Audiology case study (Plan B). (Degree granted, 6/00)
- Eggenberger, Rondi. Audiology case study (Plan B). (Degree granted, 6/00)
- Koonz, John. Identifying feigners with computerized dynamic posturography (Plan B).  
(Degree granted, 6/00)
- Rauschenberger, Katie. Audiology case study (Plan B). (Degree granted, 6/01)
- Olson, Kristi, A method to assess functional word recognition for persons with  
asymmetric hearing loss. **(Plan A)**, Degree granted, 6/01)
- Hummel, Ryan. Audiology case study (Plan B). (Degree granted, 7/01)
- Price, Laura, Comprehensive Exam (Plan B). (Degree granted, 6/02)
- Hawkinson-Lewis, Michelle, Comprehensive Exam (Plan B). (Degree granted, 6/02)
- Pett, Laura, Comprehensive Exam (Plan B). (Degree granted, 6/03)
- Bremer, Lynne, Comprehensive Exam (Plan B) (Degree granted, 7/03).
- Sabur, Sabina Rukiya Comprehensive Exam (Plan B) (Degree granted, 6/04)
- Vincent, Shannon Leigh Comprehensive Exam (Plan B) (Degree granted, 6/04)
- Miller, Sharon (Plan A). (Degree granted, 6/05). Assessment of different explanations of  
fundamental frequency's contribution to speech intelligibility in noise.
- Rierson, Sondra L, Comprehensive Exam (Plan B) (Degree Granted, 6/05)
- Genson, Rebecca L, Comprehensive Exam (Plan B), Degree Granted, 6/05)
- Opperman, David (Otolaryngology). **(Plan A)**. Incidence of Spontaneous Hearing  
Threshold Shifts During Modern Concert Performances Co-advised with Sam  
Levine, M.D. (Degree Granted, 12/05)
- Vang, Elee (Plan B). (Degree granted, 5/11)

#### C. Other Plan B Papers Supervised

- Carlson, Jill. Detection of a tone in noise: Correcting for infant inattention. (Plan B,  
graduated, 11/92)

#### D. AuD Students

- Carson, Mollie Dawn, AuD  
Coucovanis, Kathryn Mayree, AuD  
Darco, Heather R, AuD  
Fritz, Kristen Marie  
Hanson, Carrie Ann, AuD  
Krueger, Nicole Rae, AuD  
Lien, Jennifer M, AuD  
Ludwig, Analise Marie Smith, AuD  
Sullivan, Michael Joseph, AuD  
Kimitch, Monica, AuD  
Akbari, David Paul  
Holland, Erin



Johnson, Chad Y  
 McCabe, Eric John  
 Nechodom, Tricia  
 Olund, Amy Patricia  
 Pitts, Kathryn Eileen  
 Privette, Sarah Ann  
 Sander, Kylie  
 Stiepan, Samantha  
 Koerner, Tess

Sanchez, Thomas E  
 Johnson, Phyllip  
 Becker, Ryan  
 Gilbert, Heather  
 Jirschele, Alanna J  
 Klein, Kristin  
 Madsen, Brandon  
 Zakharenko, Viktoriya  
 Brost, Jamie  
 Kersten, Andrew  
 Clark, Alexandra Grace  
 Bochat, Sarah Lynn

#### D. Ph.D. Students:

Ries, Dennis. Temporal masking patterns for ramped- and damped maskers and their relation to subjective duration and loudness (Ph.D. dissertation). (Degree granted, 10/01)

DiGiovanni, Jeffrey. On the theoretical viability of spectral enhancement (Ph.D. dissertation). (Degree granted, 10/02). (Co-advised with Peggy Nelson)

Han, Heekyung, Current Student

Yu, Jocelyn, Current Student

Shriya Basu, Current Student, co-advised with Jayanthi Sasisekaran)

#### E. Courses Taught

CDis 5701 Hearing Loss and Audiometry (5 cr)	winter, 1990-1994, 98-99
CDis 5702 Advanced Audiometry (5 cr)	Fall, 1989-1998
CDis 5801, Aud Assessment I (3 cr)	Fall, 1999-2003
CDis 5306 Hearing Science (3 cr)	Spring 1995-1999
CDis 3306, Hearing Science (3 cr)	Spring, 2000-2004
CDis 8305 Laboratory Instrumentation (4 cr)	Spring 1990, 1992, 1996,

CDis 8718, Seminar: Hearing (3 cr)	1998 Spring, 1990-1993, Winter, 1995, 1997, 1999
CDis 8801, Aud Assessment II	Spring, 2000
CDis 8803, Signals and Systems in Audiology (3 cr)	Fall, 1999-2003
CDis 5810, Laboratory Module	Spring, 2000, 2003 Fall, 2003
SLHS 3306 Hearing Science (cr)	Spring 2005-2015
SLHS 5801 Audiologic Assessment I (3 cr)	Fall, 2004-2009, 2011-2016
SLHS 5810 Laboratory Module in Audiology (var)	Fall 2004, Fall and Spring, 2005-2010
SLHS 5820 Clinical Research and Practice, Grand Rounds	Fall and Spring, 2006-2012
SLHS 8801 Audiologic Assessment II (3 cr)	Spring, 2005-2015
SLHS 8803 Signals and Systems in Audiology	Fall, 1999, 2000, 2004, 2006, 2008, 2010, 2012, 2014, 2016
SLHS 8805 Hearing Science Foundations of Audiology	Fall, 2007, 2009, 2011, 2013, 2015

#### F. Guest Lectures

GERO 5110- Biology of Aging, Lecture on Presbycusis, Spring, 2005-2007,  
2012-2016

PSY 8993 Directed Studies: Special Areas of Psychology and Related Sciences –  
multiple presentations each year as part of a Journal Seminar

#### IV. SERVICE, 1989-present

##### A. Department:

Chair, June 2015-present

Director of Honors, 2000-2015

Director of Undergraduate Studies, 2002-2015

Member, ad hoc Committee on Clinical Education in Audiology, 1989-90.

Member, Equipment Advisory Committee, 1989, 1991, 1996, 1997.

Member, Professional Degree Admissions Committee, 1990-91, 1991-92, 1993-1994, 1996-1997, 1998-1999, 2002-2003, 2005-2006, 2008-2009, 2012-2015.

Member, AuD admissions Committee. 2011-2014.

Member, Ph.D. Student Admissions Committee, 1990-present.

Member, Merit Advisory Committee, 1991, 1996, 2001, 2002, 2003, 2005, 2007, 2013.

Chair, Merit advisory committee, 1996, 2001, 2002, 2003, 2007, 2013.

Member, Committee on Planning and Curricula, 1992-1997, 2007-present.

Chair, Search Committee for Assistant Clinical Specialist in Audiology, 1993.

Faculty Sponsor, Undergraduate Research Opportunities Program, 1993, 2005.

Member, Search Committee for Audiology Faculty Position, 1993.  
 Chair, Audiology Curriculum Committee, 1993-1997.  
 Member, Search Committee for Speech-Language Pathology Faculty Position, 1994-95,  
 2002-2003, 2004-2005.  
 Chair, Search Committee for Teaching Associate Position, 1995.  
 Post Tenure Review Committee, 1998, 2001, 2002, 2003, 2004, 2007.  
 Curriculum Committee in Audiology for a clinical doctorate, 1998-2004  
 Member, Committee outlining job description for research associate in electronics and  
 computers, 2001  
 Chair, Comprehensive exam committee in Audiology, 2000-2001, 2004  
 Member, fund raising/newsletter committee, 2002-2004.  
 Member, ASHA Accreditation Committee, 2002-2003  
 Member, Comprehensive Exams Committee, 2004  
 Promotion and Tenure Committee, 1996-present  
 Newsletter Committee, 2003-2004  
 Co-Chair, Space Committee, 2005  
 Co-chair, Curriculum and Comps Committee, 2005  
 AUD Transition Committee, 2005-2010  
 AuD comps organizer, 2005, 2006

#### B. College and University:

Member, Faculty Search Committee, Department of Otolaryngology, 1992-93.  
 Member, Student Academic Affairs Committee, CLA, 2002-present  
 Member, Continuing Student Scholarship Awards Committee, 2010, 2011  
 Member, Entering Student Scholarship Awards Committee, 2009-2011  
 Member, Turner Award Honors Thesis Committee, 2003, 2004  
 Member, Selmer-Birkelo Scholarship Committee, 2003  
 Member, Student Disciplinary Committee 2003  
 Member, CLA Assembly, 2007-2008, 2009-2010  
 Member, College P&T Committee, Fall 2009, Fall 2010, Fall 2011  
 Course Review Committee, 2011-2015  
 Chair, CLA Committee on Student Scholastic Conduct 2012-2015  
 Member, Faculty Senate, 2016-present

#### C. Profession and Discipline:

Periodic discussions with community clinics regarding diagnostic protocols,  
 1992-1997, 2004, 2014  
 Representative of the Psychological and Physiological Acoustics Technical  
 Committee to the Acoustical Standards Committee, Acoustical Society  
 of America, 1993-96.  
 Member, Spring Conference Planning Committee, Minnesota Speech-Language-  
 Hearing Association, 1994-1995.  
 Chair, Subcommittee on Speech Intelligibility, Acoustical Standards Committee,  
 Acoustical Society of America, 1996-2012.  
 Member, Subcommittee on Loudness, Acoustical Standards Committee, Acoustical  
 Society of America, 2002-2006.

- Member, Committee to evaluate Hearing Science submissions to the national meeting, ASHA, 1989, 1997.
- Elected Representative of the Physiological Acoustics and Psychoacoustics Technical Committee to the Acoustical Society of America, 1998-2001, 2004-2007.
- Publications Board, American Speech-Language Hearing Association, 2001-2003, 2008-2010.
- Member, Minnesota Speech Language Hearing Association Foundation, 2003-present
- Associate Editor, American Journal of Audiology, 2005-2007
- Guest Editor, American Journal of Audiology, 2010-2011.
- Guest Editor, JSLHR (Speech), 2008-2011.
- Guest Associate Editor (JSLHR), 2013.
- Editor, Journal of Speech, Language, and Hearing Research-Hearing Section, Nov 2007-2010.
- Selected Media contacts about my current research regarding teen hearing loss:
- Interviews with MPR (radio and online publication): Sept 20, 2010.
  - Interview on WCCO radio, Sept 21, 2010.
  - Interviews (Sept. 20, 2010) for articles published in: Pioneer Press, Star Tribune, Minnesota Daily
  - Interview for MinnPost (Sept 20, 2010)
  - Interview with Hearing Journal for an article that appeared in Feb 2011
- Photograph: Cover photo of Minnesota frogs published in the international journal Hearing Research, March 2012. This photo promotes an article by Nityananda, V., Bee, M.A. Professor Bee is in the department of Ecology, Evolution and Behavior on the St Paul campus.
- Interview with Radio K (**KUOM**) for a segment about echolocation in blind persons (4/08/12). Culture Cue: "Looking through a different light." Producer: Noel Clark.
- Interview by Star Tribune and The Daily Minnesota for two articles published about a possible earplug ordinance required for clubs. March 22 & April 1, 2014.
- Interview by the Star Tribune for an article on the problems of communicating in noisy restaurants published on March 15, 2014.